Design Education for Equality, Diversity, and Inclusion

EUROPEAN TEACHING FRAMEWORK AND RESOURCES FOR HIGHER EDUCATION

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“It is not our differences that divide us.
It is our inability to recognize, accept,
and celebrate those differences.”
— Audre Lorde

PREFACE

Antonio Marano

Periods of profound societal transition inevitably raise fundamental questions about the role of higher education. In moments marked by technological acceleration, environmental hazards, demographic transformation, and increasing social uncertainness, universities are called to reconsider not only what they teach, but also why they teach it and for whom. Historically, higher education has always been a place where knowledge is preserved, problematised, developed, and transmitted.

Today, universities are increasingly expected not only to generate and disseminate knowledge, but also to play a proactive role in shaping the cultural, social, and institutional conditions through which societies can address emerging challenges and envision more sustainable futures. This responsibility is embodied in the so-called "third mission" of higher education institutions, which reflects academia's commitment to engaging with societal issues and contributing tangible solutions. Beyond their traditional functions of teaching and research, universities are now called upon to make a decisive contribution to the development of innovative economic, productive, cultural, and social policies. Thus, they are expected to critically reflect, innovate, and advocate for new pathways of development, fostering richer and more complex models of sustainability, inclusiveness, and social progress.

This responsibility is particularly evident within Design Education. Over the past decades, design has gradually expanded beyond its conventional association with products and industrial production. As recognised by the International Council of Societies of Industrial Design (ICSID), design is a creative activity whose aim is to establish the multi-faceted qualities of objects, processes, services and their systems throughout their entire life cycles. In comparison with the influential definition proposed by Tomas Maldonado in 1961, this perspective highlights the systemic and strategic nature of modern design. Designers increasingly operate within relational networks, service systems, digital environments, and complex social contexts, becoming agents of innovation and change across organisations and different spheres of human experience. Their work, when guided by proactive knowledge, influences how people access resources, participate in public life, experience technologies, and interact with their environments.

Design therefore cannot be understood solely as a technical discipline; it is a cultural practice that shapes the quality of human experience in inclusive and sustainable ways. To respond to this expanded role, designers must develop the ability to work at the boundaries of the discipline and within broader interdisciplinary contexts. Fostering this capacity represents one of the central aims of contemporary design education.

In this evolutionary scenario of the design culture, the growing attention devoted to Equality, Diversity, and Inclusion (EDI) reflects this broader evolution. These themes have become central to contemporary debates because they challenge long-established assumptions regarding who design serves, whose perspectives are represented, and which forms of knowledge are considered legitimate. As societies become increasingly diverse and interconnected – despite ongoing human frictions – the limitations of universal and standardised models become more visible. Designing for an abstract "average user" is no longer sufficient in contexts characterised by plurality, mobility, and continuously evolving ways of living. Real people, with their unique needs and aspirations, cannot be archetyped through standard or abstract figures.

For higher education institutions, such transformations generate both opportunities and responsibilities. Universities are increasingly expected to prepare graduates capable of operating within complex and rapidly changing environments, where technical competence alone is no longer sufficient. As public goods rather than profit-driven enterprises,

universities have a broader educational and civic mandate: in line with European policy frameworks, they are called upon to advance multiculturalism, sustainability, and social justice while fostering the holistic development of the human person. Their mission is not merely to produce qualified professionals, but to cultivate responsible citizens capable of navigating uncertainty, engaging constructively with EDI, and addressing the long-term challenges of an interconnected world.

In this sense, future professionals must combine scientific and technical expertise with ethical responsibility, developing the capacity to critically assess the social consequences of their decisions and actions. This can only be achieved if students are provided with unbiased knowledge that stimulates their ability to understand diversity, navigate uncertainty, engage with multiple stakeholders and, ultimately, critically evaluate the social consequences of their decisions. Such ambitions require innovative educational models that move beyond disciplinary specialization. Ultimately, universities are called to nurture a generation of globally minded citizens, equipped not only to respond to complexity and unpredictability, but also to contribute actively to the construction of more humane, sustainable, and inclusive societies.

Within this evolving scenario, Design for EDI emerges not simply as an additional field of study but as a promising perspective through which educational practices themselves can be reconsidered. The issue is not limited to introducing new contents into existing curricula. Rather, it involves rethinking deeply how knowledge is structured, how teaching and learning processes are organised, how teachers operate, and how academic success is evaluated. Inclusivity, in this sense, becomes a methodological and cultural principle capable of influencing the entire educational ecosystem.

The value of the present volume lies precisely in its willingness to address these questions from multiple perspectives. Rather than treating EDI as a purely normative aspiration or a fashion trend, the book explores its implications for research, teaching, institutional development, and educational innovation. It brings together conceptual reflection and practical experience coming from international cooperation, offering readers the opportunity to observe how inclusive principles can be translated into concrete pedagogical strategies, frameworks, and learning environments.

An important aspect of this contribution is its recognition that meaningful innovation rarely emerges from isolated actions. Educational change requires dialogue, collaboration, and the gradual construction of shared knowledge. Some of the most pressing challenges facing contemporary higher education systems are not the absence of good practices, but their fragmentation, limited visibility, and difficulty of transfer across institutions and cultural contexts. Valuable experiences often remain confined to local environments, or labels, preventing the development of cumulative learning processes capable of generating broader systemic impact.

For this reason, the themes explored throughout the volume extend beyond Design Studies alone. The questions raised by EDI, when read by using a design-led perspective, are relevant to the wider academic community and resonate with contemporary discussions concerning access to knowledge, social responsibility, democratic participation, and the public mission of universities. They invite educators and researchers to designerly reflect on how institutions can contribute not only to economic development and technological advancement, but also to the cultivation of fairer and more humane societies.

Ultimately, this book arrives at a moment when the relationship between education, innovation, and social transformation is being reconsidered across the world. Its contri-

bution lies not in providing definitive answers, but in offering a platform for critical discussion and future development. The reflections, methodologies, and experiences collected here demonstrate that EDI is neither a temporary trend nor a peripheral concern. Rather, it represents an opportunity to enrich educational cultures, strengthen design practice, and expand the social relevance of academic knowledge.

The hope is that readers will approach these pages not only as a source of information, but also as an invitation to participate in a broader conversation. The future of education depends on our collective capacity to imagine learning environments capable of acknowledging human diversity while fostering shared understanding and collaboration. In this respect, this volume offers more than a pedagogical agenda: it proposes a vision of education as a transformative force, helping students, educators, and institutions engage constructively with the complexities of the contemporary world.

INTRODUCTION

Emilio Rossi

Context and Rationale

The growing complexity of contemporary society is transforming the conditions in which people live and interact. This transformation produces an increasing pluralisation of contexts, where cultural, social, and demographic diversities intersect and generate heterogeneous ways of living, acting, and experiencing everyday life. Such diversity reflects a wide spectrum of identities, abilities, and socio-economic conditions, which directly influence how needs, expectations, and aspirations are defined. As a result, the traditional notion of a standard user – historically grounded in assumptions of homogeneity and predictability – becomes increasingly inadequate. Products, services, and environments are no longer required only to perform efficiently within stable and predefined conditions, but also to respond to differentiated and evolving contexts, addressing social inclusion in terms of accessibility, usability, and social impact.

These transformations are further accelerated by changes in lifestyles. New ways of living, working, and consuming are reshaping the relationship between individuals and designed artefacts – e.g., products, services, built environments, communication solutions, etc. – while the hybridisation of physical and digital environments is expanding the scope and agency of design interventions. Designed solutions are increasingly embedded within systems of interaction, where their value lies not only in their material or functional properties, but also in their capacity to enable social practices, support participation, and mediate between different user conditions. In this sense, the Design discipline operates within fluid and interconnected environments that require continuous adaptation rather than fixed solutions.

Within this scenario, design agendas are progressively expanding. For several decades, environmental sustainability has represented a major shift in design thinking, introducing systemic perspectives and long-term responsibility into the discipline. While this dimension remains crucial, it is no longer sufficient to address the complexity of contemporary challenges. Increasing attention is now directed toward social dimensions such as Equality, Diversity, and Inclusion (EDI), which highlight how design processes and outcomes affect different groups in uneven ways.

This shift implies a broader understanding of impact, where the focus extends beyond environmental performance to include the social and cultural consequences of design interventions, as well as their capacity to enable or constrain access, representation, and participation.

The expansion of design agendas has significant implications for the discipline itself. Design is no longer primarily oriented toward the production of discrete objects, but increasingly toward the generation of outcomes that unfold across time and contexts. In this perspective, the value of design lies in its ability to produce meaningful and inclusive conditions rather than merely functional artefacts. The role of the designer is therefore undergoing a substantial transformation. Rather than acting solely as a creator of solutions, the designer becomes an interpreter of complex situations and a mediator among diverse actors, needs, and constraints.

This shift reflects a redefinition of both the designer and the user. Designer's role is less tied to solving problems, and more to look for promising opportunities for inclusive transformation. The idea of user shifts from an abstract "average" addressed through standardised approaches, to situated and active individuals whose experiences are shaped by specific social, cultural, and environmental conditions. Such an epistemological transformation also calls into question the supposed neutrality of the Design discipline.

Decisions embedded in design processes influence who is included, who is excluded, and how different perspectives are represented. Moreover, improved methods for data extraction and analysis, as well as tools for user definition and representation are required. As a result, Design must be understood as a situated and value-laden practice, where responsibility extends beyond technical performance to encompass the broader consequences of informed design choices. In this sense, attention to marginalised and often invisible users is not an optional addition, but a necessary condition for ensuring that design outcomes are equitable and socially responsive. Consistently, even those users commonly included in inclusive interventions need to be holistically considered as active contributors of design processes, not only as passive, weak groups.

The reconfiguration of the designer's role requires the development of new design capabilities. First, stronger interpretative competences are needed to understand the complexity of social and cultural contexts, enabling designers to recognise diversity not as an exception but as a defining condition. Second, relational skills become central, as design increasingly relies on participatory practices, co-design processes, and the involvement of multiple stakeholders. These approaches demand the ability to listen, negotiate, and collaborate across different perspectives. Third, systemic thinking is essential to operate within interconnected environments, where decisions at one level may have consequences at others. Finally, ethical awareness must be strengthened in order to critically reflect on biases, exclusions, and unintended impacts embedded in both processes and outcomes. Together, these capabilities shape a new design culture on EDI and contribute to a broader redefinition of design expertise.

These transformations have direct implications for Design Education. Institutions are increasingly expected to prepare designers capable of addressing complex and dynamic societal challenges, yet a significant gap persists between the evolution of the discipline and its pedagogical structures. In many cases, EDI is still incorporated as a thematic component or as an expression of individual sensitivity, rather than as a structured and assessable dimension of curricula. While some educational experiences integrate inclusive approaches into studios or projects, their implementation often remains partial, uneven, and dependent on local initiatives. This condition generates aleatory body of knowledge and limits the possibility of developing shared learning pathways and coherent educational models.

To address this limitation, EDI needs to be understood across multiple dimensions. It can be introduced as a subject, through dedicated courses or modules that provide conceptual and methodological foundations. It can be implemented as a practice, through the integration of inclusive approaches within design processes and project-based learning. Most importantly, it can be framed as a cultural dimension, influencing the mindset of both students and educators. In this sense, EDI is not simply an additional topic, but a lens through which design problems are interpreted, solutions are developed, and outcomes are evaluated. Such a perspective requires a collective effort from institutions to establish shared principles, languages, and pedagogical orientations.

The absence of this shared orientation produces a series of structural challenges. Design for EDI is characterised by a proliferation of terms and approaches that, while reflecting the richness of the field, often lack explicit connections. Concepts such as inclusion, accessibility, participation, and design justice are used in overlapping but not equivalent ways, leading to ambiguity in both teaching and research. Without a clearly articulated conceptual core, it becomes difficult to compare educational experiences, define learning outcomes, and assess competences in a consistent manner. As a con-

sequence, knowledge produced through teaching experimentation remains fragmented, and good practices are not easily transferable across contexts.

Rather than reducing this plurality, the challenge lies in making it intelligible, transparent, and operational. This requires the development of frameworks capable of linking concepts to practices, and practices to observable outcomes. It also requires the identification of shared criteria for evaluation, as well as the creation of conditions that support the accumulation and circulation of knowledge. In this perspective, structure is not opposed to diversity; rather, it provides a basis for articulating and leveraging it within educational contexts.

This volume is situated within this scenario and addresses these challenges by proposing a structured approach to Design for EDI in higher education. It brings together conceptual reflection, empirical analysis, and pedagogical experimentation in order to contribute to the consolidation of the field. By documenting existing practices, comparing teaching experiences, and developing a shared educational framework, the book aims to make Design for EDI both legible and transferable. In doing so, it positions EDI not as an external addition to Design Education, but as a dimension that reshapes how design is understood, taught, and practiced, contributing to the development of more inclusive and responsible design cultures.

The EDIDesK project

EDIDesK[1] is a collaborative initiative involving five European universities and two international NGOs active in the field of Design Studies. The project contributes to the advancement of Equality, Diversity and Inclusion (EDI) within Design Education by addressing current structural limitations and identifying opportunities for the systematic integration of EDI principles into design curricula across different institutional and cultural contexts. Positioned within the broader European landscape of higher education, EDIDesK leverages the diversity of its partners as a resource for generating comparative knowledge and fostering approaches that are inherently transnational, adaptable, and transferable.

The project is grounded in the recognition that, despite increasing attention to EDI in academic and professional discourse, its integration within Design Education remains fragmented and uneven. Teaching practices often emerge as isolated initiatives, strongly dependent on local conditions, individual expertise, or temporary institutional priorities. This condition limits the possibility of building cumulative knowledge and reduces the capacity of graduates to respond effectively to contemporary design challenges, which increasingly require inclusive and enabling solutions. As a result, the risk of reproducing exclusionary practices within design processes and outcomes remains significant.

In this context, EDIDesK addresses a critical issue for the European creative and educational sectors: the need to equip future designers with competences that enable them to operate within complex, diverse and rapidly evolving societies. The European dimension of the project plays a central role in this ambition. By bringing together institutions with different cultural, pedagogical, and disciplinary traditions, EDIDesK enables a comparative perspective that moves beyond context-specific solutions and contributes to the definition of approaches that can be translated across educational systems. In this sense, the value of the project lies not only in the knowledge it produces, but also in its capacity to ensure transferability, scalability, and long-term applicability.

EDIDesK is conceived as a bridge connecting three interdependent dimensions: research, pedagogy, and infrastructure. From a research perspective, the project analyses

the current state of Design for EDI within higher education, identifying patterns, gaps, and critical barriers that hinder its consolidation as a structured field. From a pedagogical perspective, it translates these insights into actionable teaching models, enabling educators to integrate inclusive approaches into curricula in a coherent and assessable way. From an infrastructural perspective, it develops tools and environments designed to support the dissemination, reuse, and continuous development of knowledge.

These dimensions are operationalised through a set of concrete and complementary outputs. First, EDIDesK develops a comprehensive mapping of existing teaching modules and educational practices related to EDI in design. This mapping not only documents current experiences, but also makes visible their diversity, recurring challenges, and potential areas of convergence. Attention is also paid to the identification of suitable methods and tools for correct inclusive education for Design Studies. Second, the project elaborates and tests a European Teaching Framework for Design for EDI, conceived as a multi-level structure that supports the definition of learning objectives, competences, teaching methods, and assessment criteria. The framework, designed through rigorous studio-led activities and live projects with students, is conceived to be flexible enough to accommodate different educational contexts, while providing sufficient structure to ensure comparability and coherence.

In addition, EDIDesK develops an open-access digital platform that functions as a shared repository and collaborative environment for teaching and learning. The platform collects and organises multilingual teaching materials, including course descriptions, tools, methodologies, and case studies, making them accessible to educators, students, and institutions. By enabling contribution, reuse, and adaptation, this infrastructure supports the circulation of knowledge and fosters the emergence of a distributed and cooperative educational ecosystem. The availability of open and structured resources is a key condition for overcoming the fragmentation that currently characterises the field.

Through this integrated approach, EDIDesK contributes to repositioning Design for EDI as both an emerging educational domain and a strategic area for innovation within Design Studies. Its relevance lies not only in addressing existing gaps, but also in providing the conditions for a more coherent and cumulative development of knowledge. By aligning research, teaching experimentation, and infrastructural support, the project enables a transition from dispersed initiatives to structured and transferable models that can be adopted and adapted across different European and international contexts.

In this perspective, EDIDesK does not simply add new content to existing curricula. Rather, it proposes a shift in how Design Education engages with diversity, inclusion, and social responsibility, offering a framework through which these dimensions can be systematically integrated into teaching and learning practices. As such, it aims to contribute to the development of a more inclusive and reflexive design culture, capable of responding to the complexities of contemporary society while maintaining coherence, rigour, and operational relevance.

How to navigate this book

EDIDesK is a complex, multi-level project that aims to develop a threefold culture of Design for EDI within higher education by advancing knowledge across research, teaching – both studio-based and online – and digital innovation. Accordingly, the project extends its original scope by contributing across multiple levels of design education and by providing scalable inputs to foster sustainable innovation within higher education

institutions, particularly design schools. This intrinsic complexity is reflected in the range of sources and discussions presented throughout the chapters, which offer readers a multi-layered interpretative perspective. This approach supports both in-depth disciplinary exploration and a broader understanding of the strategic mechanisms driving the proposed innovation pathways.

In terms of structure, the volume follows a clearly traceable progression: conceptual framing, comparative analysis, experimentation, standardisation, content production, and scalability. **Chapter 1** defines the field and identifies the critical issues that hinder cumulative progress; **Chapter 2** provides a comparative diagnosis of modules and methodologies; **Chapter 3** moves to the level of validation through experiments and case studies; **Chapter 4** formalises a multi-level European framework for Design for EDI; **Chapter 5** introduces an open-access platform as a cooperative infrastructure for resources and learning pathways; **Chapter 6** critically synthesises the results and offers recommendations; and **Chapter 7** extends the discussion to community engagement and long-term sustainability, also supported by dialogue with networks, organisations, and the project's External Advisory Board.

This reading structure enables readers to understand how the project has evolved over time in relation to its initial objectives, as originally conceptualised within the project framework. The sequence of actions – reflecting the strategic rationale underpinning the project – guides this mode of reading. In this sense, the volume supports the exploration of comprehensive and holistic evidence by following the developmental trajectory that has shaped both the project and its outputs. Reading the book sequentially from **Chapter 1** to **Chapter 7** therefore promotes a longitudinal understanding and facilitates comparability across results and disciplinary domains, fostering integrated and critical reflection. However, given the project's grounding in EDI principles, accessibility has been a central editorial priority. In addition to this linear narrative, the volume offers thematic and disciplinary non-linear reading modalities. Chapters and sub-chapters can be consulted selectively, supported by internal cross-references and annexes that include methods, databases, interpretative maps, pilot materials, platform guidelines, templates, and framework sheets. This enables both academic use and practical application in diverse contexts.

This alternative reading modality is conceived as a complementary approach that supports in-depth, discipline-specific engagement with the content. Thematic exploration is central to this structure, allowing readers to focus on specific areas of interest. For example, readers interested in methodologies for product design can navigate selectively across chapters by focusing on relevant sections, tracing how different project partners have developed, interpreted, and refined specific topics. At the same time, academics interested in the broader transformative implications of the project in Design Studies can also focus on selected chapters that provide critical reflections on key findings.

Tab. 0.1 presents the main proposed reading modalities in relation to different reader needs and interests. Fig. 0.1 also presents a themed reading of the chapters, organised by goals. Overall, these complementary reading modalities provide flexible entry points that support multi-level engagement and encourage critical reflection. At the same time, the structure reflects the diversity of potential users and underscores the capacity of EDIDesK to provide sustained support to the academic community over time. In this sense, the volume fully embodies the project's philosophy and is conceived as an outcome grounded in EDI principles.

Reader	Path
Researchers interested in exploring the project as a complete learning process	Ch.1 → Ch.2 → Ch.3 → Ch.4 → Ch.5 → Ch.6
Lecturers wishing to adopt or improve a module	Ch.1 → Ch.3 → Ch.4 → Ch.5
Programme leaders, curriculum designers, and quality assurance experts	Ch.2 → Ch.4 → Ch.6 → Ch.7 → Annex A
Researchers and scholars in design pedagogy	Introduction → Ch.1 → Ch.2 → Ch.4 → Ch.6 → Annex A/B
Educational designers and digital/hybrid learning specialists	Ch.2 (methodologies) → Ch.5 → Annex B
Institutional decision-makers and stakeholders	Ch.1 → Ch.2 (overview) → Ch.6 → Ch.7
Design students interested in EDI	Ch.1 → Ch.3 → Ch.5

Table 0.1. Reading modalities of the book.

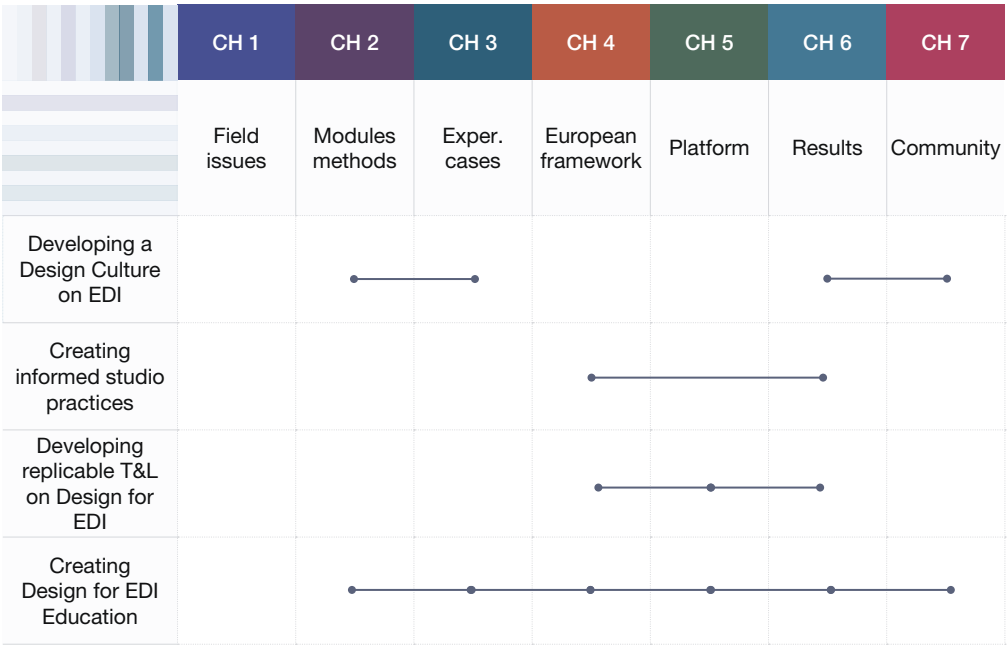


Figure 0.1. Themed reading of chapters by disciplines and goals.

Credits

This volume, as well as the EDIDesK project as a whole, is the result of a collective and collaborative effort involving academics, researchers, students, professionals, stakeholders and international organisations committed to advancing Equality, Diversity and Inclusion in Design Education.

The book brings together contributions developed by the EDIDesK project partners across different work packages, disciplinary fields and institutional contexts. Each chapter reflects a specific stage of the project: from the theoretical framing of Design for EDI, to the analysis of existing teaching practices, the testing of educational modules, the development of the European Teaching Framework, the design of the digital platform, and the formulation of recommendations for future academic and professional communities.

All sections have been authored by the project partners and collaboratively reviewed by the editorial team, with the aim of ensuring coherence, scientific consistency and continuity across the volume while preserving the plurality of perspectives that characterises the project. The editors wish to acknowledge the contribution of all authors, students and external collaborators whose work, reflections and feedback have made this publication possible. Their contributions have supported the development of the volume at different levels, from theoretical framing and methodological analysis to teaching experimentation, platform design and critical reflection. In this collective framework, the contributions to the volume are organised as follows.

Chapter 1, authored by Emilio Rossi, establishes the scientific foundation of the EDIDesK project, outlining the epistemological, pedagogical and systemic challenges related to the integration of Equality, Diversity and Inclusion within Design Studies.

Chapter 2 focuses on the state of the art in teaching Design for EDI and on the analysis of teaching methodologies, tools and educational resources. Contributions include Patrycja Rudnicka and Marta Więckowska for Sections 2.1, 2.2, 2.2.2 and 2.4; Raffaella Massacesi for Section 2.2.1; Zuzana Čerešňová for Section 2.2.3; Julia Carrasco Parodi and Massimo Menichinelli for Section 2.2.4; and Alessia Brischetto and Ester Iacono for Section 2.3.

Chapter 3 presents the project's practice-based validation phase through teaching experimentation and case studies across different design fields. Contributions include Patrycja Rudnicka, Marta Więckowska and Alessia Brischetto for Section 3.1; Rossana Gaddi for Section 3.2; Patrycja Rudnicka and Marta Więckowska for Section 3.3; Julia Carrasco Parodi and Massimo Menichinelli for Section 3.4; Alessia Brischetto for Section 3.5; Zuzana Čerešňová and Klára Macháčová for Section 3.6; and Alessia Brischetto for Section 3.7.

Chapter 4 introduces the European Teaching Framework for Design Education for EDI. Contributions include Zuzana Čerešňová for Section 4.1; Alessio D'Onofrio for Section 4.2; Patrycja Rudnicka and Marta Więckowska for Section 4.3; Julia Carrasco Parodi and Massimo Menichinelli for Section 4.4; Alessia Brischetto for Section 4.5; Zuzana Čerešňová for Section 4.6; and Emilio Rossi for Section 4.7.

Chapter 5 is dedicated to the EDIDesK digital platform, its pedagogical structure, user profiles, learning itineraries and open-access contents. Contributions include Patrycja Rudnicka, Marta Więckowska for Section 5.1; Alessia Brischetto for Section 5.2; Julia Carrasco Parodi and Massimo Menichinelli for Sections 5.3 and 5.4; Michal Kacej for Section 5.5; and Sarah Jane Cipressi for Section 5.6.

Chapter 6 provides a critical synthesis of the project results and outlines implications and recommendations for future research and teaching. Contributions include Patrycja Rudnicka and Marta Więckowska for Section 6.1; Alessia Brischetto for Section 6.2; Klára Macháčová for Section 6.3; Sarah Jane Cipressi for Section 6.4; and Ainoa Abella with Julia Carrasco Parodi for Section 6.5.

Chapter 7 addresses community engagement, professional perspectives and long-term sustainability. Contributions include Lorenzo Imbesi for Section 7.1; Giuseppe Di Bucchianico for Section 7.2; Claudia Porfirione for Section 7.3.1; Alexa Mottram for Section 7.3.2; Elisabetta Carattin for Section 7.3.3; and Erminia Attaianese for Section 7.3.4.

All materials presented in this volume have been developed within the framework of the EDIDesK project. Whenever possible, authorship of student work, original teaching materials, visual documentation and project outcomes has been explicitly attributed to the respective contributors. The editors also gratefully acknowledge the students, tutors, external stakeholders and members of the EDIDesK External Advisory Board for their valuable participation, feedback and support.

Endnotes

1 EDIDesK is an acronym for the project "Open Access Contents on Design for Equality, Diversity, and Inclusion for Higher Education Programmes", funded by the European Union under the Erasmus+ KA220-HED Cooperation Partnerships in Higher Education programme (grant: 2023-1-IT02-KA220-HED-000153774; EDIDesK project website: https://www.edideskproject.com/). The content of this publication does not reflect the official position of the European Union. Responsibility for the information and views expressed therein lies entirely with the authors.

01

Design for Equality, Diversity, and Inclusion: Epistemological Scaffolding and Systemic Challenges in Higher Education

Emilio Rossi

1.1 The Multidimensional Nature of the EDI in Design Studies

The United Nations' 2030 Agenda for Sustainable Development recognises the quality of higher education as a powerful, transformative, and strategic means to equip present and future generations of global citizens with the intellectual and operational tools needed to address the systemic complexity of current and future societies (UN, 2015; Rossi & Brischetto, 2024). Alongside the undeniable emergency of training people in a fair and democratic modality so that no single individual is left behind, the imperative of educating them with the highest standards of critical knowledge is paramount (Attaianese *et al.*, 2021). Yet, the quality of knowledge that scientific community worldwide is currently capable of passing on must not be limited to a passive heritage; it is a necessary, living instrument to deal with the pressing socio-ecological emergencies of present days (Subrahmanian *et al.*, 2020).

In this perspective, constructing more equitable, open, and pluralistic learning environments can be considered as a fundamental prerequisite to shape a better class of thinkers that will act as societal shapers. These future professionals must be structurally prepared to guarantee fair socio-economic prosperity, radical equity in the access and use of collective resources, and a deeply democratic, decentralised use of emerging technological advances.

The United Nations recognises this specific topic of quality education not as a collateral interest, but as a fundamental pillar of its mid- and long-term strategy for global sustainable development. In fact, Sustainable Development Goal 4 (SDG 4) – Quality Education – explicitly demands that institutions ensure inclusive and equitable quality education and promote lifelong learning opportunities for all (UN, 2015; UNESCO, 2020), as shown in Fig. 1.1. The international agencies, and all member countries, are consequently called to execute radical interventions by planting the necessary epistemological seeds from which to generate a desired, structural discontinuity, so that sustainability can be definitively posed at the core of human culture.

In this complex transition, Design Education plays a fundamental role in defining informed cultures and proactive frameworks (Findeli, 2001; Cross, 2025). It provides the methodologies needed to move from the mere analytical dimension of knowledge – which often results in a sterile factualisation of information – to design-oriented perspectives that are fundamental to generate tangible visions and transformative scenarios for sustainable transitions (Manzini *et al.*, 2009). In this process, the role of designers becomes apparent to shape the precise way societies can evolve resiliently, sustainably, and inclusively, respecting local heritage and human diversity while embracing socio-technical innovation as a key driver for positive, systemic change (Irwin, 2015). It is essential to understand that this ambition is not oriented on culturally orientating the educational systems on new things, but to reconsider what characterises humans in the respect of their heritage.

To become truly sustainable and to actively contribute to generating lasting social innovation, higher design education systems should develop and safeguard a crucial, twofold link. On one side, technological advances and scientific breakthroughs must be kept intentionally open, accessible, and made available to anyone interested in adopting and propagating an evolved cultural awareness. This openness provides fair, democratic access to shared resources and infrastructures, updating both soft and hard knowledge and skills within a perspective of a bottom-up, technology-led evolution of both disciplinary boundaries and interdisciplinary knowledge settings (Brown, 2008).

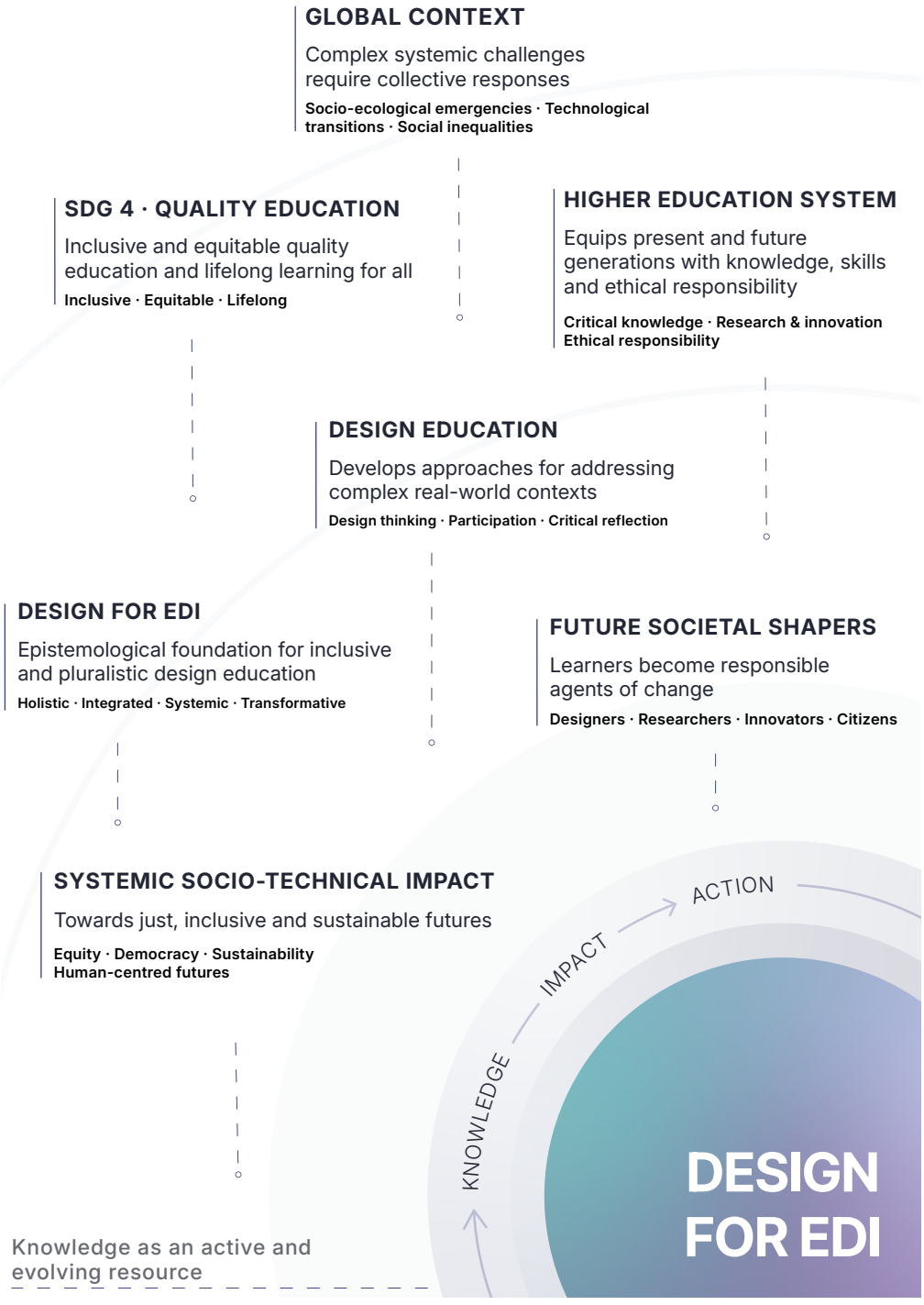


Figure 1.1. Macro-systemic trajectory of Design for EDI: From socio-technical sustainability goals to the epistemological foundation in higher education. Source: Graphic elaboration by the author.

On the other hand, more socially driven, human-centred pushes should be intentionally placed at the absolute core of contemporary knowledge systems. Seen in a design-led mode, these human aspects do not only contribute to reinforcing the environmental and economic impact of good education within global ecosystems, but they also significantly reinforce the socio-technical impact of academic knowledge when it is applied to real-life, complex scenarios (Rossi *et al.*, 2022).

Considering the social aspects of higher design education enables learners to better contextualise, situationalize, and humanise their knowledge for daily scopes, drastically reducing the contemporary temptation of being driven exclusively by techno-centric, market-led information that ultimately keeps people distant and isolated from living, breathing human contexts. At the same time, this social dimension contributes to fundamentally reviewing the historical contributions of quality higher design education, ensuring that it consistently considers diverse human beings as the direct and indirect beneficiaries of any technological or industrial innovation.

Among the relevant social topics that are worth mentioning in the realm of quality higher design education, Equality, Diversity, and Inclusion (EDI) represent a profound, three-dimensional epistemological innovation (Rossi & Brischetto, 2024). Although the individual concepts of equality, diversity, and inclusion are not entirely new to social sciences, their cumulative, integrated contribution to design education is uniquely capable of transforming multiple institutional and pedagogical levels. This includes strategic department management, the structural design of university curricula, the material implementation of studio and classroom activities, the direct involvement of students in the co-design and co-assessment of project results, and finally, a more authentic alignment of the core mission of Design schools to their socio-political role as societal shapers (Margolin, 2002).

At the same time, EDI calls for a much deeper, critical reflection on the role of educators in defining inclusive and sustainable learning pathways – how can design educators develop adequate teaching and learning environments through EDI? (Chickering & Gamson, 1991). The goal is to better prepare students – future citizens and the next generation of societal shapers – to identify specific, often overlooked design topics, understand how to critically address relevant structural inequalities, and guarantee that their work is assessed against novel, ethical criteria that are not merely tied to market profit or commercial performance.

To be properly embedded and considered at the level of quality design education, EDI must be approached as a holistic, structural changing force, and not as an add-on meant to qualitatively or superficially enrich the nature of existing design programmes – cultural essence versus advertorial cosmetic (Więckowska *et al.*, 2024). In this sense, its contribution is simultaneously cultural, philosophical, and operational. Moving from the traditional, tokenistic add-on concept to a deeply rooted built-in dimension opens the door for a deeper reflection on the three pillars of EDI, recognising that each component can act promptly and proactively at different scales of design pedagogy. Moreover, and this is perhaps the most important lesson to be considered, when EDI is approached as a key transformative force, it allows the entire design discipline to overcome the narrow, linear problem-solving approach – which often treats symptoms rather than causes – in favour of actively seeking and mapping systemic opportunities for inclusive, long-term societal change (Attaianese *et al.*, 2021). Operatively, this transition calls for a deeper, more rigorous problem-framing of the methodologies for teaching and research that are commonly adopted in contemporary Design studies (Brischetto & Iacono, 2024).

At the level of design education, EDI can radically innovate the practices through which cultural content is developed and proposed to students, the modalities through which studio or class activities are designed and implemented, as well as the active integration of external partners in live projects (Rossi & Brischetto, 2024). These external actors can actively contribute to generating consistent, contextualised learning and reflective thinking among students (Schön, 1983). At the same time, the teaching and learning dimension also forces an urgent evolution toward the innovation of teaching modalities, which are too often inadequate or too traditional to properly sustain consistent, pluralistic skill development. This structural pressure ultimately produces a vital innovation in school culture, affecting both teaching staff and academic managers.

At the research level, EDI can generate an important evolution in the body of methods used by design students to address complex societal issues. Being an activity projected directly toward society, and through which real users can be included into academic environments, EDI calls for more participatory, co-creative research methods that require a multidimensional and multidisciplinary mindset from students (Brischetto & Iacono, 2024); all of these shifts must be sustained by adequate and transparent procedural tools. Accordingly, these urgent pushes cannot be simply managed or sustained if EDI is merely considered as an afterthought or an optional seminar.

While early academic discourse in the field of design has begun to document how these inclusive values improve the modes through which students are trained, a deeper narrative analysis of global design curricula reveals a substantial gap between theory and execution (Rossi, 2024). Within contemporary design studies, EDI is almost universally praised as ethical ideals; however, they rarely progress into structured, measurable pedagogical outcomes. Instead, current educational practices are characterised by a profound fragmentation: individual educators deploy highly localised, intuitive, and often temporary inclusive exercises that lack a shared methodological vocabulary.

This aestheticization of inclusion often reduces a profound epistemological necessity to a superficial checklist, obscuring the systemic barriers built into classical design tools, user-sampling methods, and anthropometric standards. When inclusive design is taught as an isolated workshop or an optional module, it reinforces the implicit message that the "standard user" remains neutral, Western, and able-bodied, while diverse populations represent deviations to be accommodated post-hoc.

To counter this fragmentation, design education must evolve a narrative of structural continuity, where the transformation of the discipline relies on stable epistemic scaffolding rather than the sporadic ethical sensitivity of individual faculty members. This requires design schools to confront the systemic nature of exclusion by fundamentally shifting how problems themselves are framed. Traditional design research often isolates user needs from their broader socio-political environments; an integrated EDI perspective, by contrast, forces students to trace how past design decisions have structurally institutionalised inequality – whether through inaccessible digital architectures, biased algorithms, or exclusionary public spaces. By investigating these historical and structural patterns, students develop the critical capacity to perceive inclusion not as a benevolent act of charity, but as a rigorous professional responsibility and a core parameter of technical and aesthetic quality.

Operationalizing EDI within higher education institutions working in design studies creates significant systemic opportunities that extend far beyond the boundaries of individual design studios. When design schools successfully embed EDI into their core pedagogical architecture, they unlock the potential to reshape the relationship between

academia, industry, and wider social ecosystems. Systemically, an EDI-driven curriculum transforms social and accessibility constraints into primary catalysts for technical and formal innovation.

Students trained under this framework do not view inclusivity as a regulatory burden or an ergonomic restriction; instead, they recognise it as a core vector of performance and design excellence. This capability repositions design schools as vital hubs for social accountability, producing a new generation of design professionals who can navigate complex, pluralistic global markets while safeguarding democratic access to socio-technical systems. Furthermore, standardising EDI competencies allows universities to build clearer metrics for institutional impact, aligning design education with the rigorous evaluative demands of contemporary quality assurance bodies in higher education.

By establishing this multidimensional terrain, the integration of EDI within the culture of the project transitions from a speculative ethical stance to a foundational necessity for contemporary knowledge systems (Rossi, 2024). Clarifying these operational intersections does not merely offer a more equitable lens for observation; it fundamentally establishes a stable, rigorous vocabulary capable of dismantling long-standing epistemic biases. Ultimately, recognising why inclusive paradigms must reshape the conceptual foundations of design practices provides the necessary critical scaffolding to ground future evaluative metrics and collaborative infrastructures, shifting the discipline toward a fully validated state of social and professional accountability.

1.1.1 Defining EDI

The correct understanding of how EDI can shape a strategic evolution of design education is obtainable only through an in-depth analysis of the synergies between existing educational models and future, promising learning pathways. This analysis is paramount to better contextualise each dimension in relation to future goals and perspectives for both students and teaching staff.

Within the domain of contemporary design, Equality establishes a vital operational imperative that aims at dismantling systemic barriers in user-product interactions, ensuring that diverse identities and intersectional perspectives are inherently accounted for within the material and digital environment (Sen, 1992). It involves the structural conditions of fairness and distributive justice embedded directly into the artificial environment. It translates into the concrete opportunity for heterogeneous groups of individuals to access enabling solutions that do not cause marginalisation or vulnerability, ensuring that physical and digital artefacts do not produce latent or overt disadvantages during and after their everyday usage. A solution explicitly informed by the principle of equality – such as a fully accessible web platform – ceases to be a mere technical output and becomes a social catalyst. Therefore, Equality serves as a critical criterion to reflect on the imperative of conceiving systems that are affordable, resilient, and fundamentally structured around the real needs of end-users (Garay-Rondero *et al.*, 2020). In this way, user cohorts who have been historically disadvantaged by specific physical or environmental conditions acquire the resources required to exercise the same possibilities as their peers, effectively closing societal participation gaps.

The recognition of Diversity represents an intrinsic, non-negotiable value for any socio-technical system aiming to foster systemic innovation. Within design studies, diversity strongly implies confronting the complex cultural, social, psychophysical, gender-based, and economic differences of the human actors destined to interact with the solutions

designed (Dong *et al.*, 2015). In this epistemological perspective, the term "users" is radically redefined to include anyone actively participating in the collaborative and plural dynamics of the material world (Escobar, 2018). Conceptually, integrating diversity deconstructs the modernist illusion that a single, standardised product or space can respond indistinctly to the totality of human bodies. Instead, collateral and intersectional factors consistently affect user interactions, depending heavily on the living contexts where these actions are experienced.

The adoption of holistic, systemic processes in product-service design motivates stakeholders to critically examine customers' origins, anthropological habits, and psychological attitudes, as well as human, social, economic, and cultural abilities. This empowerment, which recognises diversity as an inventive virtue rather than a limitation, significantly qualifies the role of designers in building synergies keen to open to high-impact social markets.

The concept of Inclusion embraces both the cultural and methodological dimensions of the project. Encouraging the creation of solutions through which every individual feels fully valued means formalising artefacts capable of generating an engaging, inclusive atmosphere, leading toward tailored products and services for final real users regardless of race, age, gender, psychophysical skills, or disabilities (Fletcher, 2006).

Within complex socio-technical systems, inclusive design practices play a pivotal role in ensuring democratic access to products and environments, accelerating the functional utility of socially conscious and systemic solutions. Compared to Equality and Diversity, which tend to focus predominantly on the conformative nature and performance of final outcomes, Inclusion concentrates precisely on the cultural and methodological processes employed by designers to achieve those results (Landa-Avila & Aceves-González, 2018). Because of this, it is paramount that practitioners are confident with unbiased notions that overcome the reductionist tendency to equate inclusion merely with designing for disabled users, thereby underscoring the designers' ethical accountability toward the entire human ecology (DePoy & Gilson, 2010; Bianchin & Heylighen, 2018) and directly transforming systemic dynamics into active sites of social development (Clarkson *et al.*, 2013).

It is precisely through this operational focus on evaluation and methodology that the deep interdependence between the single vectors of EDI becomes fully manifest, shifting the discussion from isolated definitions to an integrated pedagogical framework. Indeed, EDI must be understood as a multidimensional, multicultural, and multidisciplinary concept that is strategic for design studies (see Fig. 1.2).

In this perspective, it plays a fundamental role for design education – informed training generates consistent, sustainable, and self-feeding learning models for designers. However, their connection is more appreciable when considered as systemic and part of a learning process spanning from informed collaborative practices to individual reflective thinking.

Equality provides the needed condition through which inclusive projects can start; Diversity assures that the condition of users and contexts, including their activities and the need for specific tools, are fair and meet the variety of human conditions (Rossi & Brischetto, 2024) – wishes, desires, psychophysical needs, etc. – while Inclusion converges these positive tensions on the creation of favourable conditions so that the final outcome, regardless of its nature and dimension, can prosper sustainably (Keates & Clarkson, 2004; Steinfeld & Maisel, 2012).

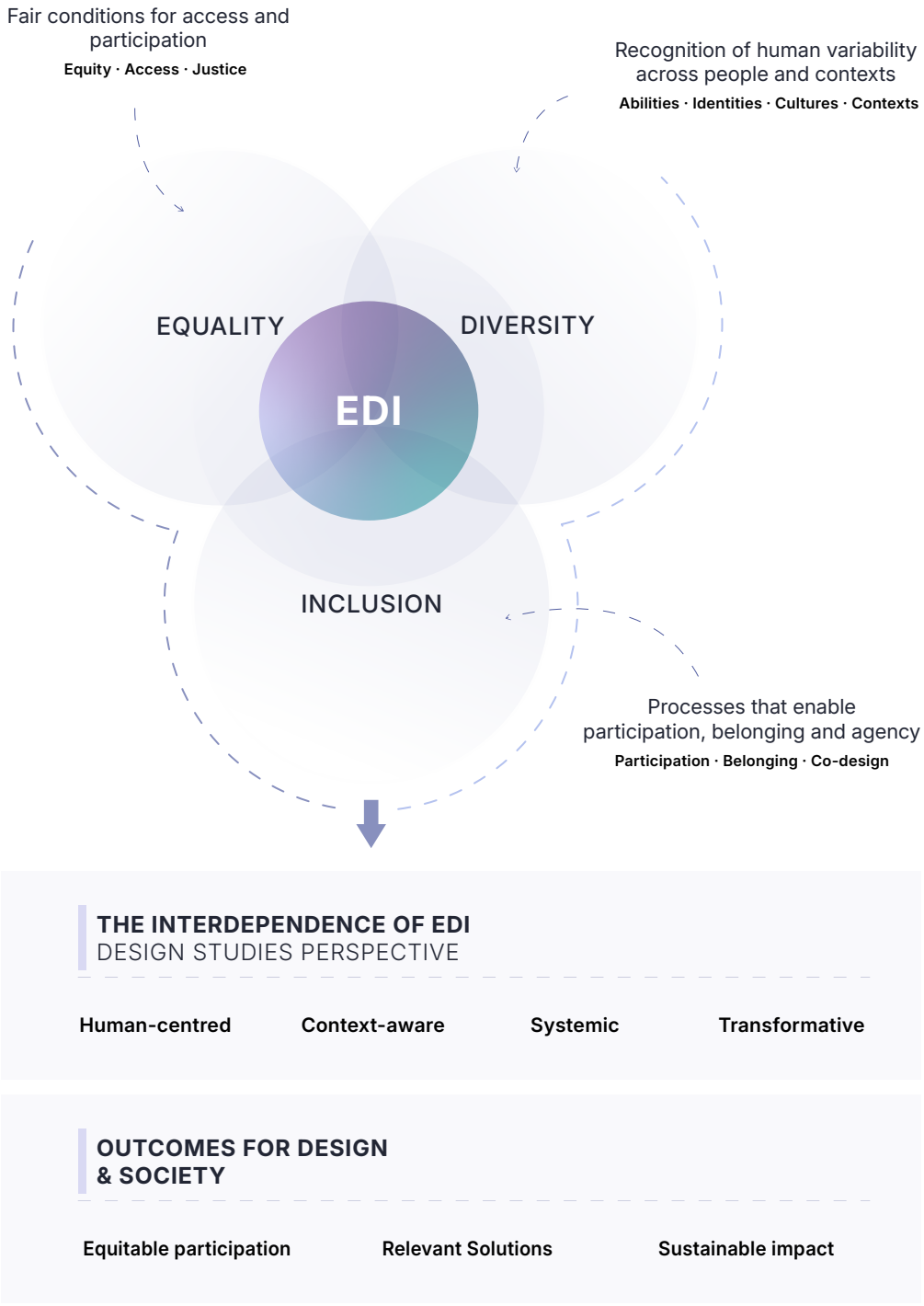


Figure 1.2. The multidimensional concept of EDI in relation to design studies. Source: Graphic elaboration by the author.

1.1.2 EDI in Design Studies

The concepts of Equality, Diversity, and Inclusion in design possess a profound and instructive genealogy. Unlike other creative or industrial fields where innovations in research and thematic exploration were primarily driven by emerging avant-gardes or shifting aesthetic paradigms and new industrial technologies, the embryonic discussion around inclusive practices emerged as a direct structural response to profound global emergencies. Yet, following the conclusion of the Second World War, thousands of military veterans returned to civilian life with unprecedented, severe physical, cognitive, and sensory impairments (Maisel *et al.*, 2018). This historical phenomenon forced architects and industrial designers to suddenly confront a widespread, localised mass emergency: the immediate provision of enabling objects, assistive technologies, and adaptive environments capable of restoring autonomous and independent living conditions (Hamraie, 2017). This era marked the emergence of early innovations in accessible design, design for advanced prostheses, and medical design to restore agency and autonomy to individuals. The socio-technical challenge was starkly defined by a physical reality that had to be urgently rebuilt to accommodate bodies that no longer conformed to the rigid anthropometric standards, standardised metrics, or industrial ideals of the pre-war era.

While these early functionalist interventions successfully established the foundation for accessible design, subsequent decades witnessed a major shift toward what is recognised today as a post-Universal Design paradigm. Overcoming the historically limiting approach of "designing for the average user" has required contemporary design studies to intentionally adopt complex intersectional lenses that account for the overlapping variables of gender, psychophysical abilities, socioeconomic background, and culture (Story *et al.*, 1998; Clarkson & Coleman, 2015). The classical Universal Design philosophy often inadvertently pursued a non-existent, homogenised ideal of human capability; conversely, contemporary intersectionality recognises that human vulnerability is highly dynamic and contextual (Crenshaw, 1989; Story *et al.*, 1988). By moving past a rigid, checklists-based compliance, this evolved framework conceptualizes human diversity not as an anomalous deviation from a standardised norm, but as a primary creative catalyst. This structural integration underpins Inclusive Design theory – and the practice of designing inclusively – frameworks systematically oriented toward evaluating the entire spectrum of human capability within the development lifecycle. This paradigm shift encourages systemic practices that position both designers and end-users within a non-hierarchical process, fostering critical thinking and the generation of goal-oriented solutions that actively empower pluralistic identities rather than merely accommodating specific medical or physical conditions (Mace, 1998).

Consequently, embedding EDI principles within this expanded theoretical terrain fundamentally alters the operational modalities through which products, digital services, and complex architectural environments are conceived. This shift does not imply a generic renewal of user interest – since user participation has been methodologically grounded in design studies since the late twentieth century – but rather a structural reorganisation of how user insights are validated. The impact on the design process is immediate and transformative. Instead of treating users as passive data points or mere consumers to be analysed, an EDI-driven methodology integrates them as active co-researchers who bring critical value and structural feedback from the earliest phases of contextual research and design brief formulation. This represents a major evolution compared to traditional User-Centred Design (UCD) models, where diverse demographics are often

excluded during initial exploratory stages and only consulted during late-stage rapid prototyping and usability testing, when the core architectural and formal parameters of the project are already non-negotiable.

Within this framework, co-design operates as a rigorous, reflexive, iterative practice designed to extract meaningful qualitative insights while actively decentralising creative authority (Sanders & Stappers, 2008). Under an EDI lens, the design process ceases to be an isolated instrumental action aimed at generating commercial outputs; instead, it becomes a mutual learning environment that benefits users, designers, and industrial stakeholders alike (Rossi, 2024). Operatively, this paradigm demands that design teams critically restructure three key areas: the selection of user samples, ensuring they mirror the actual socio-demographic complexities of the real-world market; the facilitation of co-creation sessions, guaranteeing that every participant feels psychologically safe, welcomed, and respected in sharing complex desires or socio-cultural values; and the alignment of corporate mindsets, ensuring that industrial partners recognise inclusivity as a core performance metric. Finally, these inputs are iteratively carried into the conceptualisation and structural development stages, where the proposed solution is systematically tested against novel, pluralistic validation protocols.

A specific and essential area of development arising from this procedural evolution concerns the long-term accountability and socio-political impact of design outcomes. By embedding EDI into the epistemic core of design studies, the discipline introduces a comprehensive understanding of a designer's responsibility regarding the social and ethical externalities of the artefacts they introduce into public and private spheres. While ethical accountability has historically informed the discipline, the systemic integration of EDI intensifies this imperative, framing the designer's role as an active mediator whose ongoing engagement with end-users shapes the political economy of the artefact. Industrial products, digital interfaces, and spatial systems are never neutral; they inherently materialise political choices and possess the capacity to either institutionalise equity or perpetuate systemic exclusion long after their commercial distribution. A truly inclusive design process therefore demands that practitioners project their evaluative metrics far beyond immediate commercial success or short-term ergonomic compliance. Designers must evaluate the life cycle of their solutions against long-term socio-political indicators, actively predicting whether an innovation will democratise resource access or introduce new digital and physical divides, thereby establishing a rigorous standard of accountability toward the preservation of human dignity (Buchanan, 2001).

1.1.3 Design for EDI

Proposing a comprehensive and authoritative definition of Design for EDI offers a privileged yet challenging opportunity to map a multidimensional landscape of opportunities for practitioners, spanning theoretical, cultural, procedural, ethical, operative, and methodological dimensions. This necessity arises because EDI, within contemporary design studies, must not be misconstrued as a mere triad of buzzwords or bureaucratic checklists; rather, it represents a polysemic, system-oriented, and socio-technical framework. This framework explicitly links the raw human dimension, the artefact-mediated human-environmental interaction, and the macro-contextual dynamics that envelop this operational setting (Holmes, 2018). Yet, while formulating a new definition is highly stimulating from an academic perspective, a primary risk to mitigate is the proliferation of redundant terminology. In a disciplinary landscape where over twenty localised in-

clusive design approaches already coexist – frequently generating cultural frictions, biased knowledge, and boundary disputes – the objective must not be to fence off a new sub-discipline. Instead, the focus must shift toward analysing how these three distinct core components cooperatively interact, ultimately concurring to build an overarching umbrella-scenario capable of systematizing and operationalizing pluralistic design theories (Balaram, 2011).

To activate this systemic scenario, we must systematically deconstruct how each component manifests within the design lifecycle, identifying the specific dimensions of visibility they introduce. The concept of Equality establishes the foundational, committed cultural premise of any design intervention. It defines the structural provision of fair, unbiased artifacts that respect users' varied physical and socio-economic realities, guaranteeing that individuals feel protected, recognised, and empowered before, during, and after interaction. While the baseline quest for fairness is structurally latent within design history, under an EDI framework Equality acts as the explicit codification of "design intention". It governs the preliminary socio-technical conditions, ensuring that an artifact – regardless of its scale, nature, or medium – serves as a democratic conduit to access. Through the lens of Equality, the designer's primary mandate is to dismantle systemic barriers, ensuring all users are granted an uncompromised, symmetrical starting point to benefit from the designed ecosystem alongside their peers.

If Equality governs the ethical intention, the dimension of Diversity triggers a profound cultural and methodological shift, moving operational attention from mere access compliance toward the deliberate exaltation of human pluralism. Diversity within Design for EDI dictates the configuration of solutions, environments, and Product-Service Systems (PSS) that intentionally recognise, respect, and celebrate human differences, whether psychophysical, cultural, temporary, or permanent. This represents a major epistemological evolution: the design gaze shifts its focus from "assistance" to "exaltation". Artifacts are no longer calibrated around a paternalistic model of compensation; instead, they are engineered to enable a pleasant, dignified, and customised experience that sustains performance while honouring the specific cultural and cognitive capital of individual user capabilities. Consequently, Diversity bridges the pre-conditions of access with a tangible demonstration of design commitment, transforming human variation from a technical constraint into a primary creative catalyst.

Finally, Inclusion operationalises these frameworks by moving beyond the immediate, localised user-product interaction toward long-term, goal-oriented systemic impacts. Because spatial, digital, and material stimuli exert a direct influence on the psychological and cognitive states of users – modulating motivation, self-worth, and social belonging – Inclusion approaches the human condition through its complex, intersecting structures of gender, race, culture, and socio-economic status. It explicitly addresses the sociological and environmental externalities produced by the artifact over time, answering a critical meta-question: to what extent does the collective use of this system make diverse communities feel structurally welcomed, valued, and safe within a specific context? Within this paradigm, an inclusive artifact ceases to be a static commercial object; it becomes an active enabler of democratic societal values. Inclusion captures the highest socio-political mission of design, requiring practitioners to think holistically in terms of systemic societal outcomes rather than isolated commercial outputs (Manzini, 2015).

In this process, a definition of Design for EDI can be proposed: "Design for Equality, Diversity, and Inclusion" defines a reflexive design culture, an educational process, and an informed creative practice that systematically concurs to achieve the interconnected

levels of Equality, Diversity, and Inclusion across multiple socio-technical dimensions through holistic, cooperative processes (Rossi & Brischetto, 2024)[1]. As an impact-oriented activity, it stimulates critical, interdisciplinary inquiry to produce deep self-reflexivity in practitioners (Landa-Avila & Aceves-González, 2018) regarding three core axes:

1. "Initial Intentions": Who are we including, who is being inadvertently excluded, and why?
2. "Design Modalities and Commitment": How do we decentralize authority within the process, and how does the artifact physically manifest inclusion?
3. "Systemic Missions": What long-term, democratic socio-political outcomes do we expect to sustain through the artifact's introduction?

As this definition implies, Design for EDI does not propose a new technical discipline, but rather a profound cultural restructuring of design epistemology. A critical consequence of this framework is the radical redistribution of decisional power away from the historically isolated practitioner toward a decentralised design ecosystem (Di Salvo, 2022). This collaborative matrix effectively operationalises the shift toward the designer as an "enabler and facilitator of plural instances" – an informed, reflexive figure who coordinates participatory processes and articulates mature, non-hierarchical dialogues among highly diverse stakeholders.

This professional evolution inevitably demands a significant expansion of the competencies required across the new product development lifecycle. Alongside traditional hard and soft skills – such as technical proficiency in industrial manufacturing, project negotiation, and structural problem-solving – Design for EDI calls for highly sophisticated, advanced literacies. These include the capacity to interpret both explicit and latent user needs tied to complex intersectional identities; an operational understanding of participative, circular business models that support bottom-up social transitions; and a deep awareness of how social innovation can be leveraged to trigger market discontinuities, effectively dismantling outdated, exclusionary industrial production models.

The primary operational challenge within Design for EDI lies in constructing a rigorous "translation machinery" capable of converting these high-level ethical values and socio-political aspirations into tangible, empirical parameters of formal, technical, and algorithmic configuration. To prevent EDI from degenerating into purely rhetorical or superficial positioning, the abstract commitment to social equity must be systematically materialised through concrete design variables. This translation operates simultaneously across three interconnected layers of architectural and industrial synthesis.

The first layer is the morphological configuration. Having rejected static, average-body metrics, morphological synthesis must embrace fluid, non-standard geometries and polymorphic affordances. This means translating the value of Diversity into physical interfaces, product envelopes, and architectural spaces whose formal language inherently communicates multiple pathways of physical interaction, accommodating highly varied grip types, sensory variations, and spatial approaches without forcing the user into a stigmatizing, adaptive posture (Story, 2001).

The second layer involves the technical and structural architecture. To operationalise Equality and prevent systemic obsolescence, the internal technical architecture of products and systems must pivot toward open modularity, toolless adjustability, and structural elasticity. By embedding multi-layered physical adjustments directly into the product's core engineering, the artifact can be structurally reconfigured by the end-user to match changing temporary or permanent capacities. Technical design must prioritise material

honesty and cognitive clarity in assembly, allowing users to intuitively adapt the product's physical performance to their evolving domestic or professional ecosystems (Ulrich, 1995).

Finally, the third layer entails algorithmic and generative systems. Especially within digital or phygital environments, the principle of Inclusion demands a shift away from hard-coded, prescriptive layouts toward dynamic, adaptive architectures. Ethical data-management and mitigation of algorithmic bias must be translated into fluid, interactive behaviours. Rather than merely offering superficial accessibility toggles (e.g., text resizing), the system must utilise generative algorithms to dynamically restructure the cognitive hierarchy, information density, and interactive modalities of the interface in real-time. This adaptation must respond precisely to the user's specific, intersectional cognitive styles and environmental constraints, ensuring that the technology actively deconstructs digital divides at the code level (e.g., W3C, 2018).

1.1.4 Teaching Design for EDI: An Opportunity for the Higher Education System

The concept of Design for EDI, as formulated in the previous definition, paves the way for a radical reconsideration of the higher education design matrix. It is evident that cultural competencies and strategic capabilities in this domain cannot result from a superficial, additive process that merely incorporates EDI terminology into existing pedagogical tracks. Instead, Design for EDI demands a rigorous analysis of the socio-political agency of designers, and consequently, a restructuring of the institutional ethos of design schools in shaping future vectors of social change.

To achieve this, Design for EDI must actively drive advances across all three core university missions: education, research, and knowledge transfer. In terms of education – the first mission – Design for EDI stimulates systemic innovation regarding the subjects introduced ("the what"), the pedagogical modalities through which content is delivered ("the how"), the enabling tools and methodological vectors ("the instruments"), the relational layout of studios and classrooms ("the where"), and, fundamentally, the ethical purpose of a contemporary design literacy ("the why"). In terms of research – the second mission – it mandates an evolutionary shift in participatory and co-design methodologies. This requires developing, testing, and scaling non-hierarchical frameworks for user engagement that empower citizens to act not merely as passive informants, but as active co-creators and informal designers of their own material environments. Finally, in terms of knowledge transfer – the third mission – Design for EDI translates these academic insights into impactful public-private partnerships, continuous professional development frameworks for industries, and concrete actions aligned with the UN Sustainable Development Goals (UN, 2015; European Commission, 2018). Within this tripartite framework, the ultimate mandate of higher education is clear: to systematically expand the cultural, technical, and human capabilities of students through a deeply reflective and operative inclusive design practice.

To shift from a superficial awareness to a mature design posture, higher education must implement a deep curricular integration. This shift requires overcoming episodic, vertical teaching models – such as elective seminars or isolated workshops – which relegate EDI to an optional, final-stage add-on. Instead, academic institutions must establish cross-disciplinary curricula where EDI operates as a permanent methodological prerequisite. Within this pedagogical framework, inclusive design principles are systematically embedded across the entire educational journey: from foundational courses to advanced design studios. By structuring EDI as an overarching requirement, students

learn to frame equity not as a separate constraint to balance against technical parameters, but as the generative core of the creative process. This integrated approach forces a continuous dialogue between ergonomics, sociology, human factors engineering, and advanced software design. Consequently, students develop a reflexive mindset that naturally integrates pluralistic user perspectives at every phase of the project, effectively transforming the traditional, siloed logic of technical modules into an interconnected, non-hierarchical learning ecosystem.

This curricular shift fundamentally requires the definition of robust project evaluation metrics to assess students' responsibility and inclusivity within design studios. To move beyond subjective, purely aesthetic evaluation criteria, design faculties must introduce transparent assessment matrices that evaluate the artifact's inclusive performance through tangible indicators. These metrics should explicitly measure three operational dimensions. The first metric is the intersectional user mapping: assessing the depth and ethical rigour of preliminary user research, penalizing reliance on abstract user personas or rigid anthropometric means. The second metric concerns the affordance elasticity: measuring the capacity of the formal and technical architecture to provide polymorphic interaction pathways without requiring stigmatizing, separate modifications. Finally, the third metric concerns the socio-environmental accountability: evaluating the long-term impact of the product-service ecosystem on community self-worth, democratic access, and user autonomy (Biggs & Tang, 2011).

By translating ethical values into objective grading parameters, the evaluation framework shifts from celebrating isolated, high-end design styling toward validating responsive, socio-technically mature interventions. Students are thus held academically accountable for the social and political externalities of their designs, establishing inclusivity as a non-negotiable metric of contemporary design excellence and professional validation.

1.2 Endogenous and Exogenous Threats

In design education, the application of EDI principles within undergraduate or postgraduate curricula requires a serious and careful negotiation process among the different institutional actors involved in high-quality education, such as school managers, directors, teaching staff, and quality assurance bodies, as well as students and external stakeholders. It does not simply translate EDI as an additive, cosmetic layer to further decorate the complex and sophisticated architecture of academic programmes. This is why it is more appropriate to talk about developing an informed culture of EDI for design studies. If this process is not collaboratively negotiated with all actors involved, EDI cannot be properly embedded in any academic structure, failing to generate the envisioned opportunity of developing the needed culture on Design for EDI (Rossi, 2024; Rossi *et al.*, 2024). Therefore, an analysis of potential critical systemic factors must be conducted ex ante to match existing conditions with endogenous and exogenous barriers.

The primary obstacle to embedding EDI in design pedagogy is the persistence of structural inertia and systemic resistance rooted within the traditional organisation of higher education (Barnett, 2000). When analysing the structural layout of contemporary design institutions, inclusion is too frequently treated as a passive compliance requirement managed by central administrative bodies rather than an active epistemological driver for design studios (Rossi *et al.*, 2024). This decoupling results in a profound rhetoric-practice gap. On an institutional level, university strategic plans, charters, and mission statements widely declare a commitment to equity and diversity, often utilizing these

concepts to satisfy national quality assessment frameworks or to boost global institutional branding. However, a severe disconnect occurs when these high-level ethical assertions are expected to filter down into the actual reality of the design studio.

The transfer of EDI principles into design syllabi remains occasional, highly vertical, and entirely dependent on the goodwill and personal sensitivity of individual researchers and professors (Rossi *et al.*, 2024). This reliance exposes the educational system to severe operational fragility. Systemic resistance does not always manifest as an overt rejection of inclusive values; rather, it operates through a passive administrative containment. Design programmes are already structurally saturated by rigid accreditation rules, strictly timed credit-allocation systems, and hyper-specialised technical tracks. Within this congested operational framework, university managers and teaching staff frequently view EDI as an external ideological weight or a non-technical complication that threatens to slow down the delivery of traditional skill sets.

Consequently, the core concepts of equity and diversity are pushed to the absolute margins of the curriculum – relegated to brief introductory lectures, optional theoretical seminars, or short-term workshops (Garay-Rondero *et al.*, 2020). By keeping EDI isolated from the foundational core of design syntax, materials science, and prototyping laboratories, the institution implicitly signals to students that social equity is a secondary, optional concern, completely divorced from the hard technical and aesthetic realities of commercial production.

Following this mapping of structural reticence, a twofold critical analysis can be proposed, distinguishing between the exogenous and endogenous threats that actively block the evolution of design curricula and schools.

In terms of exogenous threats, three interconnected elements emerge from the macro-contextual environment, constantly pressing against the boundaries of academia. The first involves the hyper-functionalist market dynamics. Contemporary industrial and professional markets still operate under neo-Taylorist and hyper-functionalist paradigms. These logics prioritise short-term commercial outputs, speed of production, and optimization for the "average consumer" to maximise economies of scale. Consequently, when design students enter professional networks, they face systemic pressure to discard inclusive methodologies, which are frequently misconstrued by corporate actors as costly, slow, or niche complications rather than primary drivers of open social innovation (Chesbrough, 2003). The second is very serious and concerns the "EDI-washing" phenomenon (Rossi *et al.*, 2024). Mirroring the dynamics of greenwashing, EDI-washing occurs when private corporations superficially adopt the aesthetic and vocabulary of diversity for marketing and branding purposes without restructuring their internal production lines, product architectures, or algorithmic systems. This external opportunism contaminates design education by promoting a culture of superficial cosmetics over structural, formal, and technical reconfiguration. Finally, the institutional tokenism must be mentioned as a serious aspect that potentially may limit the strategic impact of EDI in design studies. This threat manifests when diversity is weaponized as a symbolic checklist. In this scenario, marginalised user groups or complex intersectional identities are integrated into design briefs merely as performative tokens to validate a project's ethical posture, without granting these stakeholders true agency or distributive decisional power within the co-design process.

Regarding endogenous threats, three internal institutional vulnerabilities must be critically addressed within the design school ecosystem. The first one concerns departmental and disciplinary silos. Academic structures are historically organised around rigid,

self-referential disciplinary boundaries. This fragmentation isolates design faculties or schools from the social sciences, cognitive ergonomics, and gender studies. Without a cross-departmental collaborative infrastructure, design studios lack the multi-layered inputs required to accurately decode and operationalise intersectional human needs. As a partial consequence of this risk for isolation, the second threat involves the lack of specific pedagogical training for teaching staff (Boyer, 1990). While design professors possess extensive hard skills in industrial manufacturing, visualisation, or architectural composition, they are rarely equipped with advanced pedagogical literacies regarding inclusive facilitation, Universal Design history, or the mitigation of implicit cognitive biases within the studio environment. Finally, it is also important to mention the misunderstanding of EDI as a driver of innovation. A persistent, defensive sub-culture within design schools still views EDI as an ideological restriction that dampens creative freedom and formal experimentation. There is a profound lack of structural understanding regarding how EDI can actually act as a powerful epistemological catalyst, capable of generating market discontinuities, pioneering new product-service archetypes, and revitalizing design theory itself.

The complex interaction of these exogenous and endogenous threats generates a highly damaging yet hidden systemic cost: the complete loss of pedagogical cumulativity, as shown in Fig. 1.3. Currently, the higher education landscape is not entirely devoid of inclusive practices; on the contrary, it produces extraordinary, highly localised vertical design experiments. Across international design schools, individual master's theses, specific social design studios, and temporary research-led workshops achieve outstanding levels of inclusivity, delivering brilliant solutions that challenge exclusion in both material and digital spheres. However, because these educational practices lack institutional standardisation and a unified methodological protocol, they remain ephemeral, self-contained islands of excellence. When an isolated inclusive design studio concludes, or when a highly committed professor moves to another institution, the entire body of knowledge generated during that educational cycle is effectively lost to the discipline.

The tacit knowledge built through direct field interaction, the localised co-design toolkits developed by students, and the crucial user-insights provided by marginalised community participants are completely dispersed. This lack of structural capitalisation prevents design schools from building a progressive, collective, and cross-institutional body of knowledge (Kuzmina *et al.*, 2023; McDonald *et al.*, 2023). Design studies, therefore, suffers from an "epistemic amnesia". Instead of advancing on a shared, evolving platform where each academic year builds upon the validated findings of the previous one, each faculty is forced to cyclically reinvent the wheel.

This non-cumulativity causes a massive waste of vital academic research resources and human energy. Students and researchers are continuously forced to re-map the same entry-level user vulnerabilities and reformulate the same basic participatory protocols from scratch. Furthermore, this fragmentation damages the credibility of design education in the eyes of external industrial partners and civil society stakeholders; when research insights cannot be accumulated, scaled, or systematically replicated, they fail to transcend the status of episodic, feel-good academic exercises. Individual pedagogical excellence thus fails to translate into a scalable, systemic culture, leaving the broader discipline incapable of generating a sustained, long-term impact on the industrial market.

To permanently dismantle this inertia and halt the dispersion of knowledge, a central, disruptive thesis can be proposed: these systemic threats and institutional frictions must not be treated as unavoidable ideological barriers, but rather as practical, operational

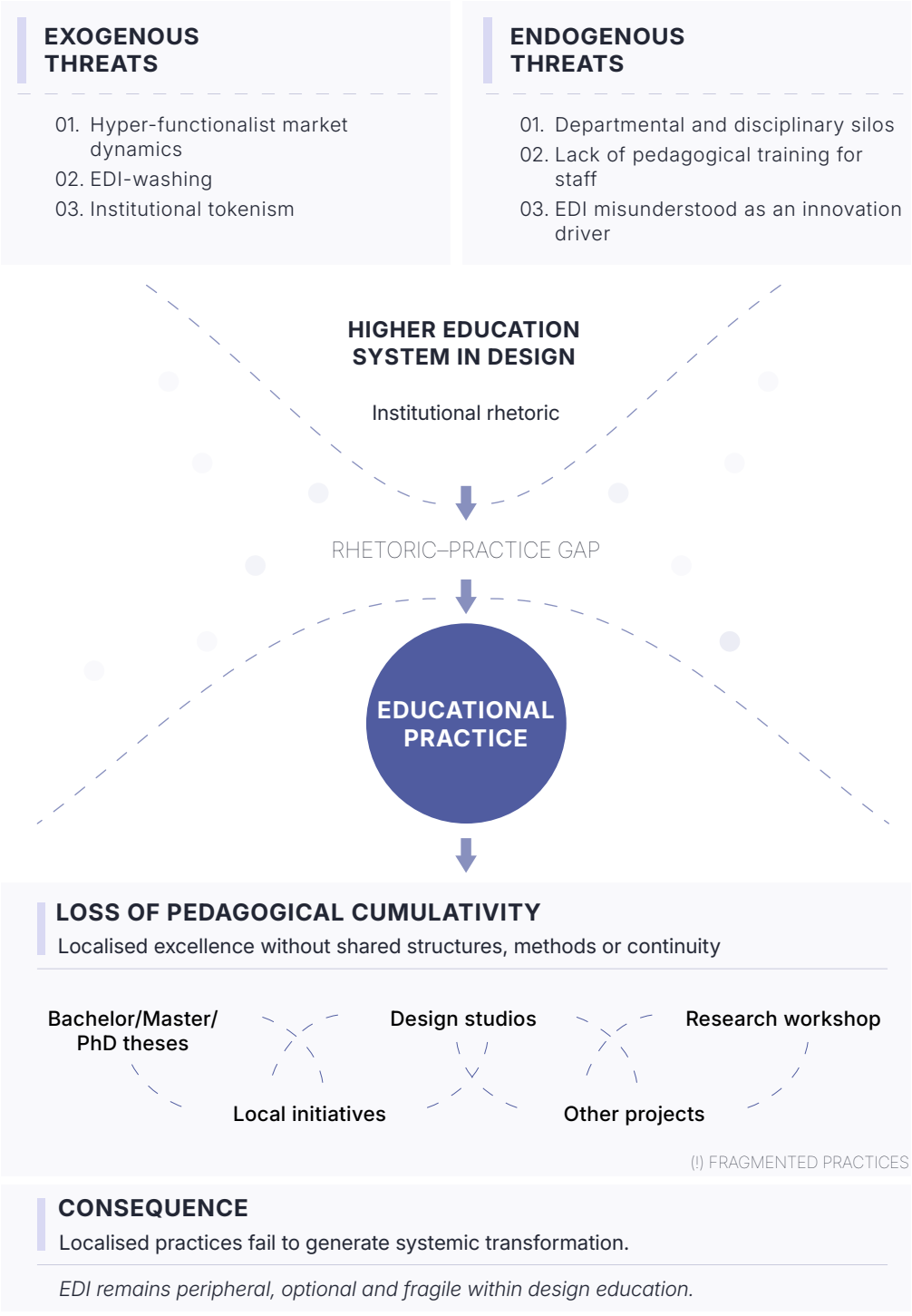


Figure 1.3. Structural mapping of exogenous and endogenous threats affecting the implementation of Design for EDI in higher education. Source: Graphic elaboration by the author.

problems to be resolved through the deployment of dedicated digital infrastructures and shared standardisation tools. The historical resistance of the academic system can be effectively mitigated by replacing uncoordinated individual efforts with a common, open-access pedagogical architecture. By translating high-level, abstract EDI principles into structured digital toolkits, cross-institutional repositories, and transparent evaluation matrices, the higher education system can democratise and stabilise inclusive design literacies.

Digital infrastructures offer the necessary operational framework to transform isolated pedagogical insights into a cumulative, global asset. Imagine an open, standardised digital ecosystem where every design studio can upload, categorise, and cross-reference its participatory research methods, verified user-testing frameworks, and polymorphic morphological solutions. Through this digital infrastructure, a co-design matrix developed in a digital interface studio in one part of the world can instantly become the verifiable baseline for a product-service system project in another, ensuring that knowledge is capitalized rather than forgotten.

Standardisation, within this methodological framework, does not imply the homogenization of creative expression or the flattening of aesthetic experimentation. On the contrary, it provides the stable, non-hierarchical, and rigorous structural platform necessary to operationalise human pluralism. It establishes a common language that allows disparate design faculties to collaborate, communicate, and evaluate the societal impact of their outputs. By embedding these shared digital tools directly into the everyday lifecycle of new product development, design institutions can systematically bridge the gap between administrative rhetoric and studio practice. This infrastructural transformation shifts EDI from a subjective, emotional aspirations into a series of verifiable, replicable, and scalable parameters of professional design excellence, ensuring that the design discipline can finally meet its ethical accountability toward the preservation of human dignity.

1.2.1 The Proliferation of Cultures, Terms, and Approaches

The contemporary landscape of design studies faces a severe crisis of terminological proliferation, where the core aspiration toward human-centred equity is actively weakened by an uncoordinated plethora of definitions. Over time, the expanding scope of design interventions – shifting from localised physical products to complex product-service systems and digital ecosystems – has generated distinct localised lexicons. Concepts such as “Universal Design”, “Inclusive Design”, “Accessible Design”, and “Barrier-Free Design” are continuously used interchangeably within both scholarly literature and institutional frameworks. Rather than enriching the discipline, this terminological chaos introduces profound semantic ambiguity. The lack of distinct boundaries between these adjacent labels dilutes their political and operational edge, transforming deeply transformative design philosophies into empty, administrative buzzwords that fail to challenge established industrial production models.

This linguistic saturation creates a severe obstacle to scientific comparability and empirical validation. When different academic departments or research consortia employ terms like “inclusive” or “universal” without a shared, non-negotiable taxonomic baseline, the cross-analysis of project outcomes becomes impossible (Bianchin & Heylighen, 2017).

For instance, an artifact validated as “inclusive” within a specific American user-experience framework might completely fail to meet the structural criteria of Inclusive Design within a European spatial planning context (Clarkson & Coleman, 2015). This lack

of rigorous equivalence prevents the formulation of unified key performance indicators (KPIs) and benchmark standards (Paraschiv *et al.*, 2021), trapping design research in a pre-scientific state where individual case studies cannot be cross-referenced, scaled, or systematically integrated into broader public policy or industrial roadmaps. This epistemological blindness permanently conceals the substantial differences between a project that merely removes a physical barrier and one that structurally redistributes socio-technical agency among marginalised communities, leading to an overall stagnation of theoretical advancement (Holmes, 2018).

This lack of a unified taxonomy directly drives the crystallisation of rigid methodological silos across international higher education networks. Instead of cooperating within a global, interconnected repository of design knowledge, various design schools – and scholars – have built isolated, self-referential research clusters. These clusters frequently defend proprietary frameworks and localised toolkits, giving rise to an academic regionalism where ideological positioning takes precedence over structural methodological transferability. Within these silos, the co-design methodologies, user-testing protocols, and ergonomic data generated are formatted using incompatible criteria. Consequently, successful design experiments conducted in one academic centre remain locked within that specific institutional ecosystem, completely inaccessible to international researchers seeking to cross-validate the replicability of those findings.

In the professional and commercial realms, this fragmentation is further amplified by market-driven opportunism (Holmes, 2018). Companies frequently exploit this lack of taxonomic precision, co-opting terms like “universal” or “inclusive” in commercial campaigns as superficial marketing buzzwords (Design and Architecture Norway, 2018), detached from any genuine transformation of internal code, product geometry, or supply chain structures. This commercial blur backfires into academia, creating a damaging feedback loop where students and practitioners emulate superficial design solutions under the mistaken impression that they represent rigorous inclusive practice – it is common to see students considering as “inclusive” a set of solutions that are mainly designed through accessibility criteria (Attaianese *et al.*, 2021). Without an objective, trans-institutional framework capable of peer-reviewing and cross-validating the actual socio-technical impact of a design output, the discipline remains vulnerable to indirect learning distortions, forcing researchers to constantly expend resources re-mapping elementary user vulnerabilities rather than advancing the shared frontier of design innovation (Patrick & Hollenbeck, 2021).

To halt this permanent state of disciplinary fragmentation and establish lexical stability, the structural framework of Design for EDI emerges as a necessary taxonomic synthesis. Design for EDI does not seek to fence off yet another insular sub-discipline, nor does it dismiss the historical and operational value of previous traditions. On the contrary, it operates as an open meta-framework designed to systematically gather, order, contextualise, and subsume preceding inclusive design cultures under a unified, three-dimensional socio-technical paradigm (Rossi *et al.*, 2024). By mapping the specific operational mandates of Equality (governing initial intentions and systemic access), Diversity (exalting human pluralism through customised affordances), and Inclusion (measuring long-term democratic externalities), this synthesis provides a clear, non-hierarchical architecture where previous localised approaches find a rigorous, integrated placement.

The introduction of Design for EDI as a rigorous taxonomic standard permanently resolves the rhetoric-practice gap that plagues contemporary design pedagogy. By replacing fragmented vocabularies with a stable, comprehensive matrix, this framework equips

Design schools, quality assurance bodies, and cross-border research consortia with a common, unambiguous language. Consequently, university evaluation boards and international scientific committees gain the ability to systematically review and benchmark curricula worldwide, preventing the uncritical approval of superficial educational modules. It translates high-level ethical responsibilities into clear, shared, and measurable project parameters across the three levels of morphological, technical, and algorithmic synthesis. Ultimately, this taxonomic consolidation transforms EDI from an emotional, uncoordinated aspiration into a stable, cumulative, and deeply reflexive scientific culture, ensuring that future generations of design practitioners can operate on a unified foundation of verifiable professional excellence.

1.2.2 Aleatory Teaching Approaches

The translation of EDI principles into the design studio environment suffers from a profound operational volatility, frequently manifesting as an uncoordinated, episodic phenomenon (Hasanin, 2013). Within contemporary higher education, the integration of EDI parameters into industrial, spatial, or digital design syllabi is heavily dependent on the individual ethical sensitivity and personal research trajectory of single design professors. While the commitment of these isolated, highly motivated scholars often yields remarkable pedagogical experiments and localised social design initiatives, this vertical volunteerism inherently exposes the educational framework to systemic precarity. Inclusive Design education cannot rely on individual enlightenment; when a curriculum lacks structural mandates, the inclusion of human diversity fluctuates according to the rotating teaching staff assigned to a specific studio, transforming a fundamental civil right into a casual, unpredictable curricular option (Zoltowski *et al.*, 2012).

This extemporaneity creates a severe lack of institutional continuity that undermines the long-term strategic mission of design schools. Because these pedagogical experiences are born as isolated, autonomous initiatives, they rarely interface with the broader programmatic architecture of the department. Consequently, when a specific faculty member departs or moves to another academic institution, or when other dynamics occur, the advanced inclusive methodologies and co-design networks developed during their tenure disappear with them. This systemic volatility prevents the establishment of a collective, shared teaching agenda. Rather than forming a stable, cross-generational transmission of design literacies, inclusive education remains locked in an ephemeral state, preventing the faculty from building a consolidated pedagogical heritage capable of structurally transforming the cognitive and operational tools provided to future practitioners.

This structural aleatory is further compounded by a critical assessability deficit within the evaluation protocols of design studios. While contemporary design pedagogy possesses highly refined, standardised criteria to evaluate the structural integrity, manufacturing feasibility, formal aesthetics, and market viability of a product or service, it exhibits a total absence of rigorous, objective metrics to measure the efficacy of inclusive design competencies. The evaluation of user diversity and intersectional equity within student projects remains largely qualitative, impressionistic, and subjective. Assessment boards frequently reward a project's inclusive intentions – often presented through emotive narrative scenarios or generic personas – without possessing the analytical instruments necessary to verify the actual technical, cognitive, or morphological performance of the artifact against specific vulnerability indicators.

The absence of an objective evaluation matrix produces an educational environment where students are rarely held accountable for the real-world social externalities of their design configurations. Without structured KPIs capable of measuring universal usability, cognitive ergonomics, or algorithmic bias mitigation, the validation of student work defaults to traditional market-driven or purely formal criteria. This lack of academic standardisation leaves the discipline unable to cross-validate student learning outcomes between different international design schools. It isolates the evaluation phase from any rigorous scientific protocol, ensuring that inclusive design proficiencies remain unquantifiable and unverified, preventing design education from achieving the status of a mature, replicable, and professionally auditable science.

The combination of extemporary teaching methods and the absence of rigorous assessment metrics directly damage the epistemic value of EDI in the eyes of the student body. When students observe that inclusion is treated as a separate, optional add-on – debated only in specific theoretical seminars but largely ignored during technical prototyping, material synthesis, or engineering reviews – they quickly internalize a distorted perception of the discipline. Instead of recognising EDI as a powerful, non-negotiable driver of socio-technical innovation and a rigorous method of scientific inquiry, students begin to view diversity through a lens of superficiality, classifying it as a mandatory exercise in political correctness or a decorative narrative layer designed to satisfy the ethical sensibilities of the evaluation panel.

This internalization of cosmetic compliance breeds a deep professional cynicism among future designers, who learn to co-opt the vocabulary of inclusivity to mask conventional, non-inclusive design architectures. When EDI is taught without the backing of a stable, systematic methodology, students fail to acquire the complex hard skills required to operate within contemporary industrial networks, where complex human diversities must be translated into precise technical requirements, universal digital architectures, and compliant product geometry. This failure perpetuates a damaging cycle of indirect learning distortions: design graduates enter the professional market equipped with advanced rhetorical skills but entirely lacking the operational competence to dismantle systemic exclusion, permanently restricting the potential of the design discipline to act as an authentic instrument of social justice and human dignity.

1.2.3 Absence of Foundations and Teaching Frameworks

The operational volatility identified within individual design studios points directly to a deeper, structural vulnerability: the chronic absence of shared epistemological foundations and unified teaching frameworks. Within higher education, design schools struggle to deliver high-quality, standardised curricula on Design for EDI. This instructional gap equally penalizes postgraduate and doctoral researchers, who are deprived of an unbiased, scientifically validated corpus of knowledge. The core of this issue lies in the divergence between theoretical conceptualisations of EDI and their methodological application. Without a clear translation mechanism, students lack actionable tools to systematically apply inclusive principles across different scales of design synthesis – be they physical products, service systems, or digital interfaces.

The absence of standardised pedagogical foundations immediately prevents the establishment of inclusive, non-discriminatory, and sustainable learning environments. On such fragmented ground, severe systemic repercussions emerge. Firstly, the body of knowledge on Design for EDI becomes vulnerable to subjective, localised interpretations,

facilitating regional approaches that scatter the discipline's scientific validity. Secondly, this theoretical ambiguity forces students to operate with imprecise research methods, leading to inconsistent learning curves; this is particularly hazardous in live projects with real stakeholders, where methodological errors produce exclusionary or patronizing outcomes. Finally, this fragmentation jeopardizes institutional compatibility, creating major frictions during student mobility between different schools due to the complete lack of credit and competency equivalence.

This structural deficit directly impairs the international transferability of design knowledge. Because design is inherently an interdisciplinary, globally networked discipline reliant on cross-cultural dialogue (Cross, 2025), the lack of a standardised taxonomy reinforces protective regionalisms and academic silos. International cooperation is essential to synchronise pedagogical agendas and enrich collective learning curves; yet, when unmapped and culturally biased frameworks clash, academic partnerships experience deep pedagogical friction. This friction is not merely linguistic, but deeply methodological, as different design schools operate under contrasting assumptions of what constitutes equity or diversity based on their local socio-political histories. Without a shared taxonomy, joint research programmes and academic collaborations spend excessive energy translating basic concepts rather than advancing the scientific frontier of the discipline, effectively locking valuable pedagogical insights within isolated geographic and cultural boundaries.

This barrier significantly limits the replicability of teaching contents across international borders. While funding mechanisms such as the European Commission's Erasmus+ program – specifically through Key Action 1 (learning mobility of individuals) and Key Action 2 (cooperation partnerships among organisations and institutions) (European Commission, 2025)[2] – provide ideal administrative and financial platforms for cross-cultural contamination and active learning, their transformative potential is severely throttled. In the absence of an underlying, agreed-upon pedagogical foundation, these international exchanges risk circulating and amplifying localised misconceptions and superficial accessibility checklists rather than disseminating rigorous, peer-reviewed inclusive methodologies. When students and academic staff migrate between institutions under the umbrella of these mobility programmes, the lack of mutually recognised EDI competency standards often results in a fragmented learning experience, where advanced inclusive design principles are treated as arbitrary, non-transferable electives rather than core, cumulative scientific qualifications.

Consequently, resolving this pedagogical fragmentation requires a coordinated, flexible effort toward standardisation, uniting school managers, teaching staff, and students in a common scientific culture. School managers must proactively align institutional structures, strategic plans, and internationalization policies with these emerging societal and market-oriented demands, recognising that a rigorous Design for EDI framework bridges the historical gap between academia, civil society, and industrial stakeholders. Simultaneously, the teaching staff must transition from isolated, volunteer facilitators into active contributors to a global, standardised body of knowledge; they must act as key translators, capable of adapting international research benchmarks to the specific socio-cultural requirements of their local design studios. Finally, students must be granted access to a stable, advanced, and experiential learning platform, enabling them to act as competent, ethical actors who do not merely theorize about diversity, but possess the practical, technical, and hard skills necessary to dismantle systemic exclusion within real-world industrial networks and global design practices.

Ultimately, the necessity of introducing a flexible standardisation framework within design education raises a fundamental epistemological question: How can we build a shared, globally compatible pedagogical architecture that guarantees scientific rigour, cumulative knowledge production, and institutional transferability without stifling the creative freedom, formal experimentation, and cultural pluralism that define the very soul of design excellence? To address this question, design schools must abandon the illusion that inclusivity can be taught through unstructured empathy or localised volunteerism. It is precisely within the resolution of this apparent paradox – balancing taxonomic rigour with creative adaptability – that the future of design education, and its capacity to systematically and scientifically safeguard human dignity across all socio-technical systems, must be firmly established.

1.2.4 No Cooperative Spaces for Inclusive Teaching and Learning

The systemic isolation of pedagogical resources and knowledge assets within contemporary design education represents a critical vulnerability that directly undermines the discipline's capacity to address urgent socio-technical challenges. If the primary mission of higher education institutions in the field of industrial and service design is to train future generations of designers as conscious, ethical, and capable shapers of society, there exists an undeniable moral and operational imperative to foster the open circulation of replicable, peer-reviewed knowledge. This is not an unprecedented academic challenge; the history of design education shows that disciplines which achieved rapid global scaling and methodological maturity – such as Design for Sustainability, Interaction Design, and Design Thinking – did so precisely because their early pioneers actively prioritised the dissemination of open-access teaching frameworks, shared syllabi, and accessible design toolkits. The horizontal circulation of these educational assets not only consolidated the scientific foundations of those emerging fields but also significantly elevated the public and industrial reputation of the pioneering institutions, transforming localised experimentation into internationally recognised pedagogical benchmarks.

In stark contrast to these collaborative precedents, the current educational landscape of Design for EDI remains deeply fragmented, characterised by a protectionist mindset that locks valuable instructional resources within isolated institutional boundaries. When the transmission of inclusive design methodologies is confined to localised, uncoordinated design studios, the discipline becomes highly vulnerable to subjective, regionalistic, and sometimes ideological interpretations that dilute its scientific rigour. For those entering this complex field for the first time – whether they are undergraduate students, postgraduate researchers, or young lecturers – the absence of accessible, validated pedagogical foundations frequently leads to the adoption of biased, superficial, or purely speculative frameworks that prioritise performative empathy over actionable, measurable design outcomes. This lack of a shared conceptual vocabulary and standardised practical tools leaves learners fundamentally unprepared to navigate the complex, multi-layered requirements of real-world industrial projects, where ill-conceived inclusive design decisions can actively perpetuate socio-spatial exclusion or reinforce paternalistic attitudes toward marginalised user groups.

This epistemic containment is further exacerbated by a deep technological mismatch between the digital tools utilised by contemporary academics and the actual cooperative potential of these infrastructures. While virtually all higher education institutions have adopted advanced digital ecosystems – such as learning management systems, cloud

repositories, and specialised databases – to host their syllabi, presentation slides, and educational toolkits, these resources are almost exclusively stored within closed local servers or behind password-protected university intranets. By restricting these valuable intellectual assets to internal university borders, institutions inadvertently stifle the democratic cross-pollination of knowledge and create a massive operational redundancy across the global academic network. Scholars and lecturers worldwide are routinely forced to dedicate significant intellectual and temporal resources to drafting identical introductory modules, basic accessibility checklists, and theoretical frameworks from scratch, rather than building upon, refining, and adapting existing high-quality materials developed by their international peers.

This infrastructural compartmentalization directly prevents the development of peer-validation and quality-control mechanisms, creating a landscape of unverified pedagogical experiments that lack collective oversight. Without an open, inter-university infrastructure designed to facilitate peer-to-peer review, four distinct and interrelated systemic threats emerge to undermine the academic credibility of Design for EDI. The first threat is the absolute absence of a dedicated digital medium capable of connecting the bottom-up demands of students seeking advanced training on specific inclusive topics with the top-down pedagogical offers of specialised researchers. The second threat involves the complete inability to leverage collective academic intelligence to validate, critique, and pressure-test new educational materials, which currently remain insulated from rigorous peer assessment. The third threat is the progressive erosion of active, trans-institutional dialogue among scholars, leaving them isolated within their regional departments without a safe, structured space to debate methodological evolution. Finally, the fourth and most critical threat is the impossibility of achieving an asymptotic, continuous refinement of the shared body of knowledge, as localised teaching insights are never systematically fed back into a centralised, dynamic repository where they can be tested and updated through collaborative action research.

To counter this systemic stagnation, universities must actively re-evaluate their traditional intellectual property frameworks and align their digital strategies with the modern definition of the “Third Mission” – the commitment to generating a distributed, public culture that drives positive societal transformation (Benneworth & Jongbloed, 2010). Transnational cooperation frameworks, such as the European Commission’s Erasmus+ program, offer robust administrative and financial platforms to support this shift; however, their long-term pedagogical efficacy depends entirely on the existence of a shared digital architecture. When academic mobility and joint curricula are built upon an open, standardised digital common, international partnerships can transcend superficial administrative credit exchanges and foster deep, meaningful methodological alignment. By transforming the development of inclusive design toolkits into a joint, co-produced, and co-reviewed endeavour, institutions can ensure that the knowledge circulated across international borders represents the highest tier of peer-validated academic excellence, ready to be immediately deployed within active design studios and multi-disciplinary classrooms.

Ultimately, the implementation of a flexible, open, and standardised digital repository for Design for EDI represents the only viable path to resolving the historic tension between academic standardisation and creative freedom. Rather than imposing a rigid, dogmatic curriculum that restricts artistic exploration, a collaborative “Open Pedagogical Commons”[3] functions as an adaptive scaffold, providing students and educators with verified, culturally-sensitive guidelines that can be freely customised to fit the unique re-

quirements of localised design contexts. By treating inclusive design knowledge not as a proprietary institutional asset to be guarded, but as a dynamic, evolving public good to be collectively enriched, the academic community can establish a highly resilient educational ecosystem. This shift from competition to cooperation is not merely a logistical upgrade; it is the fundamental prerequisite for transforming the noble aspirations of Design for EDI into a rigorous, predictable, and globally impactful scientific practice capable of systematically safeguarding human dignity.

Endnotes

1 "Design for Equality, Diversity, and Inclusion" is used in this volume as a working definition developed within the conceptual framework of the EDIDesK project. It identifies an integrated design culture, educational process, and creative practice rather than a separate or established design discipline.

2 Key Action 1 and Key Action 2 are two of the principal strands of the Erasmus+ programme. Key Action 1 supports the learning mobility of individuals, including higher education students and staff, whereas Key Action 2 supports cooperation among organisations and institutions, including cooperation partnerships and the development and transfer of innovative educational practices. See the European Commission's Erasmus+ Programme Guide: Key Action 1: Learning Mobility of Individuals and Key Action 2: Cooperation among Organisations and Institutions.

3 In this chapter, the expression "Open Pedagogical Commons" denotes a shared and evolving educational environment in which teaching resources can be accessed, peer-reviewed, adapted, reused, and collaboratively enriched. The expression is employed as a conceptual formulation rather than as the official name of an existing platform or established institutional model.





On this page: discussion and collaborative activities during the EDIDesK Halfway Meeting, University of Florence, Italy, 29-30 May 2025.







On this page: highlights from collaborative activities during the EDIDesK Halfway Meeting, University of Florence, Italy, 29-30 May 2025.

02

The Analysis of Current Teaching Offerings and Pedagogical Methodologies

Edited by Patrycja Rudnicka, Marta Więckowska

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2.1 Teaching Design for EDI: A Reasoned Introduction with Scope

Patrycja Rudnicka, Marta Więckowska

Current times are characterised by rapid social development and a growing awareness of the causes and consequences of exclusion and inequality. As Kat Holmes (2018) wrote, exclusion is a by-product of design decisions that create "mismatches" between people's needs and the world around them. Design education and practice are increasingly called to respond to those complex social, cultural, and institutional discrepancies and challenges. This shift requires not only new professional sensibilities but also more robust pedagogical models. Equality, Diversity, and Inclusion (EDI), which has emerged as a crucial field of reflection and action (Wolbring & Nguyen, 2023), is gaining attention and awareness in design education and professional environments (Rossi & Brischetto, 2024). Historically, design practice has been organised around market demands since the Industrial Revolution, while social need has emerged as a corrective and, in some accounts, a parallel mission (Margolin & Margolin, 2002; Papanek, 1973). The concept of EDI has served as a powerful cultural tool to counter the trend of global product standardisation driven solely by market pressures. Designers have been pulled toward social and environmental problems that lie outside conventional profit logic (Morelli, 2006). It has also clearly shown that the needs of markets and users might be seen as complementary rather than competitive (Margolin & Margolin, 2002). However, it needs to overcome historical injustices, systemic exclusion, and Western-centric bias to fully empower future generations (Rossi, 2024).

The EDIDesK project partnership includes four countries: Italy, Spain, Slovakia, and Poland. Design education in those countries developed differently due to political and historical conditions in the second half of the twentieth century. Three countries experienced specific challenges posed by repressive political systems that influenced the basic assumptions of twentieth-century design education (see Sects. 2.2.2-2.2.4).

The historical background of design in Catalonia and Spain was shaped by the end of political repression under the Francoist regime, a development closely connected to the democratic reclamation of public spaces. It has spurred the development of urban design and cultural revival, with design playing a critical role (Carrasco Parodi & Menichinelli, 2024).

In Poland and in Slovakia (the latter then part of Czechoslovakia), communist regimes influenced the role of design in the centralised socialist economy of shortages, with influential design institutions and the spectacular challenges of introducing their ideas and projects into mass production and the betterment of living conditions. However, it is important to note that ideas of equality and social responsibility were core values for many professionals at the time. In Poland, the writings of Andrzej Pawłowski, who founded modern design education in the 1960s and 1970s, remain formative for the understanding of the role of design in society (Więckowska & Rudnicka, 2024). In Slovakia, the biggest changes were introduced in the late 1980s and 1990s as a result of study visits and collaborations with institutions abroad, in Finland and the USA, which included Universal Design in architecture education.

Similar topics were present in Italy's design history, where design was also perceived as a practice that influenced the quality of life and accentuated its inclusive nature – the works of many important Italian designers focused on connecting design with civic responsibility, material culture, clarity, and accessibility (see Sect. 2.2.1).

Those historical influences are important for understanding the cultural and social foundations of the current understanding of design, which, at the level of values, incorporates EDI assumptions into designers' ethical and professional codes of conduct and the discipline's general positioning. On the other hand, even with the growing social and EDI consciousness, the integration of EDI in design education still often remains partial, uneven, and weakly formalised – as is stated in the EDIDesK project description on the website. In many cases, it appears as a thematic concern, an ethical orientation, or a transversal sensitivity, but not yet as a stable and assessable teaching structure. The literature on EDI-related design education was analysed by Rossi and Brischetto (2024).

The conclusions of the analysis of more than 50 identified sources confirmed the strategic role of the EDI concept on several dimensions, from content development, modality of knowledge acquisition, quality of studio environments, to cultural dynamics, stakeholders' relationships, and project characteristics, as well as experiential aspects of learning (Rossi & Brischetto, 2024, p. 17).

EDI in design education is advancing the field and facilitating sustainable progress, while also aligning with the evolving legal and regulatory landscape. The last few decades have brought genuine interest in and action on inclusion globally and in Europe, which has also influenced design education. The central issues in which EDI is rooted are human rights, sustainability, and accessibility. The Universal Declaration of Human Rights resolution from 1948 directly addressed equality and non-discrimination as universal rights (United Nations, 1948) and served as a basis for the 1960s and 1970s anti-discrimination movements and for movements for the rights of women, children, and other minority groups. Of course, efforts toward equality activities remain ongoing, as the world still sees inequalities systematically connected to geographical, social, and economic divisions, yet for Western societies, it was an important step forward. It was interconnected with democratisation and the development of the European Union, which further opened space for sustainable development and accessibility regulations.

Sustainable development is commonly understood as comprising three interconnected environmental, social, and economic pillars or areas, ensuring long-term continuity for generations. The policy and legal regulations of sustainable development began in the late 1980s with the Brundtland Report (World Commission on Environment and Development, 1987). Although the report is primarily regarded as a foundational document in sustainability policy, it emphasises equity throughout, appealing to fairness and equity in addressing current and future generational needs, reducing inequalities, and including the needs of marginalised communities. The United Nations Sustainable Development Goals align with EDI (United Nations, 2015), as they directly address equity, inclusion, accessibility, participation, and human rights. EDI in design education operationalises the social dimension of sustainable development and connects it with environmentally aware and economically viable solutions. EDI ensures that design processes and outcomes are equitable, accessible, participatory, and responsive to the needs of diverse communities.

Subsequently, with the discussion on sustainable development, the accessibility movement started to formalize in the USA and Europe. In 1981, accessibility began to shift from a charitable concern to an issue of equal rights with the declaration of that year as the International Year of Disabled Persons (UN DESA, 2026). Then, in the 1990s, the concept of Universal Design, pioneered by Ronald L. Mace *et al.* (1991), transformed accessibility from designing for disability to designing for everyone. Subsequently, starting with architecture and then in product design, digital design accessibility became an important design requirement. This was followed by the Americans with Disabilities Act (ADA, 1990),

the United Nations Convention on the Rights of Persons with Disabilities (United Nations, 2006), and the European Accessibility Act (European Parliament and the Council of the European Union, 2019), creating a regulatory framework for accessibility, including in design. EDI does not limit accessibility to disability-focused compliance; rather, it includes it as a fundamental principle. With the shift in social awareness and the introduction of legal requirements, it was necessary to operationalise these requirements within more inclusive design education on many levels: teaching about them, including marginalised groups in education and design debates, mitigating accessibility barriers in education itself, and focusing on sustainable equity. Currently, EDI principles are not only moral and ethical obligations but also provide a basis for social and economic competitiveness. They also reinforce entrepreneurial skills and graduates' readiness to tackle complex issues upon entering professional markets, creating more opportunities for inclusion.

However, with the general acceptance of EDI as an ethical umbrella term among design professionals, it is important to recognise how those values are introduced into design education at the European level. Several concepts of EDI (e.g., Inclusive Design, Design for All, Universal Design) are integrated into curricula. However, this is not uniform, and the lack of a European standard is evident, which is partially caused by the multifaceted nature of EDI, constant cultural changes, and a lack of networking among European Higher Education institutions (HEIs). Universal Design is taught mostly in architecture (Bernardi & Kowaltowski, 2010), whereas Inclusive Design is associated with digital products. Most papers discuss frameworks, approaches, and challenges of including EDI content in design education, yet qualitative approaches are rarely used. Beyond studies of Universal Design principles in the USA (Oro & Malhotra, 2024) and Turkey (Helvacioglu & Karamanoglu, 2012), systematic European research remains limited. One exception is the study by White *et al.* (2024), based on a small sample of professionals working in Ireland and South America. Oro and Malhotra's (2024) paper concludes that "sustainability is often prioritized while inclusivity remains elective" in design education in the USA. Findings from four European countries, the results of the EDIDesK project research, presented in further parts of this chapter, are more optimistic.

The EDIDesK project aims to create an open-access, sustainable knowledge platform on EDI to harmonise and facilitate the competitiveness, market readiness, sustainability, and inclusivity of EU HEIs in design. An important stage of the project was to map how design education includes and executes EDI-related teaching and learning content. The detailed reports from each stage of research are documented on the EDIDesK website and in this chapter, we rely on research findings and deliverables from the Work Package 2 (WP2) stage (see General Note on Chapter 2). During this stage, undergraduate (UG) and postgraduate (PG) design programmes were analysed in partner institutions' countries and teaching methodologies were analysed and prepared (see Sect. 2.3 and related project deliverable reports). The objective of the study conducted within WP2 of the EDIDesK project was to map the landscape of EDI in teaching in design and related fields in partner countries and globally. Its aim was to identify existing content, practices, and teaching approaches related to Equality, Diversity, and Inclusion in design and design-related higher education. The study focused on undergraduate and postgraduate programmes in Italy, Poland, Slovakia, and Spain and was complemented by a broader international perspective drawn from the Cumulus network. The research also aimed to develop a methodological framework capable of capturing differences across national contexts, the formal elements of curricula, and the less visible aspects of teaching practice shaped by educators' individual initiatives and approaches.

2.2 Analysis of Undergraduate and Postgraduate Teaching Modules

Patrycja Rudnicka, Marta Więckowska

The research within WP2 of the EDIDesK project included three complementary stages: desk research of teaching modules in Italy, Poland, Slovakia, and Spain, interviews with selected educators running high-quality courses, and a global survey among educators. The desk research provided a broad overview of existing educational provision, interviews with academics revealed how EDI was interpreted and implemented in everyday teaching practice, and the international survey enabled the identified issues to be compared with the experiences of a wider academic community. In parallel, a benchmarking analysis of analog and digital EDI tools was conducted. Together, these methods, summarised in the research plan shown in Fig. 2.1, allowed the research team to move from a broad mapping of educational provision to a more detailed analysis of selected modules and teaching practices. They also supported the identification of best practices, including how content, teaching tools, and methodologies are combined, as well as the potential role of the tools examined in the benchmarking process.

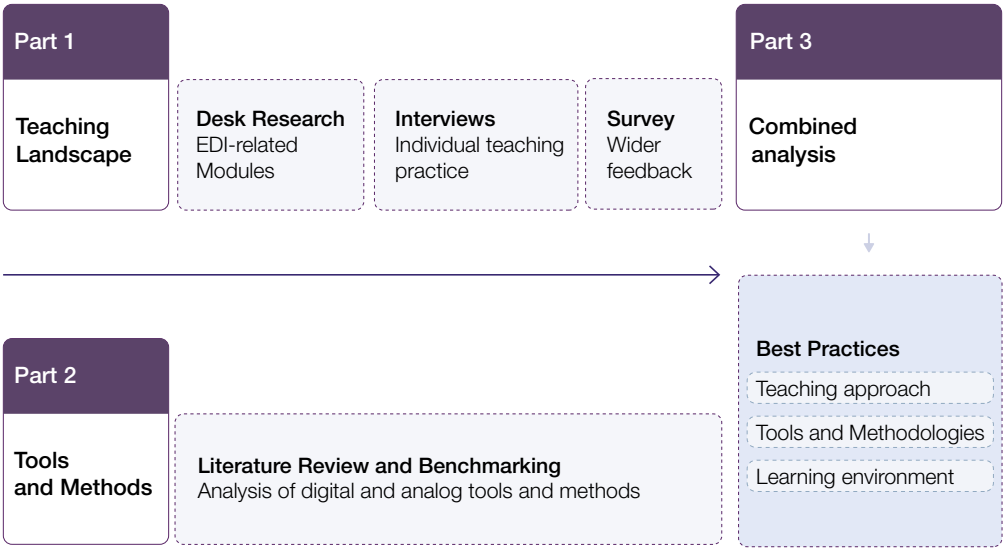


Figure 2.1. Research plan and structure. Source: Graphic elaboration by the authors.

In the first stage, project partners reviewed the websites of multiple universities in their countries to identify undergraduate and postgraduate modules that addressed EDI-related issues. To ensure consistency across the analyses conducted in each country, a common set of definitions and categories was developed, enabling the results to be compared. The extent to which EDI was integrated into each module was assessed using a five-level scale. The scale reflected how strongly the module content and assignments addressed EDI-related issues, whether EDI was present in student projects, and how consistently it was integrated across assignments. It was intended as a comparative instrument rather than an assessment of teaching quality (see Tab. 2.1).

EDI Level	Definition
Level 1	The module only covers selected issues about EDI.
Level 2	The module covers selected issues about EDI, and some student works show elements concerning EDI issues.
Level 3	The module covers selected issues about EDI, and most of the student works shows elements concerning EDI issues.
Level 4	The module covers selected EDI issues, most student works include elements concerning EDI issues, and a cooperation with an external partner in the area of EDI is carried out.
Level 5	The module is entirely/fully focused on EDI issues, and all student works properly address EDI issues.

Table 2.1. Five-level scale for evaluating EDI integration in teaching modules. Source: Adapted from EDIDesK Deliverable D2.1.1, p. 8.

Modules that met the selection criteria were then described using a shared framework covering basic information, programme characteristics, subject type, design field, EDI-related content, examples of student work, cooperation with external stakeholders, and available syllabi or teaching materials. The modules were also classified by their position and function within the curriculum by type. The categories, established jointly by the partners, included: basics of design, design studios, diploma studios or seminars, supporting and supplementary subjects, theoretical subjects, and activities outside the formal curriculum (see Tab. 2.2 and Fig. 2.2).

The research also distinguished numerous design domains, including product design, architecture, interior design, service design, visual communication, digital product design, design for public space, social design, and research. This categorisation enabled the capture of the diverse ways EDI is integrated into existing curricula, while the distribution of the identified modules by study level and country is shown in Fig. 2.2.

Type of subject	Definition
Basics of Design	A foundational course that introduces students to fundamental principles, theories, and skills that are essential for creative expression and problem-solving in the field of design. This subject typically covers core elements such as composition, colour theory, typography, spatial relationships, and conceptual thinking. Students explore these fundamental aspects through both theoretical study and hands-on projects, fostering a solid understanding of design principles that serve as a cornerstone for their further exploration and development within the broader field of design.
Design Studio	In a design studio module, students engage in the execution of complex design projects. These projects vary in levels of complexity, but the curriculum mandates the development of solutions for specific needs. Throughout the module, students actively participate in hands-on design work by applying their creativity and skills to address real-world challenges and produce practical solutions following specified requirements.

Diploma Studio / Diploma Seminar	A module where students work on their graduation projects, concurrently developing a written thesis that meticulously documents the entire process, with a particular focus on research aspects. Throughout this subject, students engage in comprehensive exploration, design, and implementation phases, culminating in the creation of their final graduation project. The written thesis serves as a detailed record, providing insights into the research methodology, decision-making processes, and the overall evolution of the project, showcasing the depth of understanding and critical thinking acquired during the module/course.
Supporting / Supplementary Subject	A practical subject not strictly related to a design studio activity. Students do some practical tasks like learning how to use color in design, how to conduct research, learn about technology and construction, exercise interpersonal communication, etc.
Theoretical Subject	It may refer to a subject that is more focused on theoretical concepts and principles rather than practical applications. Generally, the objective of teaching and learning of theoretical subjects is focused on transferring theories to students, which usually can be applied in practical design subjects.
Student activities outside the curriculum	Any other form of teaching and learning content that programmes may offer in order to enrich the cultural and technical skills of learners, such as visits to companies, informal workshops with stakeholders, guest lectures, student-led projects (e.g., competitions), etc.

Table 2.2. Definitions of subject types. Source: Adapted from EDIDesK Deliverable D2.1.1, p. 7.

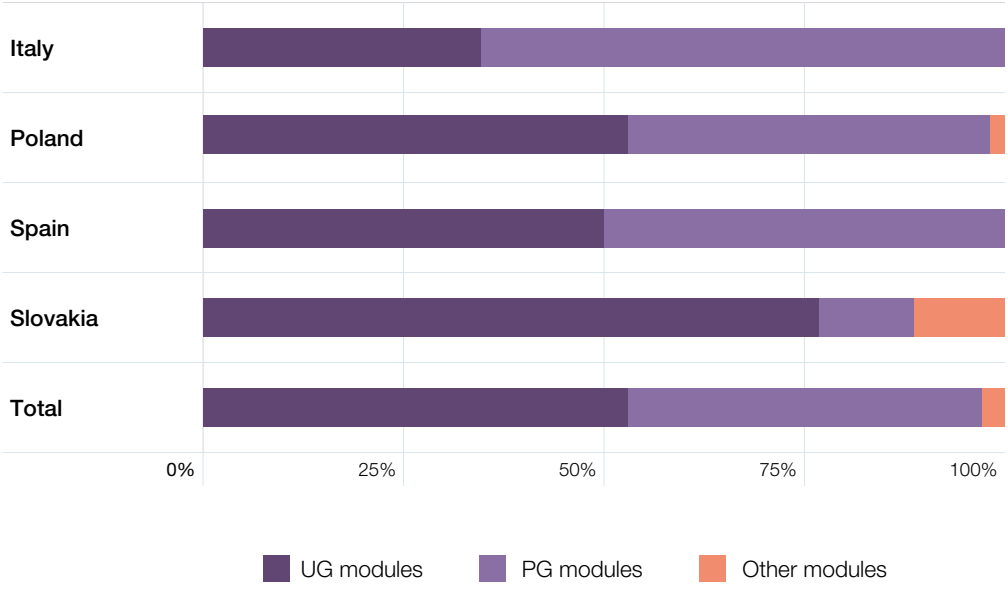


Figure 2.2. Distribution of educational modules by study level and country. Source: Graphic elaboration by the authors based on EDIDesK Deliverable D2.1.1, p. 10.

EDI Level	Italy	Poland	Spain	Slovakia	Total
4–5	6	17	5	4	**32**
3	14	20	6	0	**40**
2	2	14	7	1	**24**

Table 2.3. Distribution of identified modules according to scopes of content related to EDI. Source: EDIDesK Deliverable D2.1.1, p. 12.

The desk research identified 112 modules from 31 universities, while Tab. 2.3 summarises the distribution of the modules assigned to EDI Levels 2-5 across the four countries. Of these, 64 were offered at the undergraduate level, 52 at the postgraduate level, and three through other educational formats. Some modules were offered at more than one study level, which explains the overlap between the categories. The dataset comprised 28 modules from Italy, 52 from Poland, 10 from Slovakia, and 22 from Spain. These results confirmed that EDI-related content was present in design education in all four countries, although its scale, terminology, curricular location, and degree of formalisation varied.

The second stage of the research consisted of semi-structured interviews with academics responsible for selected modules addressing EDI. The modules were selected from the database created during the first research stage. The selection was based primarily on the extent to which EDI was integrated into the module, while also aiming to represent different countries, study levels, design fields, and subject types. The main purpose of the interviews was to move beyond the formal information available in module descriptions and gain first-hand insight into how EDI was understood, translated into teaching practice, and assessed by individual educators. The interviews added qualitative depth to the initial desk research and helped identify the characteristics of effective EDI-oriented design education.

A total of 34 completed interviews were included in the final analysis, covering a broad range of educational formats, including introductory design courses, design studios, diploma studios and seminars, theoretical courses, and supporting subjects. It included modules taught at both undergraduate and postgraduate levels. The represented disciplines encompassed product and industrial design, service design, digital and interaction design, visual communication, architecture, interior design, design for public space, social design, ergonomics, Universal Design, and design research.

Across the modules summarised by subject type, country, and design field in Tab. 2.4, the interviews covered seven areas: basic information, the educator's understanding of EDI, professional and academic experience, module content, methods of competence verification, teaching tools and methodologies, and the module's relationship to the wider curriculum. The collected information also allowed the research team to distinguish between the formal description of a module and the actual ways EDI was introduced through briefs, research activities, teamwork, stakeholder participation, prototyping, and assessment. The interviews were analysed through a common procedure developed to ensure comparability across the four partner countries.

Type of subject	Countries where represented	Design fields
Basics of design	Poland, Italy	Product design; Digital product; Visual communication; Architecture; Interior Design; Design
Design studio/diploma studio or seminar	Poland, Spain	Product design; Digital Product; Visual Communication; Architecture; Interior Design; Design
Supporting/supplementary subject	Poland, Slovakia, Spain	Design; Digital Product; Service Design; Research; Architecture; Design for public space; Product Design; Interior Design; Industrial Design
Theoretical subject	Italy, Poland	Digital Product; Design; Commercial design
Entire degree	Spain	Design

Table 2.4. Overview of interviewed modules leaders by subject type and design field. Source: Authors' own elaboration based on EDIDesK Deliverable D2.1.1, pp. 15-18.

Each interview was analysed by organizing the relevant content into predefined thematic categories and adding a structured summary. The summary focused on the most important aspects of the module, such as the module's type and place in the curriculum, the specific approach to EDI education, key EDI-related competences, and methods used to verify them, such as project evaluation, tests, or self-reflection. Each analysis also included a meaningful quote from the interview.

In the next step, each partner reviewed the interviews conducted in their national context and formulated preliminary hypotheses about the characteristics of effective EDI-oriented design education. These country-level findings were subsequently compared and synthesised across the entire dataset, enabling the identification of common patterns while preserving differences among teaching traditions, disciplines, and individual educators' approaches.

The third stage was an international online survey distributed through the Cumulus network. It addressed module content, teaching methodologies, tools, learning outcomes, and educators' reflections on good practices. Although the number of responses was limited, the survey provided a complementary source of information and helped situate the findings from the four partner countries within a broader academic context.

Together, the three methods created a layered research structure. The desk research established the scope and formal characteristics of EDI education, interviews provided insight into pedagogical intentions and practices, and the survey offered an external point of comparison. This combination was particularly relevant because EDI is frequently present in design teaching yet is not explicitly named in course titles or formal learning outcomes.

The research confirmed that EDI was already present in design education across all four countries, although it was embedded through different disciplinary traditions and curricular models. It appeared in dedicated Inclusive Design courses, ergonomics, and Universal Design modules. Across the dataset, product design was the most strongly represented field, followed by visual communication, service design, digital product design, design for public space, architecture, and interior design. EDI content was included in both theoretical and practical subjects, with project-based learning playing a particularly important role. This diversity supports an understanding of EDI as a transversal design competence rather than a narrowly defined specialisation.

Further analysis of the research results led to the formulation of a set of hypotheses concerning the characteristics of effective EDI education. These hypotheses were grouped into five areas: (1) Students' natural predispositions to Design and/for EDI, (2) Competences related to EDI, (3) Class arrangements and types of assignments, (4) Competence verification, and (5) The role of EDI in design education. Together, they indicate that EDI education should be understood as a progressive process that combines knowledge, skills, and attitudes, and that increases students' readiness to tackle more complex issues and responsibilities.

2.2.1 Analysis of the Scenario in Italy

Raffaella Massacesi

The desk research conducted within the EDIDesK project and described in deliverables reports shows that, in Italy, content related to equality, diversity and inclusion is present in most of the design programmes analysed. Their presence, however, does not derive from a regulatory obligation, but rather from the disciplinary culture of design and from the research interests of individual teachers (D'Onofrio *et al.*, 2024). The roots of this orientation lie in long-standing traditions. In Italy, design culture, since the post-war period, has often interpreted design as a practice capable of affecting the quality of life, everyday environment and the community. From this perspective, different but converging experiences and figures may be recalled: Adriano Olivetti's civic and community-oriented vision; Giulio Carlo Argan's reflection on design as a component of material culture and of the transformation of the human environment; Bruno Munari's methodological and pedagogical approach, oriented towards clarity, understanding and the simplification of experience; Enzo Mari's critique of design reduced to style or consumption and his attention to social responsibility and user awareness; Giovanni Klaus Koenig's contribution to design for the community; and, more recently, Ezio Manzini's work on design for social innovation.

More specifically, this genealogy can be recognised in the strategic contribution developed within Ergonomics discipline and from scholars in the field of Architecture who have actively contributed to bringing the concept of human diversity into educational design practices. For example, Luigi Bandini Buti, a pioneer of Italian Ergonomics, president of the Italian Society of Ergonomics (1988-1993) and later of Design for All Italia (2009-2013), moved beyond a traditional Ergonomics – intended as a fragmented discipline gathering organisational, cognitive, and medical domains – to propose an idea of "Holistic Ergonomics" (Bandini Buti, 2008), which considers the individual as a whole – individual and collective memory, behavioural patterns, cognition and emotions – anticipating many of the conceptual cores now associated with EDI. In the same context, Fabrizio Vescovo (2001) also contributed to the development of educational and design-oriented

methods aimed at overcoming physical and social barriers in the built environment. (re: barrier-free design). These initiatives, together with related work undertaken at several Italian universities, contributed to the development of an informed culture of design and inclusivity.

On the one hand, ergonomics, anthropometry and Human-Centred Design introduced into design a scientific attention to the variability of users' physical, perceptual, cognitive and operational abilities. On the other hand, the cultures of Design for All, Universal Design, Inclusive Design, social design and accessibility have progressively broadened this perspective, shifting the focus from functional adaptation alone to the construction of more equitable conditions of participation, use and access (D'Onofrio *et al.*, 2024).

Italian cultural tradition therefore makes it possible to recognise a potentially inclusive vocation of design, but also the need to transform this vocation into criteria, methods, teaching tools and verifiable practices. From this point of view, EDI education does not externally add a theme that is foreign to Italian design culture, but rather makes explicit and operational a tension already present in its history, extending its perspective to also include issues of equality, structural inequity and intersectionality, and providing research methodologies.

The EDIDesK research described in the deliverables highlighted how teaching practices related to EDI themes in Italy are embedded in multiple areas of design: the most represented is product design, followed by digital product design and visual communication; then service design and design for public space, interior design and architecture, as well as more limited occurrences of social, communication and fashion design. The analysis of the interviews conducted within the EDIDesK research project shows that educators' experience with EDI themes derives mainly from theoretical and scientific research activities (32%). A significant role is also played by work with students, through the supervision of educational projects and degree theses related to EDI (28%). To a slightly lesser extent, this experience is also built through participation in conferences, seminars and specialist discussions on the topic (25%), while the development of practical projects and applied research appears less frequent (15%).

The most frequent thematic keywords within the teaching modules analysed are Design for All, Human-Centred Design, Communication Design, and Social Inclusion. Alongside these are Universal Design and User Experience, and Interaction Design, Design Thinking, Human Factors, and Co-design. Other terms appear only once in the sample, including Information Design, Service Design, Inclusive Digital Service, Social Design, Environmental Sustainability, Wayfinding, Architectural Barriers, Cognitive Ergonomics, Physical Ergonomics, Ergonomics for Design, Ambient Assisted Living, and Human Diversity (D'Onofrio *et al.*, 2024). Overall, this constellation of keywords shows a strong correlation with some of the historical roots of Italian design discussed above.

The EDIDesK interviews reveal several key elements. Italian education related to EDI is predominantly interpreted as a technical-operational and instrumental design competence. Courses are largely studio-based, compulsory and oriented towards design practice. Teachers translate EDI principles into operational activities: introductory lectures on frameworks, user research, iterative concept development, rapid prototyping, co-design workshops, and hackathons with companies or organisations. The most evident outcome is that students acquire a different approach to design. They not only learn accessibility techniques, but also develop greater awareness of user diversity and of the social responsibility of design. They learn to propose EDI solutions that do not necessarily require large investments and that are not addressed only to vulnerable users.

In the first phase of the EDIDesK research, an analysis was carried out across the Italian landscape of design education in order to identify university study programmes that integrate EDI themes into design-related curricula. The teaching modules investigated were classified by type and presented in deliverables report D2.1.1. The most prevalent category observed is Basics of design (20), followed by Supporting or supplementary subjects (3), Design studios (2), Theoretical subjects (2), and Diploma studio (1). An initial screening of the modules suggests that teachers who integrate EDI themes into their teaching consider these aspects to be foundational, part of the basic principles and core competences of the designer. Students are guided to explore these aspects both through theoretical study and through practical projects. Tab. 2.5 summarises, for each type, its role in relation to EDI and the typical teaching methods.

Type of module	EDI-related role	Typical teaching methods
Basics of Design	EDI performs both a foundational and an applied function: it introduces principles, tools and methods for designing accessible, inclusive and person-centred products, services, spaces, interfaces and communication systems. It develops cross-cutting competences related to accessibility, ergonomics, Design for All, sustainability, autonomy, social participation and attention to vulnerable groups.	The teaching method is mainly studio-based and applied, relying on introductory lectures, case study analysis, design exercises, user research, the use of design tools, concept development, prototyping and the final project. In these courses, EDI principles are typically translated into design practice.
Supporting/ supplementary subject	EDI performs an integrative function and fosters critical awareness. These courses complement design education by introducing diversity, the gender gap, social inequalities, inclusion and the designer's responsibility. The aim is to broaden students' perspectives, helping them recognise exclusion and avoid reproducing stereotypes or discriminatory representations.	The teaching method is mainly theoretical-critical and seminar-based, relying on lectures, discussion, analysis of social and cultural phenomena, reflection on the designer's positioning and critical reading of case studies. In some cases, it also introduces tools or frameworks applicable to design practice.
Design studio	EDI has both a design-oriented and critical function. It supports the examination of social issues, such as gender and inequalities, and guides the development of concepts and products through user-centred and Design for All approaches. EDI becomes a lens for interpreting needs, contexts and relationships between people, artefacts and environments.	The method is studio-based, with a strong focus on the design project. It includes critical analysis, research, exercises, concept development, individual or group work, progressive reviews and presentation of outcomes. The teacher guides the process through reviews and critical or design-oriented tools.

Theoretical subject	EDI has a theoretical and methodological function. It introduces principles, definitions and strategies such as Design for All, Inclusive Design, accessibility, Universal Design and user-centred design. In these courses, EDI supports the development of awareness, evaluation skills and tools for assessing the inclusiveness of products, services, environments and digital technologies.	The teaching method is theoretical and methodological, based on lectures, the presentation of models and principles, the study of frameworks, and the use of evaluation systems, rating systems, tests and data analysis. The typical approach involves learning criteria and tools for understanding, measuring and evaluating inclusiveness.
Diploma Studio/ Diploma Seminar	EDI performs a social, transformative and participatory function. It orients design towards the well-being of citizens, communities and territories through co-production, participatory methods and reflective practices. Inclusion becomes an objective of the design process rather than only a technical requirement.	The method is participatory and project-based, with a focus on social design. It includes problem definition, the involvement of communities or stakeholders, co-production, reflective practices, the development of solutions with social impact, and the presentation of design outcomes.

Table 2.5. Roles of EDI and teaching methods across module types in Italy. Source: Authors' own elaboration based on research data from the EDIDesK project.

In undergraduate courses (10 modules), EDI-related content is introduced mainly as basic design literacy. At this level, EDI therefore appears as a foundational competence: it teaches students to consider the human factor, users' needs, the diversity of physical and cognitive abilities, and the usability of environments, objects and interfaces. The aim is to build an initial sensitivity towards inclusion, integrating it into the early stages of the design process.

The EDIDesK research revealed that in postgraduate courses (18 modules), EDI-related content is more articulated and applied to complex design contexts. EDI takes on a more advanced function: it supports the development of skills in needs analysis, co-design, the definition of inclusive strategies, prototyping, social impact assessment and the management of complex projects. It plays a central role in dedicated master's degree programmes, such as the master's programme in Eco Inclusive Design, or in certifications such as the "PoliMI Ambassador in Inclusivity Design" at Politecnico di Milano.

The ten interviews conducted in Italy as part of the research with teachers reveal a conception of EDI as a multidisciplinary and multidimensional field, dependent on context and interpreted differently according to the specific area. This approach makes it possible to consider different users, contexts and conditions of use, transforming diversity into an operational criterion for designing more accessible, equitable and inclusive products, services, spaces and systems.

In some courses, EDI is explicitly stated in the contents, objectives and design activities; in others, it is implicit, as a methodological component of the process. At times it is guided by the teacher as a theoretical framework; at other times it emerges from the brief, the target group or the students' own sensitivity.

The teaching methodologies adopted in the module combine theoretical lectures, exercises, design studios and field research, positioning the teacher as a methodological

guide and critical facilitator: beyond transmitting knowledge, they organise an experience in which students observe, interpret, design and test inclusive solutions, developing critical awareness and design responsibility.

Student assessment is mainly project-based: it evaluates the understanding of principles, the use of research methods, the analysis of needs and contexts, and the ability to justify design choices. Assessment takes place through critical discussions of project outputs and prototypes, but also through tests or individual interviews to evaluate each student within group work. It concerns not only the final product, but also the coherence of the process through which students translate diversity, needs and constraints into design.

The tools used are varied and reflect the multidisciplinarity of the topic: maps, use scenarios, storyboards, diagrams, interviews, questionnaires, focus groups, brainstorming and personas. They do not only produce outputs: they make the process visible and transform EDI into a concrete practice of analysis, collaboration, prototyping and evaluation.

In Italy, EDI is present in design education both in undergraduate courses, as basic design literacy, and in postgraduate courses, where it takes on a more advanced and applied function. The most prevalent category of modules is Basics of Design: this indicates that EDI is considered part of the foundations of designer education, rather than a specialist topic to be introduced only at the end of the learning pathway. Its roots derive from the disciplinary culture of design and from a tradition that interprets design as a practice capable of affecting quality of life and the community.

The analysis conducted within the research highlights several critical issues. In some courses, EDI is explicit and central, while in others it remains implicit and is conveyed through other disciplines. This results in a great richness of approaches, but also in fragmentation, since EDI depends more on the sensitivity, experience and networks of individual teachers than on a shared strategy.

A further critical issue concerns the teaching approach, within which three main problems emerge. The first is related to the difficulty of building and maintaining stable partnerships, which are necessary to apply EDI content to real cases and to test projects in concrete contexts of use. The second concerns the need to make EDI an operational form of knowledge rather than a merely declarative one, with the risk of reducing inclusion to simplified categories because of the difficulty of comparing design solutions with real users. The third concerns assessment: in group work, it is difficult to measure individual competences and, in design courses, the inclusive quality of the process does not easily fit univocal criteria.

The most relevant characteristic of EDI in Italy is its strongly design-oriented nature. It does not appear as an autonomous discipline or as an abstract set of rules, but as an orientation that cuts across different areas of design and is integrated into the studio, often in connection with real cases. The result is a pluralistic approach, from which no single definition of EDI emerges, but rather the shared idea that design must engage with real differences and with concrete conditions of use and access. EDI therefore appears less as a standardised content and more as a widespread design culture, nourished by teachers' experience and applied research.

This points to the need to make EDI more systematic, explicit and shared. It would be useful to define learning objectives and expected competences more clearly at the different levels, so that EDI is not entrusted solely to individual sensitivity. Stable networks with users, communities, companies, public bodies and third-sector organisations should also

be consolidated to support field research, co-design and prototype testing. The evaluation of the final product should be integrated with explicit criteria concerning the inclusive process, while methodological training should be strengthened through exercises on stereotypes, bias, exclusion, accessibility and human variability from the earliest stages. Finally, a shared vocabulary should be developed that, without eliminating plurality, connects theoretical approaches, methods and design outcomes. Together, these measures could support a more coherent, transferable and sustainable integration of EDI across design education.

2.2.2 Analysis of the Scenario in Poland

Patrycja Rudnicka, Marta Więckowska

In Poland, the understanding of EDI in design education arises from a specific institutional and pedagogical context. Design is formally located within the field of fine arts and art conservation, and EDI is not explicitly named in the Polish Qualifications Framework (Integrated Qualifications System, 2015). As a result, its presence in curricula is not primarily driven by national regulations, but by a longer tradition of socially responsible design, the autonomy of art academies, and the individual initiatives of educators. Since the formation of modern design education in the 1960s and 1970s, the designer's role has been associated not only with form, technology, and production, but also with improving the quality of life, responding to social needs, and acting in the public interest. This perspective is reflected in the work of Andrzej Pawłowski (2001), who situated design at the intersection of art and technology while emphasising its ethical and social responsibilities.

For this reason, EDI in Polish design education can be seen less as a recently introduced framework and more as a set of practices gradually absorbed into existing pedagogical traditions. It has been influenced by concepts such as Universal Design, Inclusive Design, Participatory Design, Human-Centred Design, Social Design, and Design for Accessibility. Rather than introducing a completely new orientation, these concepts have helped to structure and expand existing practices, framing EDI not only as a value-based approach but also as a set of processes and strategies for gathering data, mapping stakeholders, engaging users, and strengthening iterative design development.

The educational practices analysed by the EDIDesK team in Poland cover a wide range of design domains relevant to EDI practice, including product design, service design, social design, interior design, design for public space, game and VR design, research, and visual communication. The desk research dataset included 52 modules from eight universities, representing different curricular formats, e.g. basics of design, design studios, diploma studios, supplementary subjects, and theoretical subjects. Most of the analysed modules were practice-based, with 35 classified as design and diploma studios. The dataset covered 25 undergraduate modules, 19 postgraduate modules, 7 modules delivered jointly at the undergraduate and postgraduate levels, and one integrated five-year master's programme.

The interview stage provided an additional layer of analysis. In Poland, 12 modules were selected for interviews with academics leading courses assessed at Level 3 or higher on the EDI Integration Scale. These modules represented different subject types, including design studios and diploma studios, supporting or supplementary subjects, theoretical subjects, and basics of design. They also covered several design areas, such as product design, service design, social design, interior design, visual communication, design for public space,

research and commercial design. Significantly, educational practices are strongly informed by the professional experience of educators, many of whom actively develop their EDI-related knowledge through workshops, conferences, training, and design practice.

The analysis of the keyword map prepared as part of the research indicates that EDI is understood in Polish design curricula in a broad and multidimensional way. It is connected not only with accessibility, disability, Universal Design, and the needs of specific user groups, but also with participation, co-design, empathy, usability, perception, and user experience. At the same time, the less frequent presence of themes related to ecology, crisis, and designer responsibility suggests that the EDI framework is gradually expanding into a wider context of social, ethical, and environmental challenges.

The largest group of analysed modules consisted of design and diploma studios, which indicates that EDI is most often embedded in project-based education. This is important because design studios allow students to work on complex, situated problems, engage with real users, and develop solutions that respond to social, spatial, cultural, or accessibility-related challenges. This appears to be a characteristic feature of Polish EDI-related design education, where EDI often functions as a way of framing project work. It is embedded in the process of defining problems, working with users, testing solutions, and reflecting on the social consequences of design decisions.

In this context, EDI can be defined as an approach that extends the social and ethical responsibility of design. It goes beyond accessibility understood narrowly as designing for disability. Instead, it asks students to recognise diverse human needs, abilities, experiences, and life situations, including physical, sensory, cognitive, social, cultural, and situational conditions. It also challenges the abstract figure of the "average user", which remains an important point of reference in Polish teaching practice: students are encouraged to move from designing for generalised categories toward understanding specific people, contexts, and forms of exclusion. Tab. 2.6 summarises the teaching approaches, methods, and EDI-related content associated with each type of module.

Type of module	EDI-related role	Typical teaching methods
Basics of Design	Early sensitivity to users, ergonomics, accessibility, and diverse needs.	Observation, introductory exercises, reflection.
Design Studio	EDI introduced through selected briefs, user groups, or social challenges.	Project-based learning, research, prototyping, critique.
Design and Diploma Studio	Stronger EDI integration through individual or socially oriented projects.	Independent research, tutoring, and partner cooperation.
Diploma Seminar	EDI as part of mature, self-defined design problems.	Research validation, expert feedback, implementation-oriented work.
Supporting Subject	Development of tools and methods for accessibility, usability, or research.	Workshops, testing, analytical frameworks.
Theoretical Subject	Ethical, social, and cultural framing of design.	Lectures, readings, discussions, and critical analysis.

Table 2.6. Roles of EDI and teaching methods across module types in Poland. Source: Authors' elaboration based on EDIDesK project research data.

EDI-related content appears at different stages of design education, but its intensity and form change across the curriculum. At the undergraduate level, it is often introduced through basic design modules, ergonomics, accessibility, observation, user research, and socially oriented design tasks. At this stage, EDI is most often introduced by helping students become more aware of user diversity, everyday forms of exclusion, and the risks of designing for a standardised or "average" user. Students are also encouraged to challenge these assumptions and translate this awareness into alternative design proposals. At the postgraduate level, it becomes more closely connected to independent inquiry, complex design processes, collaboration with external partners, and real-world implementation. Graduation and master's projects play a particularly important role: they allow students to choose socially relevant topics and demonstrate not only design competence, but also maturity, responsibility, and awareness of the wider impact of design. This studio- and diploma-based model is one of the most distinctive ways in which EDI becomes visible in Polish design education.

A key insight from the interviews (N=12) conducted in the EDIDesK project, described in deliverable report D2.1.1, is that educators understand EDI as a multifaceted, context-dependent concept. They emphasised that diversity should not be reduced to disability and that designers need to consider a wide range of needs, including temporary, situational, cognitive, sensory, technological, and social conditions. Examples brought up by educators include people with disabilities, elderly users, children, parents with strollers, people in unfamiliar situations, and users with limited access to technology.

At the same time, the interviews revealed differences in how explicitly EDI is integrated into teaching. Some educators include EDI directly in syllabi and learning outcomes, while others treat it as an inherent part of responsible design practice. This distinction is important in the Polish context, where the Polish Qualifications Framework for design education does not explicitly require EDI content in curricula. As a result, EDI often depends on the values, experience, and initiative of individual educators.

Teaching practice is strongly project-based and connected with real-world contexts. Educators use briefs developed with external partners and collaborate with non-governmental organisations (NGOs), public institutions, regional organisations, experts, and businesses. Students conduct research in actual environments, observe users, interview stakeholders, test prototypes, and verify design concepts. This approach helps them move away from abstract assumptions and develop solutions grounded in real needs.

The role of the educator is often described as facilitation rather than instruction. Educators guide students through research, analysis, testing, and reflection. Assessment focuses not only on the final outcome, but also on the quality of the process, depth of research, social impact, implementation potential, and responsiveness to feedback. In some cases, assessment also includes user feedback, expert review, peer feedback, or student self-assessment.

The teaching methods identified in the interviews include empathy maps, personas, value proposition canvases, user journeys, storyboards, diagrams, and prototyping. Some educators use tools that simulate disability or specific user perspectives, such as vision impairment simulations, age simulation suits, or accessibility calculators. These methods help students understand user experience more deeply and critically examine their assumptions. However, some educators emphasise that such tools can never replace real contact with users, field research, or usability testing. For this reason, students should not omit this phase of the design process.

The Polish scenario shows that EDI is present in design education at both undergraduate and postgraduate levels, especially in project-based modules, design studios,

and diploma studios. Its presence is rooted in a long tradition of understanding design as a socially responsible profession. This historical background makes EDI-related education meaningful for many educators, even when the term EDI itself is not always explicitly used.

At the same time, the analysis reveals several challenges. First, EDI is unevenly integrated across curricula. Some modules are fully dedicated to EDI or include strong collaboration with external partners, while others address it only partially. Second, equality is not explicitly evident in the analysed module descriptions, suggesting the need to strengthen structural and rights-based perspectives. Third, many EDI practices depend on the commitment and initiative of individual educators rather than on institutional strategies. This makes them innovative, but also potentially fragile, as they are not yet established as standard practice.

The strongest feature of the Polish case is the richness of teaching practice. Educators use real-world contexts, user engagement, participatory methods, prototyping, testing, simulation, and reflective assessment to develop students' sensitivity and competence. EDI education is therefore not limited to theoretical knowledge but is closely connected to experience, practice, and contact with diverse users and stakeholders.

A further conclusion concerns the need for more systematic knowledge exchange between institutions. Since many valuable practices already exist, the next step should be to recognise, organise, and share them more effectively. This could include common terminology, shared teaching resources, staff training, examples of good practice, and clearer institutional support for embedding EDI across curriculum design, teaching methods, assessment, and learning environments.

2.2.3 Analysis of the Scenario in Slovakia

Zuzana Čerešňová

In Slovakia, the topic of EDI education was initially focused mainly on the accessibility of the built environment or on designing products for specific user groups, especially with a focus on people with disabilities. In the 1990s, the first concepts emerged aimed at designing environments and products for all people, considering their diversity and their different needs and requirements. Nowadays, Human-centred design (HCD) theories have shifted from accessibility to social inclusion, emphasising the importance of everyone's active participation in society as one of the factors of social sustainability (Fletcher, 2011).

Design education should therefore be revised and reoriented towards a socially engaged approach that recognises the responsibility of architects, designers, and urban and landscape planners (Bashier, 2014), also in line with the UN Sustainable Development Goals (United Nations, 2015). Within the design process students should be encouraged to act both as rational researchers observing human behaviour and as creative designers, designing in response to human needs (Myerson & Lee, 2011). The aim is to stimulate their interest in EDI topics, to form their social feelings and positive attitudes towards inclusion and support the implementation of EDI principles in practice.

The foundations of EDI-oriented design education in Slovakia are closely linked to Associate Professor Mária Samová, whose expertise was fundamentally formed by her study visits to the Helsinki University of Technology (now Aalto University) in Finland in 1985, and notably by her subsequent research fellowship at the Adaptive Environments Centrer (now the Institute for Human-Centered Design) in Boston, USA, in 1994. Drawing on this experience, she introduced Universal Design into the curriculum at the Faculty of Architecture (now the Faculty of Architecture and Design) of the Slovak

University of Technology (STU) in Bratislava. Since then, the course has been maintained as a compulsory component of the Bachelor's degree programme in Architecture and Urbanism. Under the leadership of Maria Samova, doctoral students and faculty members have actively advanced EDI methodology, systematically implementing EDI principles across other subjects, including Public Buildings, Residential Buildings, and Architectural Design Studio II.

In 2007, the research group led by Maria Samova established the research and training Centre of Design for All (CEDA) at the Faculty of Architecture STU. This initiative represented a natural culmination of the group's efforts to institutionalise its activities and assert its presence at an international level. Currently, CEDA, under the leadership of Lea Rollová, actively influences the creation of Slovak building regulations and participates in various international and national programmes. CEDA is a member of the EIDD Design for All, which is a unique international platform for different organisations with a common goal: a more inclusive World for everyone. As stated in EIDD Stockholm Declaration (EIDD, 2004) "Design for All is design for human diversity, social inclusion and equality".

The Slovak design education landscape on EDI was analysed using the common methodology developed within the EDIDesK project. The objective of this research was to map and analyse courses and modules offering the most comprehensive teaching content, methodologies and tools on Design for EDI within undergraduate (UG) and postgraduate (PG) design-related study programmes in Slovakia. This objective was achieved by conducting a desk-based research study and conducting interviews with members of academic staff. The initial phase involved researching the best practices that incorporate EDI content within study programmes in design-related disciplines, such as architecture, urban planning, product design, service design, etc. In the second phase, based on collected and analysed data, best practices were selected for more detailed investigation in interviews with academics who coordinate and teach modules on Design for EDI (Čerešňová *et al.*, 2024).

In Slovakia, there are four higher education institutions that are offering design-related study programmes, including product design, interior and furniture design, architecture and urban design. One of them is Academy of Fine Arts and Design (VŠVU) in Bratislava and three of them are technical universities: 1) Slovak University of Technology (STU) in Bratislava, 2) Technical University of Košice (TUKE), and 3) Technical University in Zvolen (TUZVO). These universities are situated in different parts of Slovakia – STU in the capital city Bratislava in western part of Slovakia, TUKE in the eastern part, and TUZVO in central part of Slovakia (Čerešňová *et al.*, 2024). All of them are offering study programmes in undergraduate bachelor level (UG) and postgraduate master level (PG). After excluding modules for which insufficient information was available, the analysis identified 10 EDI-related courses across Slovak universities. The analysis identified 10 EDI-related courses across Slovak universities, comprising 5 undergraduate and 5 postgraduate modules.

The Faculty of Architecture and Design, Slovak University of Technology (FAD STU) in Bratislava has the longest and most extensive coverage of the EDI topic among the higher education institutions in Slovakia. The Centre of Design for All (CEDA) at this institution also makes a major contribution to HCD research and teaching, as well as collaborating with practice in creating inclusive environments. It is thus evident that the subjects from FAD STU and TUZVO have been identified as being of significant EDI potential.

At FAD STU, students learn EDI principles continuously, already from the first year of their bachelor studies. Relevant basic information is obtained in the context of a specific type of buildings within the main subjects Typology I-III, which are focused on res-

idential buildings and various public buildings, e.g. cultural, educational, administrative, sports-recreational, healthcare and social-care facilities. Subsequently, the EDI principles and concepts are implemented each semester in practical projects within the Design Studio I-VII, and in Bachelor and Diploma Thesis (projects).

In addition to typologically oriented subjects, students of bachelor's degree also have a compulsory subject on Universal Design (UD), coordinated and guaranteed by Zuzana Čerešňová. The aim is to deepen their acquired knowledge, stimulate their interest in EDI topics and support the implementation of EDI principles in practice. The UD course interprets the EDI approach as a human-centred approach to creating an inclusive environment including social sustainability, respect for human rights, and public interest. The course begins with empathic exercises, to simulate the movement and wayfinding of people with various limitations. Students in this course see and examine examples of how all people are equal and that everyone can participate fully in society (Čerešňová *et al.*, 2024).

Furthermore, the EDI framework at the FAD STU is extensively integrated into two additional courses: Humanization of Microenvironment and Body Conscious Design. Coordinated and guaranteed by Veronika Kotradyová, these modules critically investigate the intersection of social inclusion, human well-being, and environmental comfort (Kotradyová, 2019). The design field of both these modules consists of service design, interior design and research. The Body Conscious Design module features product design and visual communication in addition, whereas the Humanization of Microenvironment module also includes public space and buildings. To enhance social interactions among people, sociopetal and sociofugal space arrangements are explained, as well as mixing functions in spaces to attract more diverse social groups of people to share spaces together. The themes are related to interaction between people and spaces, arising from anthropology, sociology, environmental psychology and physiology (Kotradyová, Salcer & Vavrinský, 2016).

Another key educational module integrating EDI topics at FAD STU is the course Interdisciplinary Contexts of Design II – Ergonomics and Universal Design. Under the pedagogical leadership of Mária Šimková, this course is positioned within a broader curriculum that spans product design, service design, interior design, digital products, and visual communication. The objective of the course is to foster understanding of EDI in the context of design, with a guiding philosophy: "Good design enables, bad design disables" (EIDD, 2004). The module introduces students to key EDI concepts through lectures on human variability, anthropometry, somatotypes, personality psychology, ergonomics, movement and handling space, working positions, lighting, and visual conditions (Čerešňová *et al.*, 2024).

The course Humanity in Design is part of the study programme Furniture and Interior Design at the Faculty of Wood Technology, University of Technology in Zvolen (TUZVO). The course, established by René Baďura, focuses on various areas of design, including product and interior design, design for public space, and partly on architecture and visual communication (Farkašová & Baďura, 2021). The publication Design and Ethics is the basis for professional and pedagogical reflection on the course content (Baďura & Baďurová, 2016). Humanity in Design is a compulsory elective and provides an opportunity for deeper exploration of EDI topics The course operationalises EDI not as an auxiliary topic but as a constitutive element of HCD that respects pluralism. Like ecological criteria, these inclusive principles are treated as foundational to contemporary design education, integrating ethics, inclusion, and diversity (Farkašová & Baďura, 2021).

Type of module	EDI-related role	Typical teaching methods
Basics of Design	Introduction to EDI and early sensitivity to users, accessibility, and diverse needs and social inclusion.	On-site observations and analyses, simulation (empathic) exercises, discussions and reflections.
Theoretical Subject	Development of theoretical and methodological knowledge on EDI by methods such as Design for All, Inclusive Design, Accessibility, Universal Design and people-centred design/HCD.	Lectures, discussions, presentations and critical analysis of case studies. The use of evaluation systems (e.g. Access Audits) to understand, measure or evaluate inclusiveness of the built environment.
Supporting Subject	Development of EDI approach by inclusive methods for accessibility, usability, and adaptability of the built environment.	Workshops, audits of accessibility and adaptability of the built environment, interviews and participatory planning with users.
Design Studio	Implementation of EDI in real-world projects focused on different types of buildings and public spaces to create an inclusive environment.	Project-based learning, human-centred research, co-design and participatory planning with stakeholders. Concept and project development, reviews and the presentation of design outcomes.
Diploma Studio/ Diploma Seminar	Stronger EDI integration through socially oriented projects. Ethical, social, and cultural framing of architecture and urban design.	Participatory and project-based methods, the involvement of communities or stakeholders, co-design, reflective practices, the development of solutions with social impact and the presentation of project outcomes.

Table 2.7. Roles of EDI and teaching methods across module types in Slovakia. Source: Authors' elaboration based on EDIDesK project research data.

As summarised in Tab. 2.7, selected EDI modules in Slovakia employ inclusive methods designed for heterogeneous student cohorts with diverse skill sets. By providing multiple channels for content delivery and project evaluation, these courses align with diverse cognitive styles and communication needs. Active student involvement is systematically driven by interactive strategies, specifically empathy exercises, on-site analyses, and collaborative discussions. By offering choices in task typologies, execution formats, and multimodal presentation methods (written, audio-visual, graphical), the modules actively accommodate diverse student interests and cognitive learning styles in accordance with Universal Design for Learning (UDL) principles (CAST, 2024). This student-centred approach significantly elevates pedagogical and learning efficiency. Simultaneously, student motivation and engagement are driven by contextualising these briefs within real-world scenarios that address the authentic needs of diverse users. Ultimately, the empirical outcomes of semester projects possess significant pragmatic value; by aligning with UDL principles of authentic engagement, they effectively equip students to resolve contemporary, real-world challenges encountered in professional design practice.

All analysed modules systematically employ a human-centred approach, integrating collaborative and participatory design methodologies. This approach relies on the active, mutual engagement of both the students and stakeholders encompassing a diverse spectrum of physical and cognitive capabilities. Mutual observation and the analysis of real situations are part of the process, through which students explore different perspectives. Leurs *et al.* (2011) and Kouprie and Sleeswijk Visser (2009) highlight several factors, which are important for development of a human-centred approach in design education: (1) design project tasks should be authentic and realistic; (2) students should conduct research through observations, interviews, field studies, and scenarios and involve real users in the design process; and (3) students should immerse themselves in users' experiences to develop empathy and understand different users' needs.

Knowledge from literature is tested through projects in which students demonstrate the ability to apply theoretical insights to specific problems, with an emphasis on practical application and depth of understanding. The methods used in the modules lead to a final project that reflects the students' ability to identify and apply EDI principles. Effectiveness is assessed based on how well students are able to transform their initial simplified ideas into a deeper understanding of the problem. Throughout the EDI modules, their analytical skills and sensitivity to EDI topics clearly develop, confirming the value of the methods used and their impact on the ability to address social and design challenges (Čerešňová *et al.*, 2024).

The primary goal of education on EDI is to reflect evolving societal needs, thereby shifting the pedagogical focus beyond artistic expression, formal composition, and principles of structural construction. This paradigm shift is particularly critical within the context of design and architectural education in Slovakia, where curricula remain predominantly oriented toward artistic expression and formal aesthetics. Within the development of the contemporary built environment, the implementation of EDI principles is imperative to challenge this situation. By shifting the focus toward user diversity, the educational process reinforces a human-centred paradigm that acknowledges and accommodates diverse needs, interests, and capabilities of the population.

In conclusion, a systematic integration of EDI modules is required across all Slovak design and architecture programmes. These EDI modules should be structurally embedded into the curriculum to deepen the knowledge on social sustainability and broaden students' perspective. Most importantly, within core pedagogical frameworks – specifically studio work – greater emphasis must be placed on generating inclusive solutions that address the needs of all user groups.

2.2.4 Analysis of the Scenario in Spain

Julia Carrasco Parodi, Massimo Menichinelli

Spain has emerged as an important reference point for EDI in design, particularly in the fields of urban design and public space (Carrasco Parodi & Menichinelli, 2024). The democratic transition following the end of Franco's dictatorship in 1975 transformed urban planning into a political project aimed at rebuilding public life and reclaiming the city as a space of citizenship. Public spaces and infrastructure became tools for fostering social participation and collective belonging, reflecting broader efforts to democratise everyday life (Esparza Lozano, 2014; Hughes, 2006). This transformation was accompanied by an evolving legislative framework. The Social Integration of Persons with Disabilities Act (Jefatura del Estado, 1982) established accessibility re-

quirements for urban and architectural environments, while Law 51/2003 on Equal Opportunities, Non-Discrimination and Universal Accessibility (Jefatura del Estado, 2003) consolidated the principles of Universal Design. Subsequently, Organic Law 3/2007 on effective equality between women and men (Ministerio de Educación y Ciencia, 2007b) expanded the scope of inclusion by requiring public administrations to integrate gender perspectives into planning and education, going beyond disability. Together, these measures contributed to a growing recognition that design can either reproduce or challenge social inequalities.

The economic crisis of 2008 and the social mobilisations that followed further broadened understandings of EDI in the public sphere. The 15M movement re-politicised public space through the occupation of squares and the creation of participatory forms of citizenship. Through commissions inside the squares, feminist and functional diversity initiatives highlighted the need to address multiple forms of exclusion simultaneously, creating other ways of understanding and inhabiting common spaces (Sánchez Criado, 2017).These developments influenced municipal policies, particularly after the 2015 local elections, when citizen platforms gained power in cities such as Barcelona, Madrid, Cádiz, Santiago de Compostela and Zaragoza. Their policies promoted participation, diversity and social justice as core dimensions of urban governance (Aguiló Bonet & Sabariego, 2016). Barcelona, where the citizen platform governed for two terms, became a particularly influential case through its intersectional feminist policies and participatory governance model. Initiatives such as the Gender Justice Plans (Área de Derechos Sociales, Justicia Global, Feminismos y LGTBI, 2021; Concejalía de Feminismos y LGTBI, 2016) and the expansion of citizen participation platforms such as Decidim (Barandiaran *et al.*, 2024) and the increase of 56 citizen-managed facilities (Bonet i Martí & Serrano Miguel, 2021) demonstrated how EDI principles could be embedded across policy areas.

These developments also influenced the inclusion of EDI policies in higher education. National and regional regulations progressively introduced requirements related to Universal Accessibility, Design for All and gender equality in university curricula (Ley Orgánica 3/2007, 2007; Real Decreto 1393/2007, 2007). More recently, universities have been required to establish equality and diversity units and develop plans addressing discrimination on multiple grounds, including gender, ethnicity, age, religion and socioeconomic status (Ley Orgánica 2/2023, 2023).

Despite this favourable policy environment, significant gaps remain between institutional commitments and educational practice. Research shows that gender-related content remains limited across Spanish higher education (Agència per a la Qualitat del Sistema, 2019), while accessibility is often approached through a narrow focus on the elimination of physical barriers rather than through broader concepts of inclusion and Universal Design. As a result, EDI principles are only partially integrated into design education.

The Spanish design education landscape was analysed using the common methodology developed within the EDIDesK project. The study examined 79 undergraduate and 34 postgraduate design programmes to identify modules explicitly addressing EDI-related themes. Following the project's established framework, all identified EDI modules were documented and categorised according to their specific characteristics: module type, particular EDI themes addressed and the depth of EDI integration.

After excluding modules for which insufficient information was available, the analysis identified 22 EDI-related courses across 15 Spanish universities. These comprised 17 undergraduate modules, three postgraduate modules, and two non-degree courses. Nine of the undergraduate modules were optional, whereas all postgraduate EDI modules

were compulsory. The results reveal a limited and uneven integration of EDI principles. Only 24% of undergraduate programmes included identifiable EDI content, most commonly through a single module. At postgraduate level, only 17.6% of programmes demonstrated any EDI presence, although several specialised programmes were entirely dedicated to inclusion-related topics.

Accessibility and inclusion were the dominant themes. Courses frequently addressed ergonomics, Design for All, disability, user-centred design, adaptability, well-being and health. Diversity-related issues were significantly less visible, with only a small number of modules explicitly engaging with gender, race, culture or identity. In particular, racial and cultural diversity appeared only marginally within the curriculum. The depth of EDI integration also varied considerably. Only four modules introduced EDI concepts only superficially (Level 1); the majority (thirteen modules) embedded them throughout the learning process and project work (Level 2 and 3); finally, a small group of five courses demonstrated advanced integration, combining strong theoretical foundations, practical application and collaboration with external stakeholders (Level 4 and 5). Overall, the findings suggest that EDI remains a peripheral rather than a structural component of design education in Spain. Although examples of good practice exist, they are concentrated in a limited number of institutions and programmes.

To complement the desk research, semi-structured interviews were conducted with educators responsible for six exemplary modules identified as highly integrated EDI cases (four undergraduate, one postgraduate, and one short course). A common characteristic across these courses was the combination of theoretical reflection and project-based learning. While all modules culminated in a design project, most also incorporated substantial research components. User participation played a central role in several cases, enabling students to engage directly with individuals and communities affected by exclusion and to learn from their lived experiences.

Educators employed a wide range of methods, including ethnography, autoethnography, user personas, customer journey mapping and participatory research techniques. Several modules also introduced analytical tools specifically designed to address accessibility and inclusion, such as use case, SWOT, CAME and statistical analysis, all of which are of universal use, and also the A+D Matrix[1] and the accessibility and satisfaction relation, both of them designed specifically for EDI topics.

Co-design approaches were particularly valued for fostering dialogue between students and users and for challenging assumptions embedded in conventional design processes. Collaboration with external organisations emerged as another defining feature. Students worked with associations, foundations, health professionals, cultural collectives and private companies, creating outcomes that extended beyond the classroom. Project outcomes were quite diverse, including exhibitions, digital applications, industrial products, educational resources and service-design tools.

The interviews also revealed a critical engagement with normative assumptions in design. Some educators encouraged students to design for so-called “extreme users”, while others challenged the very notion of normality, arguing that “the reality is that most people do not conform to the norm in some aspect of their lives and are, as a result, excluded”. Several respondents emphasised the importance of questioning the assumption that all design inherently serves the common good: “We want students to understand they are not saviors and should not create new needs”. Additionally, two participants approached EDI through their pedagogical practices, stating: “We must recognise pedagogy itself as a site for inclusion and diversity, developing methods that acknowledge

student differences and create space for heterogeneity". Finally, many educators argued that EDI should not be confined to specialised modules. Instead, they viewed inclusion, diversity and equality as transversal principles that should inform the entire curriculum, shaping both design practice and pedagogical approaches (see Tab. 2.8).

Type of module	EDI-related role	Typical teaching methods
Basics of design	Introduction to design as a social practice that can address everyday inequalities. Students develop an early understanding of Inclusive Design, Design for All, and Human-Centred Design by recognising diversity as an intrinsic characteristic of society rather than an exception.	Observation and ethnographic research, interviews, visual ethnography, empathy and autoethnographic exercises, co-design, project-based learning, prototyping, and reflection. Students develop a small design intervention addressing the needs of someone in their immediate environment to understand diverse user experiences.
Design studio	Integration of EDI into the complete design process through socially engaged and research-led projects. Students connect theories of care, the commons, and social design with design research methodologies, applying them to real-world challenges in collaboration with stakeholders.	Project-based learning covering the full design process, from research to concept development, value proposition, prototyping, and communication. Human-centred research, stakeholder collaboration, autoethnography, participatory mapping, co-design workshops, design toolkits, collaborative platforms, and project reviews.
Supporting subject	Development of Inclusive Design as a methodology and perspective. Students learn to design with and for traditionally excluded users ("extreme users"), understanding that addressing diverse needs leads to broader usability. Inclusion is recognised as a continuous, transversal design approach.	Lectures introducing Inclusive Design principles and legislation, ethnographic research, accessibility audits, case studies, user observation, project-based assignments, evaluation of products and public spaces using accessibility and Universal Design criteria, prototyping, and iterative testing.
Theoretical subject	Development of theoretical and methodological knowledge on EDI through design research and social sciences. Students examine how gender, race, disability, culture, identity and other social dimensions shape design processes and outcomes, learning to plan and assess inclusive strategies.	Lectures, seminars, discussions, presentations, critical reading of literature, analysis of case studies, design research planning, evaluation frameworks, and critical reflection on design methodologies and their social implications.

Table 2.8. Roles of EDI and Teaching Methods across Module Types in Spain. Source: Authors' own elaboration based on research data from the EDIDesK project.

Spain offers a distinctive context in which EDI principles have been actively developed through urban policies, participatory governance and legislative reforms. However, these advances have not yet been fully translated into design education. The analysis reveals a persistent gap between policy and curricular implementation, with EDI content remaining limited, fragmented and often optional.

A limitation of this study concerns the reliance on publicly available programme and module documentation. It is likely that some educators incorporate EDI principles into their teaching without explicitly identifying them in module titles, descriptions or curriculum documents. The interviews conducted as part of this research revealed several examples of professors adapting pedagogical approaches to address inclusion and diversity without these practices being formally recognised within the curriculum. Consequently, the findings may underestimate the actual presence of EDI-related teaching. Nevertheless, even when accounting for such potential underreporting, the overall integration of EDI within Spanish design education remains strikingly low when compared with the country's advanced legislative framework and its significant achievements in inclusive urban policy and design practice.

At the same time, the study identifies important opportunities (Carrasco Parodi & Menichinelli, 2024). The modules analysed demonstrate that EDI can be successfully integrated through collaboration with external stakeholders. Expanding partnerships between universities and grassroots organisations, civic centres, maker spaces and public institutions could help bridge the gap between academic curricula and Spain's rich ecosystem of participatory and inclusive design practices. Spanish design education could also benefit from reconnecting with the country's tradition of designing public spaces and infrastructures for collective use and social inclusion, extending this legacy beyond architecture to other design disciplines.

Finally, greater investment in design research is needed to consolidate and expand EDI methodologies, which currently rely heavily on isolated initiatives and project-based funding. Strengthening these areas would help align design education with Spain's broader achievements in inclusive urban policy and practice, preparing future designers to address complex social inequalities.

2.3 Analysis of Teaching Methodologies, Tools, and Educational Resources for Design for EDI

Alessia Brischetto, Ester Iacono

The analysis of teaching methodologies is a necessary step for understanding how EDI can be integrated into design education not only as thematic content, but as an operational component of the learning process (see Deliverable D2.2.1 and General Note on Chapter 2). While the analysis of course offerings makes it possible to observe where and to what extent EDI-related topics are present within curricula, the analysis of methodologies examines how such content is translated into activities, tools, educational resources, design processes, and forms of participation.

In design education, the methodological dimension is particularly significant. Design learning is not based exclusively on the transmission of theoretical knowledge, but on situated, iterative and collaborative processes through which students observe contexts, interpret needs, identify barriers, formulate hypotheses, develop solutions and evaluate their effects. From this perspective, EDI cannot be understood as an additional theme to be inserted into an already defined syllabus. It should rather be considered as a criterion

that orients the design of the learning experience itself: the construction of briefs, the representation of users and communities, the accessibility of learning materials, the organisation of collaborative work, and the criteria through which design outcomes are discussed and assessed. For this reason, the analysis does not limit itself to teaching methods in the strict sense. It considers a broader constellation of methodological resources: toolkits, approaches, operational tools, guidelines, workshop materials, open educational resources, digital environments and collaborative tools[2]. This broader perimeter is necessary because EDI does not always appear as an explicit methodological category in design. In many cases, the principles of equity, diversity and inclusion are embedded in adjacent design cultures and operational frameworks, such as Inclusive Design, Universal Design, Design for All, Human-Centred Design, Design Thinking, accessibility, usability, co-design and participatory approaches. These fields do not fully coincide with EDI, but they provide tools and perspectives that can support design teaching capable of addressing barriers, inequalities, differences in use and conditions of exclusion (Buchanan, 1992; Clarkson *et al.*, 2007; Sanders & Stappers, 2008).

The selection of resources was therefore guided by qualitative criteria rather than by a descriptive collection of available tools. Priority was given to resources that showed coherence with EDI or with closely related domains such as accessibility, inclusion, user diversity and participation; methodological or scientific relevance within design, education or inclusive learning; open-access availability or clear conditions for educational use; applicability to Higher Education and design-related programmes; and the presence of supporting materials such as guides, templates, cases, tutorials or references. This selection also responds to a methodological need: to make explicit which resources can support Design for EDI as teaching content, which can operate as process tools, and which require further pedagogical mediation before being adopted in studio-based or project-based learning.

The mapped resources were analysed through indicators concerning typology, EDI goals, scientific or methodological approach, design field, target domain, tool format, individual or collaborative use, phase of the design process, scientific validation, open-access status and educational relevance. This filtering distinguished resources simply available online from those that can be meaningfully interpreted, adapted and transferred into teaching contexts.

main categories of resources, which also form the documentary basis of Annex B (Tools, Methodologies and Digital Resources for Design for EDI) and its sub-annexes. The first category includes toolkits, methodologies, approaches and tools for EDI, in analog, digital or hybrid formats. These resources are generally close to design practice and are often organised in relation to the phases of the design process: exploration, ideation, prototyping, evaluation and validation. They help students and educators recognise exclusion, understand user diversity, identify barriers, reframe design problems and translate insights into design actions. For the extended mapping of these resources, see Annex B.1. Relevant examples include the Cambridge Inclusive Design Toolkit[3], the IDEA Toolkit, the Microsoft Inclusive Design Toolkit, the University of Nottingham Equality, Diversity and Inclusion Cards and the Community-Led Co-design Kit of the Inclusive Design Research Centre[4]. Their value lies in different but complementary contributions: estimating design exclusion, structuring inclusive questions, translating EDI into design prompts, supporting critical discussion and enabling community-led or participatory design processes (Clarkson *et al.*, 2007; Holmes, 2018; Microsoft, 2016; Zallio & Clarkson, 2021, 2022; Craigon *et al.*, 2023; Costanza-Chock, 2020).

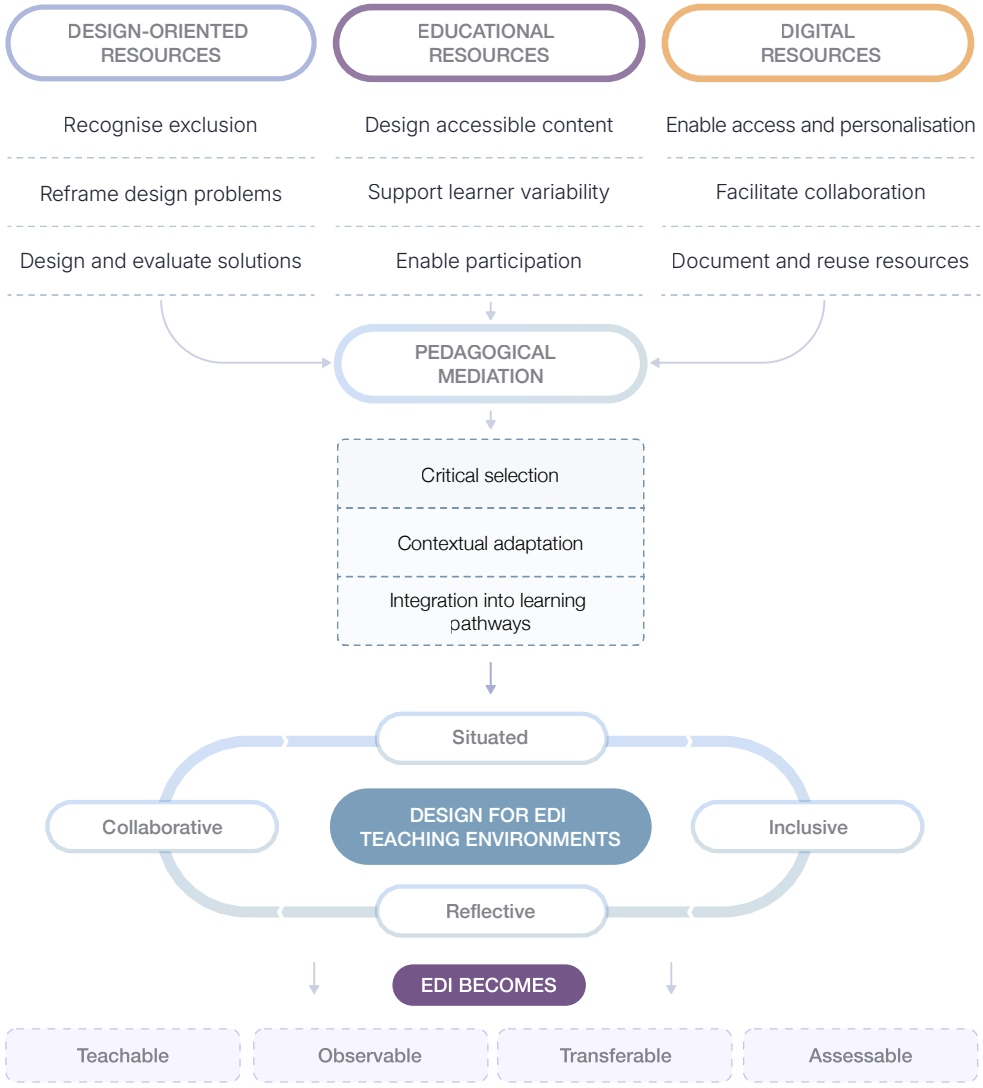


Figure 2.3. Analytical framework for teaching methodologies, tools, and educational resources for Design for EDI. Source: Graphic elaboration by the authors.

The second category includes tools, teaching methodologies and guidelines for EDI, or resources with potential relevance for EDI-oriented teaching.

This group is more heterogeneous and includes accessibility toolkits, guides for educators and researchers, inclusive learning resources, workshop materials, open educational resources, and educational frameworks such as Universal Design for Learning (UDL). Resources such as the BCcampus Accessibility Toolkit, the FLOE Inclusive Learning Design Handbook[5], the CAST Universal Design for Learning Guidelines, Newcastle University's EDI Toolkit for Researchers and Humber College's Teaching for Belonging: Equity, Diversity and Inclusion Faculty Toolkit expand the analysis beyond design methodologies in the strict sense. They direct attention to the pedagogical conditions that make inclusive teaching possible: accessible content, flexible pathways, inclusive

language, learner variability and adaptable materials (CAST, 2024; Coolidge *et al.*, 2018; Humber College, 2022; Newcastle University, 2023). For detailed resources, guidelines and educational materials, see Annex B.2.

The third category concerns digital environments and digital tools: platforms, web-based tools, open-source software, accessible interface components, collaborative applications and technologies for creating, adapting and sharing inclusive learning materials. Compared with the first two categories, this area is less homogeneous and closer to an evolving field. Its relevance lies in supporting accessibility, personalisation, remote collaboration, process documentation and reuse of resources. Tools such as Clusive, UDL Studio, UDL Exchange and CAST Figuration, together with the FLOE and FLUID projects, show how digital environments can contribute to more flexible and accessible learning systems (CAST, 2024; Treviranus, 2018). For the extended list of digital environments and tools mapped, see Annex B.3.

The distinction between these categories is therefore analytical rather than rigid. In teaching practice, the same resource may act simultaneously as a design tool, a reflective device and a support for assessment, depending on how it is introduced, adapted and discussed by educators.

Taken together, the three resource families are compared in Tab. 2.9, which synthesises their methodological value and critical conditions for educational adoption. Across the three families, a common critical condition emerges: tools, guidelines and platforms do not become inclusive by themselves. This is particularly relevant in design education, where the educational value of a resource depends not only on its content, but also on how it is embedded in briefs, studio activities, group work, reviews and final assessment. Toolkits and design-oriented methodologies translate inclusive design principles into operational activities; educational guidelines define the pedagogical conditions that enable inclusive teaching; and digital environments provide technological conditions for access, collaboration, documentation, personalisation and reuse. Their educational value depends on pedagogical mediation, contextual adaptation and integration into coherent learning pathways.

The distinction between physical and digital teaching environments is useful for organising the analysis, but it should not be interpreted as a rigid separation. As illustrated in Fig. 2.4, analog, hybrid and digital conditions are better understood as positions within a continuum of teaching environments for Design for EDI.

Many methodologies operate across formats: a canvas can be printed and used in class or transformed into a digital template; a co-design activity can take place in person but be documented through collaborative platforms; a card-based activity can support a group discussion in the studio or be adapted to a blended environment. Similarly, digital tools acquire educational value only when they are integrated into a clear design process, with explicit objectives, instructions, criteria for use and moments of shared reflection.

From this perspective, the value of a methodology does not depend only on the quality of the tool, but on the relationship between the tool, the teaching context and the design process. A checklist, a persona, an audit, a deck of cards, a toolkit, or a collaborative platform can contribute to teaching Design for EDI only if it helps students understand why it is used, what knowledge it produces, how it orients design decisions, and how it makes it possible to assess inclusion, accessibility, participation, or exclusion. Educators therefore need materials, application examples, adaptation criteria, and theoretical references that allow these resources to be transferred across courses, levels, and disciplinary fields.

Resource family	Methodological role	Pedagogical contribution	EDI contribution	Conditions for adoption
Toolkits, methodologies, approaches and tools for EDI	Translate inclusive design principles into operational design activities.	Support studio-based learning, workshops, project framing, ideation, evaluation and validation.	Make exclusion, user diversity, barriers, capabilities and participation visible within the design process.	They require pedagogical mediation: tools should not be used as isolated exercises, but embedded in coherent learning pathways.
Teaching methodologies, guidelines and educational resources for EDI or with EDI potential	Define the educational conditions that enable inclusive teaching.	Support accessible content, flexible learning formats, inclusive language, open educational resources and learner variability.	Shift attention from "teaching about EDI" to designing learning experiences that are themselves more inclusive.	They are often not design-specific and must be translated into design studio, project-based and assessment contexts.
Digital environments and digital tools	Provide technological conditions for access, collaboration, documentation, personalisation and reuse.	Support remote and hybrid work, multimodal content, accessible interfaces, shared resources and process traceability.	Extend participation possibilities, but only when accessibility, usability and pedagogical coherence are intentionally designed.	Digital availability must not be confused with inclusiveness; platforms and tools need to be evaluated critically.

Table 2.9. From tools to teaching strategies: methodological value for Design for EDI. Source: Authors' own elaboration based on research data from the EDIDesK project.

Several recurring elements emerge from the analysis: the most promising resources combine understandable instructions, a clear operational structure, examples or application cases, possibilities for adaptation and an explicit connection with the phases of the design process. Their educational value also depends on the accessibility of the resource itself, in terms of language, format, visual readability and possibilities for multimodal use. Finally, tools developed in professional, organisational or technological contexts can be relevant for higher education only when they are mediated by educators and connected to explicit learning objectives, design activities and assessment criteria.

Alongside these potentials, some critical issues also emerge. Some tools are solid and recognised, but not always easily adaptable to different teaching contexts. Others are open access but not fully editable, or present a concise and partially implicit methodology. In some cases, resources are rich in operational terms but weak in scientific validation or documented experiences in higher education. In other cases, accessibility is declared as an objective but is not fully reflected in the structure of the materials. These limits do not reduce the value of the tools; rather, they indicate the need to consider them not as directly transferable solutions, but as resources to be interpreted, adapted and integrated into a coherent teaching framework.

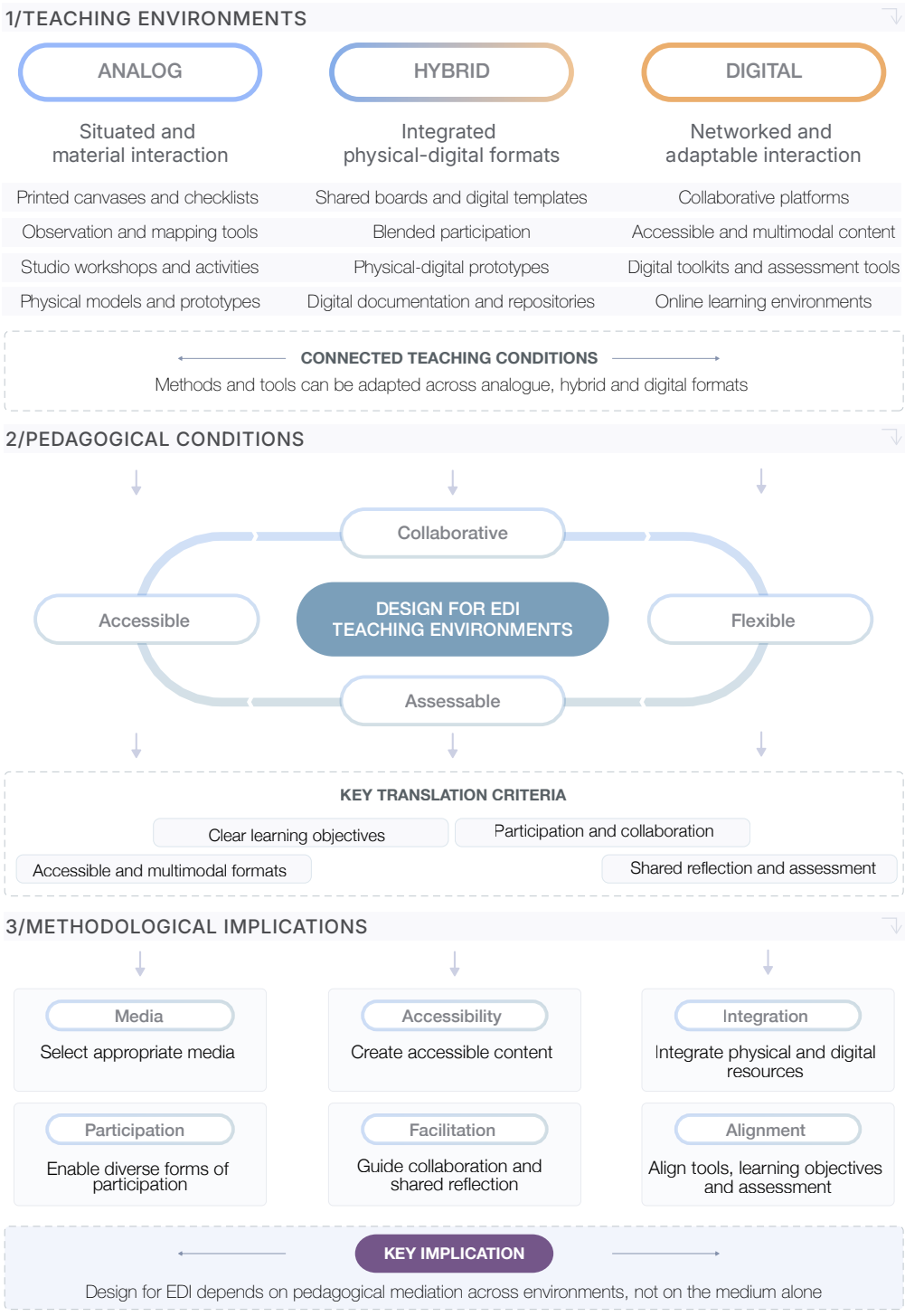


Figure 2.4. From analog to digital: continuum of teaching environments for Design for EDI. Source: Graphic elaboration by the authors.

Overall, the mapped scenario shows a broad and promising methodological base. The presence of analog, digital and hybrid resources makes it possible to imagine more flexible and inclusive teaching models, capable of working on observation, participation, representation of diversity, identification of barriers, collaborative ideation and evaluation of impacts. The main challenge is therefore not only to collect tools and resources, but to build connections between methodologies, learning objectives, phases of the design process, accessibility of materials, forms of collaboration and assessment criteria. It is within this connection that design assumes a strategic role: not simply as an applied field for inclusive principles, but as a cultural and operational infrastructure for making EDI teachable, observable, transferable and accessible.

In this sense, the analysis provides not only a repertoire of resources, but a critical basis for understanding how methodologies, tools and learning environments can contribute to making Design for EDI more explicit, transferable and assessable.

The following sections explore these dimensions by distinguishing, first, analog and hybrid methodologies for situated and collaborative learning and, second, digital tools and learning environments for design education. This distinction supports a scalable reading of the chapter: readers interested in the methodological framework can remain with this section; educators seeking to design or redesign teaching activities can move to Sections 2.3.1 and 2.3.2; readers requiring operational information can consult the extended sheets and tables in Annexes B.

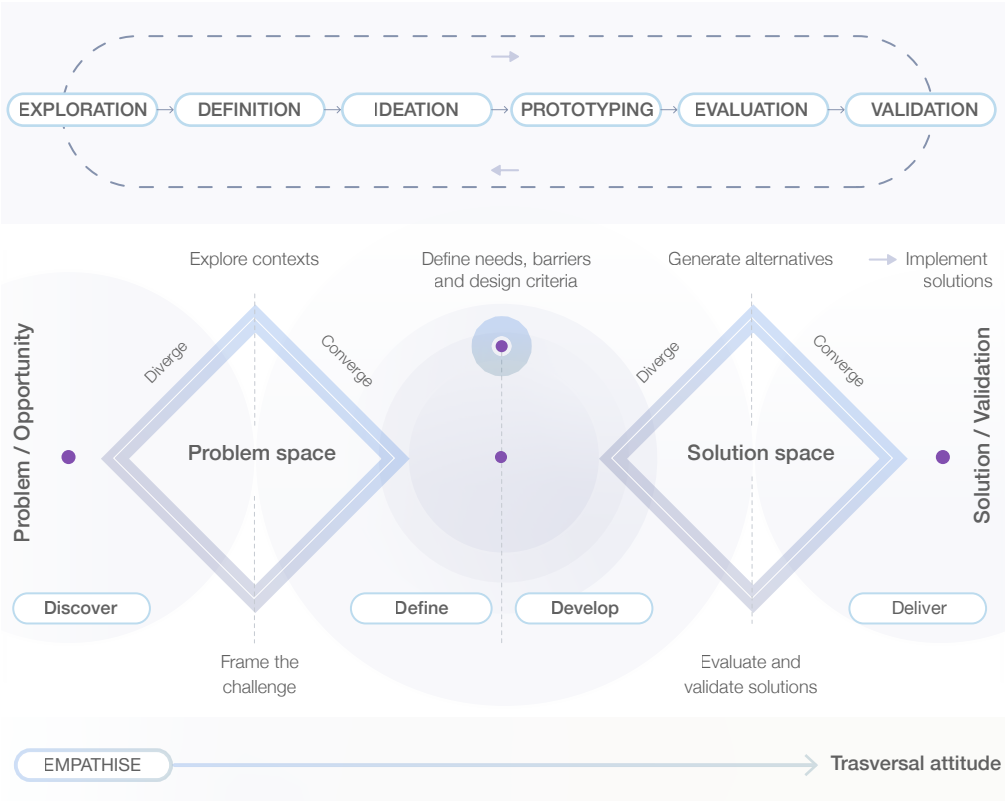
2.3.1 Analog and Hybrid Methodologies for EDI-Oriented Design Learning

The analysis of methodologies for the physical teaching environment requires an initial clarification. In design education, the physical environment is understood as a pedagogical condition encompassing classrooms, laboratories, studio work, workshops, collective reviews, direct observation, material experimentation and shared knowledge construction. The expression therefore includes analog and hybrid methodologies supporting situated learning, collaboration, co-design and design reflection. These settings also create opportunities for direct interaction, collective interpretation and the situated testing of design decisions.

This interpretation is particularly relevant to Design for EDI, since inclusion depends on integrating equality, diversity and accessibility into how students and educators engage with problems, users, contexts and barriers. Analog and hybrid methodologies can make visible dimensions often implicit in the design process, including exclusion, capabilities, differences in use, languages, stereotypes, social conditions, under-represented needs, access to services and participation. Their value lies in transforming EDI from a value-based framework into an observable, discussable and assessable design practice.

This is particularly important in studio-based design education, where learning develops through action, critique, negotiation and the progressive materialisation of ideas. Tools are not neutral supports: they shape what students observe, how they frame problems, which users they consider and how decisions are justified.

This process-oriented role is synthesised in Fig. 2.5, which maps the main tool families across recurring phases of design learning as an interpretative framework rather than a fixed sequence. Empathy is transversal, while validation may lead to implementation or a return to earlier phases for further exploration, ideation or prototyping. Analog and hybrid tools can therefore be sequenced, combined and adapted according to learning objectives, project constraints and student and stakeholder involvement.



Tool family	Exploration	Definition	Ideation	Prototyping	Evaluation	Validation
Simulation and exclusion-awareness tools	●	●	○	●	●	●
Personas, user profiles and scenarios	●	●	●	○	●	○
Cards, prompts and method decks	●	●	●	○	●	○
Canvases, templates and checklists	○	●	●	●	●	●
Co-design and participatory toolkits	●	●	●	●	●	○
Process-oriented method libraries	●	●	●	●	●	●

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Analogue and hybrid tools can be sequenced, combined and adapted across different phases of project-based learning

Figure 2.5. Analog and hybrid tools across the design process: exploration, ideation, prototyping, evaluation, and validation. Filled markers indicate recurrent opportunities for pedagogical use, while lighter markers indicate possible or context-dependent applications. Their placement is indicative rather than fixed or exclusive. Source: Graphic elaboration by the authors.

The first relevant group includes toolkits and instruments that help students understand user diversity and recognise forms of exclusion generated by products, services, interfaces, spaces or processes. From this perspective, the Inclusive Design Toolkit developed at the University of Cambridge represents one of the most established references. It provides tools for understanding user diversity, simulating capability loss, estimating exclusion and managing the design process, offering a methodological basis that connects Inclusive Design, Human-Centred Design and accessibility evaluation (Clarkson *et al.*, 2007, 2013; Dong & Clarkson, 2005). From a pedagogical perspective, its relevance lies not only in the availability of individual tools but also in its capacity to help students understand that exclusion is not a marginal or accidental effect of design. Rather, it is often the measurable consequence of design decisions, use requirements and assumptions about users. Tools such as the Exclusion Calculator, digital personas, family sets of personas and design process checklists can support different moments of design learning. Personas help broaden user representation and reduce the tendency to design for an average or normative user. Exclusion calculators help connect product or service characteristics with possible barriers to use. Process checklists allow students and educators to verify whether the design process includes critical components for inclusive design. These tools are particularly effective in the early and evaluative phases of the process, when students define the problem, understand users, identify critical issues and discuss the inclusive quality of proposed solutions.

A second group consists of canvases, audits and tools for structuring the design process. The IDEA Toolkit, developed within the Inclusive Design Group at the University of Cambridge, is particularly relevant because it explicitly introduces the dimensions of Inclusion, Diversity, Equity and Accessibility into the design process (Zallio & Clarkson, 2021). The Inclusive Design Canvas supports brainstorming, co-design and community engagement, helping project groups to question assumptions about people, needs, capabilities, barriers, and design actions. The IDEA Audit proposes a mixed-method approach to collecting perceptions related to inclusion, diversity, equity and accessibility in environments, organisations or specific contexts.

From an educational point of view, these tools can be interpreted as translation devices: they transform broad and sometimes abstract principles into operational questions. For students, this passage is essential. Working on EDI does not simply mean declaring attention to vulnerable groups or diverse users. It means learning to ask more precise questions: Who is included or excluded by a solution? Which capabilities are required? Which social, cultural, physical or cognitive conditions are considered? Which experiences remain invisible? Which design actions can reduce or amplify barriers? In this sense, canvases and audits help build an operational grammar of inclusion.

However, these tools require teaching mediation. If used in isolation, they risk becoming merely filling-in exercises. Their value emerges when they are integrated into a broader learning pathway: theoretical introduction, context analysis, work on the brief, evidence collection, critical discussion, design development and assessment. The educator therefore plays a fundamental role in making the passage between tool and learning explicit. It is not enough to complete a canvas. It is necessary to discuss which assumptions have been challenged, which information is missing, which users or communities have been involved, and how the outcomes of the tool actually modify design decisions. This mediation also helps prevent the instrumental reduction of EDI to a checklist. The aim is not only to verify whether inclusion has been considered, but to make visible how inclusive reasoning enters the project, changes priorities and supports more responsible design choices.

A third group includes card-based tools, decks, workshop resources and lightweight methodologies for activating discussion, critical reflection and collaborative ideation. This family includes, for example, the Microsoft Inclusive Design Activity Cards, the EDI Cards developed at the University of Nottingham and other tools based on cards or operational prompts. The Microsoft Inclusive Design Toolkit is grounded in three well-known principles: recognise exclusion, learn from diversity, solve for one and extend to many (Microsoft, 2016; Holmes, 2018). The activity cards translate these principles into exercises applicable along the design process and can be used either as a linear guide or as targeted support for integrating inclusive practices into existing processes.

The EDI Cards were conceived as flexible tools for discussion and reflection on Equality, Diversity and Inclusion in different design and research contexts (Craigon *et al.*, 2023). Their educational value lies in the capacity to generate structured conversations around topics that can be complex or sensitive in a learning environment. Cards, prompts and sheets allow students to engage with questions of power, representation, bias, responsibility, participation and impact without reducing EDI to a list of technical requirements. In a design studio, these tools can support group activities, concept reviews, brief discussions, ethical evaluation and reflection on use scenarios.

The value of card-based tools lies in their operational accessibility. They are generally easy to introduce, foster peer interaction, can support short activities or more structured sessions, and help bring into the design process questions that might otherwise remain implicit. However, their use also requires care. Discussion on EDI can activate personal experiences, divergent positions and possible tensions. For this reason, such tools should be accompanied by facilitation rules, attention to language, time management, explicit learning objectives and criteria for restitution. Inclusion should be reflected both in the content of the cards and in the way they are used, including how the conversation is structured to remain safe, accessible and productive for all participants.

A fourth group concerns methodologies and toolkits oriented towards co-design, participation and community involvement. The Community-Led Co-design Kit of the Inclusive Design Research Centre is important because it shifts attention from designing for users to constructing design processes led or co-led by communities (Inclusive Design Research Centre, 2017/2024; Costanza-Chock, 2020). The kit includes guides, activities, adaptable tools and case studies, and addresses fundamental aspects such as facilitation, accessibility, participant recruitment, involvement of co-designers and process documentation. In an educational perspective, this type of resource helps students understand that inclusion cannot be reduced to the representation of diverse users within a design exercise. It requires conditions of participation, listening, responsibility and return.

Similarly, the Inclusive Cities Co-design Kit and the Inclusive Co-design Toolkit developed by Bridgeable offer materials for planning co-design activities attentive to linguistic, cultural, emotional and organisational barriers. These tools are particularly interesting for teaching because they make it possible to discuss not only who is involved, but how involvement takes place. In Design for EDI, participation becomes inclusive when access to spaces, time constraints, languages, communicative capacities, roles, compensation, consent and participant expectations are explicitly considered. For this reason, co-design toolkits are valuable especially when they help students design the relationship with stakeholders as an integral part of the project.

This perspective connects Design for EDI with broader reflections on design justice and the responsibility of design in social processes (Costanza-Chock, 2020). In a teaching environment, these references can help shift attention from the final solution to the

process that produces it. Learning does not only concern the capacity to design more accessible artefacts; it also concerns the capacity to recognise power relations, conditions of exclusion and situated forms of knowledge. Participatory and co-design methodologies therefore create a bridge between design competences, critical awareness and social responsibility. A fifth group includes collections of methods and process tools which, although not always explicitly developed around EDI, can support inclusive teaching if intentionally integrated. The 18F Method Cards, for example, collect Human-Centred Design methods organised by phases such as discover, decide, make and validate. Method cards of this kind can be useful in teaching because they provide an operational grammar of the design process: affinity mapping, journey mapping, personas, service blueprints, prototyping, usability testing and other methods can structure activities, make decisions explicit and support the traceability of the project. However, their contribution to EDI depends on how they are oriented. A human-centred tool becomes relevant for Design for EDI when it explicitly integrates criteria concerning diversity, accessibility, equity and participation.

The main typologies of analog and hybrid tools discussed in this section are summarised in Fig. 2.6, which organises the mapped resources according to their primary pedagogical function while recognising that many can be used across different categories depending on the learning context. Tab. 2.10 complements this overview by relating these typologies to their educational functions and to possible phases of the design process, offering a more detailed operational synthesis of the resources analysed. Together, the figure and table support a progressive reading from general tool families to their possible application within teaching activities.

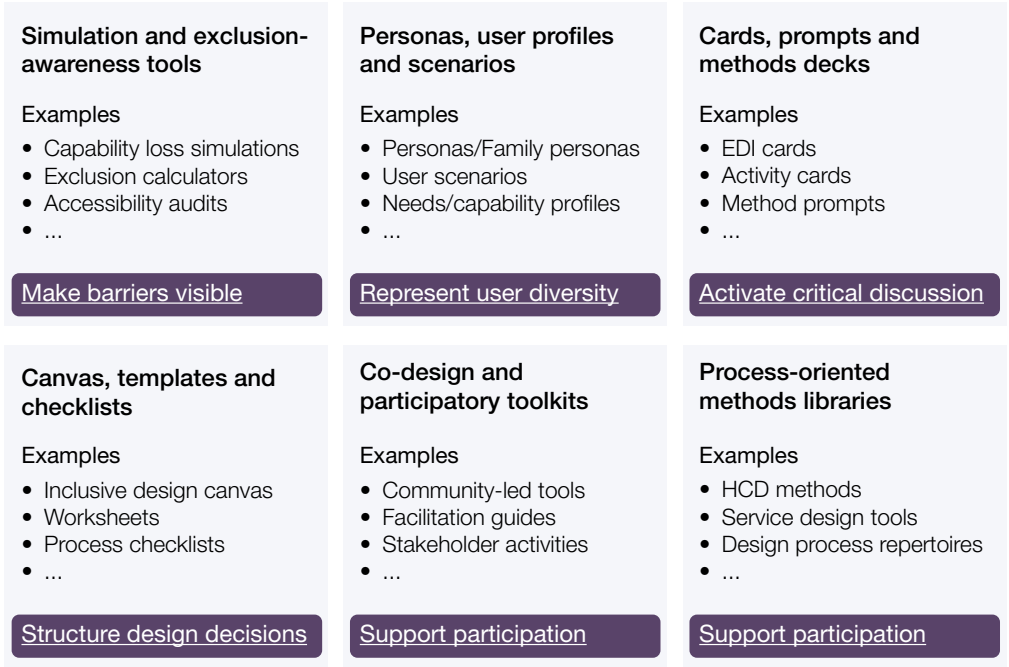


Figure 2.6. Typologies of analog and hybrid tools for Design for EDI. Source: Graphic elaboration by the authors.

Analog and hybrid tool family	Examples from the mapping	Educational function	Possible design process phases
Simulation and exclusion-awareness tools	Capability loss simulations; exclusion calculators; impairment simulators; accessibility audit tools.	Help students recognise barriers, understand user diversity and make exclusion observable through embodied, visual or analytical exercises.	Exploration; problem framing; evaluation; validation.
Personas, user profiles and diversity-representation tools	Personas; family personas; user scenarios; needs and capability profiles.	Support the representation of diverse users and prevent generic or abstract user models in design briefs and project discussions.	Exploration; problem framing; ideation; evaluation.
Cards, prompts and method decks	EDI Cards; IDEA Toolkit cards; 18F Method Cards; social impact design cards.	Structure discussion, guide inclusive questioning, support method selection and stimulate collaborative reflection.	Exploration; ideation; prototyping; evaluation.
Canvases, templates and checklists	Design process checklists; ethical design checklists; co-design templates; accessibility and inclusion worksheets.	Help students organise information, document decisions and translate inclusive principles into design requirements.	Problem framing; ideation; prototyping; validation.
Co-design and participatory toolkits	Community-Led Co-design Kit; inclusive co-design toolkits; inclusive cities co-design materials.	Support stakeholder engagement, community participation, facilitation and shared decision-making in situated design processes.	Exploration; co-definition; ideation; prototyping; feedback.
Process-oriented method libraries and toolkits	Inclusive Design Toolkit; Service Design Tools; design thinking tool collections.	Provide structured repertoires of methods that can be sequenced and adapted across teaching contexts and design challenges.	Across the whole process: exploration, ideation, prototyping, evaluation and validation.

Table 2.10. Main analog and hybrid tool families, educational functions and possible design process phases. Source: Authors' elaboration based on research data from the EDIDesK project; see also Annex B.1.

Overall, the mapped analog and hybrid methodologies show at least four central pedagogical functions. The first is structured awareness: they help students recognise barriers, exclusions, differences and biases that often remain invisible in ordinary design processes. The second is exploration: they broaden knowledge of contexts, users and conditions of use. The third is collaborative design: they facilitate discussion, negotiation of meanings and shared construction of criteria. The fourth is evaluation: they make it possible, at least preliminarily, to verify whether a design proposal actually considers accessibility, diversity, participation and impact.

These functions make such tools particularly suitable for physical and studio-based learning environments, where presence, direct interaction and the materiality of resources can support active learning and critical discussion. Cards, canvases, checklists and toolkits can be manipulated, annotated, combined, discussed and modified. This material dimension supports a form of situated learning in which knowledge is not simply transmitted but constructed through action, comparison and reflection. In the design studio, this allows the relationship between process and responsibility to emerge: students do not work only on inclusive solutions, but learn to interrogate the conditions that make a process more or less inclusive.

At the same time, the physical dimension should not be idealised. An in-person environment can be exclusionary if it does not consider the accessibility of spaces, working times, communication modes, materials, languages, group dynamics and the safety of discussion. Analog and hybrid methodologies must therefore also be assessed in terms of their internal accessibility. A toolkit for inclusion should be readable, understandable, adaptable, available in different formats and usable by students with different needs. Coherence between inclusive objective and tool format becomes a criterion of methodological quality.

The analysis also reveals recurring critical issues. The first concerns terminological fragmentation: many tools do not explicitly use the term EDI, but refer to inclusion, accessibility, usability, empathy, user diversity or co-design. This plurality is rich, but it can make comparison difficult. The second concerns validation: some tools are supported by publications and strong scientific legitimacy, while others are more recent, experimental or documented mainly through websites and dissemination materials. The third concerns adaptation to higher education: not all tools developed for professional sectors are immediately usable in class. The fourth concerns updating: digital tools, templates, collaborative platforms and datasets can change rapidly and require periodic verification.

For these reasons, the analytical sheets and extended tables planned in Annex B.1 should not be considered as a static repertoire, but as an updatable base of resources. Their usefulness is not only documentary, but methodological: they make visible the criteria through which tools for Design for EDI can be selected, adapted and evaluated. This approach supports the scalable logic of the volume, allowing readers to move from interpretive synthesis to operational tool sheets and further comparison.

In synthesis, analog and hybrid methodologies for the physical learning environment constitute a strategic core for Design for EDI. They connect theory and practice, values and actions, awareness and assessment. Their most relevant contribution is not the simple availability of tools, but the possibility of constructing teaching experiences in which inclusion becomes part of the design process: observed, discussed, negotiated, translated into decisions and evaluated through the outcomes. From this perspective, design matters not as a neutral applied field, but as an educational practice capable of making the conditions of exclusion visible and transforming them into design criteria.

2.3.2 Digital Tools and Learning Environments for Design for EDI

The analysis of methodologies for the digital teaching environment requires a different level of attention from that applied to analog and hybrid methodologies. In the case of digital environments, the analysis should identify tools and platforms while also clarifying the conditions under which they can effectively support inclusive, accessible and participatory learning processes. From this perspective, the digital teaching environment should be understood as the set of conditions through which content, interactions, interfaces, materials and activities are made accessible, adaptable, collaborative and reusable.

In design education, this distinction is especially important. Digital tools can expand access to content, facilitate remote collaboration, support documentation of design processes and enable the shared construction of resources. At the same time, they can also generate new barriers: cognitive overload, inaccessible interfaces, formats incompatible with assistive technologies, dependence on proprietary licences or platforms, difficulties in orientation, and discontinuity between tools and learning objectives. For this reason, the analysis of digital environments must combine technical, pedagogical, design and inclusive criteria.

The repertoire mapped in Annex B.3 includes digital tools, platforms, open educational resources, open-source software, accessible interface components, collaborative environments and technologies for creating or adapting inclusive educational materials. Compared with analog and hybrid methodologies, this area is less homogeneous and more subject to evolution. Some resources are learning platforms; others are content-production tools; others are frameworks, plugins, guidelines, collaborative templates or co-creation environments. Their value lies in their capacity to support essential conditions for Design for EDI: accessibility, personalisation, collaboration, multimodality, adaptability and reuse. These enabling conditions are synthesised in Fig. 2.7, which identifies accessibility, personalisation, collaboration, documentation and reuse as the main dimensions through which digital tools can support inclusive learning environments.

A first set of resources concerns the creation of accessible and personalisable teaching materials. This area includes tools linked to Universal Design for Learning[6], such as Clusive, UDL Studio, UDL Exchange and CAST Figuration. These tools shift attention from content as a static object to content as an adaptable resource. The aim is to make learning materials available through different modalities, with support levels, alternative formats, accessible interactions and personalisation options. Accessibility should therefore not be treated as a later correction of a material, but as an initial criterion in the design of the learning experience.

Resources related to Universal Design for Learning are particularly relevant because they propose a view of learning design grounded in learner variability. Inclusive learning is constructed by planning from the beginning multiple means of access, representation, engagement and expression (Rose *et al.*, 2006; Meyer *et al.*, 2014; CAST, 2024). This approach can be transferred to design education: designing accessible content also means teaching students to consider diversity as an ordinary condition of the project, rather than as an exception to be managed afterwards.

A second set of resources concerns frameworks, projects and open-source environments oriented to accessibility, personalisation and the design of inclusive interfaces. The FLOE and FLUID projects, developed within the ecosystem of the Inclusive Design Research Centre, connect inclusive learning, open educational resources, personalisation and accessible interface design. FLOE assumes that open educational resources

can become more inclusive if they are designed to be adapted to different needs. FLUID focuses on user experience and inclusiveness in open-source software, through components and tools for more flexible and accessible interfaces (Treviranus, 2018).

1 - ACCESSIBILITY

Accessibility by design	
Key criteria	AT compatibility • readable structure • alternative formats
Educational value	enables access to content and activities
	↘ Enable access

2 - PERSONALISATION

UDL and learner variability	
Key criteria	adaptable contents • flexible pathways • multiple means of access
Educational value	supports differentiated learning trajectories
	↘ Adapt learning

3 - COLLABORATION

Participatory and distributed learning	
Key criteria	shared works paces • feedback space • sync/async interaction
Educational value	supports participation and distributed teamwork
	↘ Enable participation

4 - DOCUMENTATION

Process traceability and formative assessment	
Key criteria	process traces • learning evidence • reflective records
Educational value	makes learning and decision-making visible
	↘ Make process visible

5 - REUSE

OER and transferability	
Key criteria	open resources • templates • repositories • sustainable maintenance
Educational value	supports transfer, continuity and scalability
	↘ Enable transfer

Figure 2.7. Digital tools as enabling conditions for inclusive learning: access and personalisation, collaboration and participation, documentation and reuse. Source: Graphic elaboration by the authors.

From the perspective of design education, these resources are interesting not only as tools to use, but also as cases to study. They show how accessibility and inclusion can be incorporated into the architecture of digital systems: in interface options, navigation, compatibility with assistive technologies, preference settings, content structure and the relationship between user and environment. For design students, this perspective is central. Designing for EDI in digital environments does not mean simply producing content about inclusion. It means understanding how decisions concerning interface, format, interaction and information architecture can enable or limit participation.

A third set concerns guidelines, toolkits and resources for producing accessible information. Examples include the Guidelines for Accessible Information developed within the ICT4IAL project[7], resources linked to European projects on ICT for Inclusion, guidelines for accessible teaching materials and toolkits focused on syllabi, assignments, classroom interactions and accessibility. These resources have a complementary methodological function to the design toolkits analysed in the previous section, since rather than guiding a specific phase of the design process, they define the conditions that make learning content more accessible, understandable and usable (European Agency for Special Needs and Inclusive Education, 2015).

For design education, this issue is relevant because course materials are often highly visual: slides, moodboards, maps, diagrams, images, videos, prototypes, collaborative files, templates and presentations. The accessibility of these materials is not a marginal issue, as it affects students' ability to participate in the learning process. Moreover, producing accessible materials can itself become a learning objective: students can be asked to design digital outputs that respect criteria of readability, contrast, structure, textual alternatives, navigability, plain language and compatibility with different devices or assistive technologies.

A fourth set concerns collaborative platforms and environments for group work, such as Miro, Mural, Figma and other real-time board or co-creation tools[8]. These environments are widely used in design teaching because they allow students and educators to share materials, organise workshops, build maps, collect feedback, document processes and work synchronously or asynchronously. In Design for EDI, they can make the process more visible, facilitate the participation of students or stakeholders at a distance, support hybrid activities and preserve traces of the work done.

However, it is important to distinguish between collaborative potential and effective inclusiveness. A collaborative platform can support group work, but it can also generate barriers if it requires high digital skills, stable connections, adequate devices, the ability to orient oneself within complex visual spaces or interactions that are not accessible. Moreover, intensive use of digital boards can overload students if it is not accompanied by clear organisation, readable instructions, defined roles and moments of synthesis. Participation therefore depends not only on the technical features of the platform, but also on how educators structure access, interaction and contribution, including alternative ways of participating when synchronous or highly visual collaboration is not possible. For this reason, these tools should be considered as methodological supports whose educational value depends on facilitation and learning design, rather than as autonomous methodologies.

The main digital resource areas identified through the mapping are summarised in Tab. 2.11, which relates representative examples to their educational functions and critical conditions for adoption, while also highlighting their potential contribution to more accessible, collaborative and adaptable learning environments (see also Annex B.3).

Digital resource area	Examples from the mapping	Educational function	Critical condition for adoption
Adaptive and UDL – based learning environments	Clusive; UDL Studio; UDL Exchange.	Support flexible creation, adaptation and sharing of learning materials, addressing learner variability through multiple formats and supports.	Require pedagogical translation into design briefs, studio activities and project-based learning.
Accessible interface frameworks and components	CAST; FLUID/Infusion; FLOE; User Interface Options.	Make accessibility observable as a design criterion for interfaces, interaction, usability and inclusive digital experience.	Need technical mediation and updated accessibility evaluation.
Open educational resources and inclusive learning guides	FLOE Project; Inclusive Learning Design Handbook; SNOW; Inclusive Design Guide.	Support the development of accessible, multimodal and adaptable learning materials.	Require curation and alignment with specific learning objectives.
Collaborative and hybrid work platforms	Miro; Mural; Realtime Board; Figma.	Enable visual collaboration, shared documentation, remote teamwork and synchronous/ asynchronous participation.	Collaboration should not be confused with inclusion; accessibility, facilitation and participation formats must be intentionally designed.
Guidelines and institutional tool-sets for accessible digital learning	Microsoft Education tools; ToFIE; ICT4IAL Guidelines.	Provide operational criteria for accessible information, inclusive classroom technologies and digital learning environments.	Often not design-specific; they must be connected to design processes, assessment criteria and disciplinary learning outcomes.
Process-oriented method libraries and toolkits	Inclusive Design Toolkit; Service Design Tools; design thinking tool collections.	Provide structured repertoires of methods that can be sequenced and adapted across teaching contexts and design challenges.	Require selection and sequencing according to learning objectives and the relevant phases of the design process.

Table 2.11. Digital resources for inclusive teaching and learning: main functions, examples and educational relevance.

The evaluation of digital tools therefore requires moving beyond their mere availability. Tab. 2.12 summarises seven interrelated criteria concerning technical access, accessibility, usability, adaptability and personalisation, participation and collaboration, sustainability and reuse, and pedagogical coherence. Together, they provide an operational framework for assessing how digital resources can contribute to more inclusive learning environments.

Evaluation criterion	What to check	Inclusive learning relevance
1. Technical access	↘ Device and connectivity requirements. ↘ Licences and costs. ↘ Reliable access conditions.	↘ Reduces technological and economic barriers. ↘ Supports equitable access to digital learning activities.
2. Accessibility	↘ Assistive compatibility. ↘ Keyboard navigation and contrast. ↘ Captions and text alternatives. ↘ Semantic content structure.	↘ Supports diverse sensory, cognitive and motor needs. ↘ Enables access to content and interaction through different modalities.
3. Usability	↘ Clear navigation and orientation. ↘ Readable interface structure. ↘ Manageable cognitive load. ↘ Functional coherence.	↘ Reduces unnecessary interaction barriers. ↘ Allows learners to focus on the activity rather than on tool complexity.
4. Adaptability and personalisation	↘ Flexible content, formats and pathways. ↘ Adjustable settings, support and access modes.	↘ Responds to learner variability. ↘ Supports different needs, preferences and learning contexts.
5. Participation and collaboration	↘ Shared and feedback spaces. ↘ Clear roles and contribution modes. ↘ Synchronous and asynchronous interaction. ↘ Process documentation.	↘ Enables different forms of participation. ↘ Supports collaboration, contribution and distributed teamwork. ↘ Makes shared processes and decisions more visible.
6. Sustainability and reuse	↘ Availability over time. ↘ Interoperability and updating. ↘ Possibilities for reuse and adaptation. ↘ Sustainable access conditions.	↘ Supports continuity across courses and activities. ↘ Enables resources to be adapted and transferred to different contexts.
7. Pedagogical coherence	↘ Explicit learning objectives. ↘ Alignment with teaching activities. ↘ Assessment criteria. ↘ Appropriate level of educator mediation.	↘ Ensures that the tool serves the learning process. ↘ Connects technological choices with inclusive learning objectives. ↘ Avoids adopting technology for novelty alone.

Table 2.12. Criteria for evaluating digital tools for Design for EDI.

The analysis suggests a set of transversal criteria for evaluating digital tools from a Design for EDI perspective. These criteria move from the basic conditions of technical access and accessibility to usability, adaptability and personalisation, participation and collaboration, sustainability and reuse, and finally pedagogical coherence. Their value lies in considering digital tools not only in terms of availability or technical performance, but in relation to the ways they support different learners, enable participation, remain usable over time and contribute to explicit learning objectives. In this perspective, the evaluation of a digital tool becomes part of the broader design of the learning environment rather than a separate technical check.

These criteria are important because digital technologies are often interpreted as neutral accelerators or facilitators. In reality, every digital environment incorporates design decisions: what is visible and what remains hidden, which actions are facilitated, which user profiles are implicitly assumed, which forms of interaction are privileged and which competences are taken for granted. The digital environment is not only a means for teaching Design for EDI. It is also a design object through which students can observe, discuss and test EDI principles.

The role of the educator is therefore decisive. Integrating inclusive digital tools requires competences in selection, adaptation, facilitation and assessment. An inclusive digital teaching environment requires accessible assignments, alternative formats, clear modes of participation, readable materials, clear guidance and opportunities for student feedback. The inclusiveness of the digital environment emerges from the relationship between technology, learning design and care for the educational process. This also requires educators to anticipate possible barriers rather than addressing them only after they emerge. Providing alternative ways to access materials, contribute to activities and demonstrate learning can help ensure that the same digital environment remains usable across different situations, abilities and levels of technological confidence.

The theme will be further developed in **Chapter 5**, especially in the section devoted to digital platforms and digital learning environments in design studies. In the present section, the objective is not to exhaust the analysis of digital platforms, but to clarify their role within the methodological framework of **Chapter 2**. Digital environments are relevant not because they replace analog methodologies or studio-based learning, but because they can extend their possibilities: making content more accessible, processes easier to document, activities more flexible, collaboration more distributed and resources more reusable.

In summary, digital environments, tools and resources are an important but not self-sufficient component of methodologies for inclusive teaching. Their most relevant contribution consists in enabling greater flexibility of learning pathways, better accessibility of materials, wider documentation of processes and new forms of collaboration. However, for this potential to become effective, digital tools and environments must be designed, selected and used intentionally. Here too, design matters: technologies are not neutral, but incorporate design choices that can enable or limit inclusion. For this reason, the digital environment should be treated not only as a support for teaching, but as a design and pedagogical space in which EDI becomes a criterion of quality, responsibility and assessment.

Taken together, the analysis of analog, hybrid and digital methodologies provides the basis for the following chapters, linking the methodological framework developed here with the digital learning environments discussed in **Chapter 5** and with the critical reflection on transferability, assessability and sustainability developed in **Chapter 6**.

2.4 Combined Analysis and Virtuous Contents

Patrycja Rudnicka, Marta Więckowska

The analysis conducted in WP2 confirmed that effective EDI education requires a close alignment among teaching content, pedagogical methods, and expected student development. The analysis did not identify a single universal teaching method suitable for every EDI-related objective. Instead, it showed that each content area should be supported by several complementary methodologies, selected based on the intended learning outcome, students' maturity, and the module's context. This conclusion emerged from the combined analysis, especially the desk research, interviews with module leaders, benchmarking activities, and the analysis of teaching tools and methodologies. The work initially focused on identifying selected best practices in design-oriented content related to EDI and teaching methodologies suitable for studio and blended learning environments. These alignments between harmonised teaching content and suitable methodologies were intended to generate a flexible framework for inclusive teaching. In this context, best practices should not be understood as ready-made models to be copied directly into every educational setting. Rather, they are transferable elements of teaching practice, identified through evidence, expert discussion, and the interpretation of existing modules, which could be used to generate new shared knowledge for EDI-oriented design education. They therefore serve as educational patterns: they show what to consider when designing EDI-related teaching content, how to deliver it, and what kind of student development it can support.

2.4.1 Identified best practices and tools

The analysis identified 15 key best practices for design-oriented content on EDI, organised into three main areas: attitudes, knowledge and skills (see Deliverable D2.3.1 and General Note on Chapter 2). This structure is important because it shows that EDI education should be embedded in the whole learning process and linked to the development of competences. It should support attitudes such as openness, readiness to face complexity, awareness of bias, and responsibility towards users and stakeholders. At the same time, it should build knowledge and awareness of EDI as a dynamic and evolving field, and develop practical skills related to research, communication, project management, stakeholder engagement, testing, and self-reflection.

For this reason, EDI should influence how modules are structured, how assignments are formulated, how students engage with users and stakeholders, how feedback is collected and how learning outcomes are assessed. This means that EDI-oriented education requires pedagogical design: a conscious connection among content, methods, tools, learning environment and assessment.

The first group of best practices concerns attitudes. These practices emphasise the importance of flexibility, emotional safety, and reflection on the designer's role and limitations. The analysis shows that students enter EDI-related modules with different levels of readiness, maturity, and personal openness. For this reason, EDI content should be introduced in a way that allows students to engage with difficult or sensitive topics without reducing them to simplified design problems or categories. A safe and supportive learning environment is therefore essential, especially when students are asked to confront stereotypes, personal bias, social injustice, disability, exclusion, or unequal access to services and spaces, and to reflect critically on their own assumptions and positioning.

The second group concerns knowledge. Here, the analysis emphasises that EDI should be presented as an integral part of the design process, not as a separate or optional perspective. Students should understand that inclusive thinking is connected with the basic responsibilities of design practice. At the same time, they should learn that EDI is not a closed set of definitions, but an evolving field shaped by changing social, cultural, technological, and political contexts. This requires critical engagement with standards, tools, frameworks, and design norms. Students should learn not only how to apply tools, but also how to question the assumptions, limitations, and relevance of these tools to specific contexts.

The third group concerns skills. The analysis highlights the need to develop design-process competences adaptable to diverse EDI-related challenges. These include the ability to use diverse research methods, identify real problems and latent needs, distinguish causes from effects, work with stakeholders, manage projects, communicate with users as equal partners, and reflect on acquired competences. In this sense, EDI education supports both hard and soft skills. It strengthens not only design methodology, research literacy, prototyping and evaluation, but also empathy, teamwork, ethical reasoning, and resilience.

The teaching tools – both digital and analog – were also analysed through a benchmarking process to show how they can fulfil specific educational goals. The analysis examined whether the tools support the entire design process or only selected EDI-related aspects, whether they are suitable for specific design areas, and how they can be incorporated into curricula. As a result, teaching content and methods were matched with relevant tools in the form of a matrix and an interactive database.

The analysed tools can play different roles in EDI-oriented education. Some tools introduce EDI knowledge and the inclusive design process, using definitions, examples, videos, worksheets, or structured design canvases. Others support awareness-building through cards, games, scenarios, exclusion calculators, or ethical prompts. Some tools support teamwork and stakeholder engagement, while others assist with prototyping, simulation, collaborative work, inclusive learning materials, or self-reflection.

Furthermore, the findings indicate that the value of tools depends on how they are aligned with teaching goals, student readiness, and the module's structure. This is particularly important because tools differ in complexity. Some are simple and can be quickly introduced in class; others require more time, explanation, and facilitation by educators. The analysis shows that tools can be used at different learning stages and should be selected according to the level of education, type of subject, and students' readiness

Digital templates, worksheets, and platforms such as Miro or Figma may support individual work, teamwork, and discussion, while interactive tools may increase engagement and allow students to test scenarios or simulate aspects of their projects. However, the findings also highlight that digital tools cannot replace the educator's pedagogical role. They need to be interpreted, adapted, and facilitated. The educator remains responsible for explaining why a tool is used, how it relates to the learning outcomes, what kind of knowledge it produces, and how students should interpret the results.

As demonstrated by the findings developed in D2.4.1, this is particularly important in EDI education, because poorly framed tools may oversimplify diversity, reproduce biases, or create the illusion that inclusion can be achieved through a checklist. Their educational value therefore depends on how they are introduced, contextualised, and discussed within the learning process. Tools should therefore support critical and reflective design practice rather than replace it.

2.4.2 Identified teaching and learning methodologies

The analysis also identified nine suitable teaching and learning methodologies for delivering EDI-related content in design and design-related fields. These methodologies were developed to bridge the gap between the design-oriented EDI content identified through the analysis of best practices and the tools analysed in the benchmarking activities. They were selected based on criteria such as their effectiveness in generating EDI-related knowledge and skills, their suitability for both studio and online environments, their flexibility across design fields, and their potential to support collaborative and diverse project formats. The methodologies include, among others, problem-based learning through the design process, design management, student-led approaches, experiential learning, case studies, workshop methodology, inclusive learning environments, learning by doing, and collaborative work among students.

Design management		
What is meant (details)	Motivation	Methodologies/approaches, categories and sub-categories of toolkits/tools
Project-based learning with fostering management skills involves guiding students through the project's process of development from concept to implementation, while emphasising design principles and management strategies.	This method develops an understanding of the commercial context of project implementations.	Suggested methodologies/ approaches: • Human-Centred Design; • Inclusive Design; • Design Thinking; • Live Projects (with commercial stakeholders); • Field Analysis. Categories of selected toolkits/ tools (as per Databases 1, 2, 3 from D2.2.1.): • Managing the process; • Design process; • Design Process Checklist; • Worksheet. Sub-categories and others recommended toolkits/tools: • Inclusive Design Toolkit (Cambridge University) – Sub tool: Design process checklist; Process Management tools.

Table 2.13. Example of the framework used to describe teaching and learning methodologies for delivering EDI-related content. Source: EDIDesK Deliverable D2.1.1, p. 15.

Each methodology was described (see Tab. 2.13) through several connected dimensions: what the methodology means, why it is relevant for EDI education, which design approaches it can activate, and which categories or sub-categories of tools can support it. This structure linked teaching methodology with practical educational resources identified in the benchmarking, including toolkits, worksheets, method cards, personas, user research tools, co-design tools, evaluation tools, prototyping tools, and resources for

understanding user diversity. In this way, the table connects abstract pedagogical aims with concrete teaching support that educators can use when designing modules.

This set of methodologies shows that EDI education requires methodological plurality. For example, problem-based learning helps students understand real-world complexity and apply the design process to social challenges. Design management supports planning, implementation, and stakeholder coordination. Experiential learning allows students to confront human diversity and reduce the gap between theory and practice. Case studies support analysis of complex situations, while workshops create space for interaction, discussion, teamwork, and structured experimentation. Collaborative work allows students to bring together diverse perspectives and develop empathy, creativity, and a sense of shared responsibility.

The key result of the combined analysis of best practices and teaching methods was the development of an interpretative map (see Annex A, Best Practices and Interpretative Map). This map was conceived as a practical matrix that links design-oriented content on EDI with the most suitable teaching methodologies. It provides a correlational matrix in which specific EDI teaching objectives can be matched with methods that support them. For instance, content related to working with real stakeholders can be supported by problem-based learning, design management, and experiential approaches: students learn why users matter, how to plan for participation, and how to conduct field research and collect feedback. The interpretative map is therefore not only a summary of findings, but also a pedagogical tool. It helps educators decide how to structure a module, which methods to use, and how to avoid a mismatch between content and learning activities.

2.4.3 Competence framework

In addition to developing teaching methodologies, it became essential to establish a competence framework, which provides an additional layer of analysis (see Deliverable 2.4.1). It defines the competences students are expected to develop and links them with EDI-oriented teaching content and tools. The framework is universal for EDI-oriented education and should be considered in both digital and non-digital learning environments. It is also organised around knowledge, attitudes, and abilities or skills, creating a coherent connection between educational aims and means. This competence perspective is important for the Teaching Framework because it shifts attention from what educators teach to what students should be able to understand, do, and reflect upon. For example, students should develop unbiased knowledge of EDI, understand how to critically engage with EDI themes and users, learn design-based methods for working with EDI issues, and gain knowledge of specific methods for working with diverse and mixed groups of people (see Annex A).

The combined analysis therefore provides several important conclusions for the Teaching Framework. First, EDI education should be gradual and distributed across the curriculum. Students need time to develop sensitivity, critical thinking, methodological confidence, and responsibility. The analysis recommends that EDI issues and approaches should be included in every module, with intensity adjusted to the year of study and students' maturity. It also stresses that students should gradually move from examples, tools, and guided observation towards independent investigation and problem identification. Second, theory and practice need to be strongly connected. EDI cannot remain only a theoretical value introduced in lectures. It needs to be tested and validated through design practice, research, prototyping, stakeholder engagement, and reflection.

The analysis highlights the importance of linking theoretical knowledge to practical application in the later years of study. Third, EDI education should be shared across the academic community. The analysis stresses the need to foster awareness among both students and academic staff, so that more cohesive and shareable knowledge can be developed. This is essential for scalability. If EDI depends only on individual educators, it remains fragile. If it is supported by shared content, methods, tools, and competences, it can become part of the institutional teaching culture. Fourth, EDI-related projects often require interconnection among modules. They are complex and usually involve research, ethics, technology, communication, social sciences, stakeholder work, and design implementation. For this reason, students should have opportunities to work on one EDI-related problem across several courses or studios, seeing it from different perspectives. Finally, the combined analysis confirms that effective EDI education requires an integrated pedagogical model. Content, methods, tools, learning environments, and competences should be designed together. Best practices help identify what should be taught and why. Teaching methodologies show how students can engage with this content. Tools support the process, provide structure, and enable collaboration or reflection. The interpretative map connects these elements and helps educators design coherent teaching scenarios. The competence framework clarifies what students should gain from the process.

Through this process, the concept of virtuous content emerged. In this context, virtuous content is understood as content that can be meaningfully transferred, adapted, and supported by suitable methods and tools. It is “virtuous” because it combines educational value with practical applicability: it helps students develop knowledge, attitudes, and competences, while also supporting inclusive, reflective, and evidence-based design practice. In this sense, virtuous content results from the combination of best practices, teaching methods, tools, and clearly defined learning outcomes. The identified tools and best practices therefore provide the basis for developing the EDIDesK platform, including its teaching materials, resources, and learning itineraries. Their diversity should not be treated as a problem, but as an important value. It enables educators to respond to different educational levels, disciplinary contexts, module types, student needs, and teaching environments. For this reason, flexibility and adaptability became key principles of the platform. Rather than offering one fixed model of EDI education, the platform should support educators in selecting, combining, and adapting content, methods, and tools according to their specific teaching goals and contexts.

General note on Chapter 2

This chapter draws on the EDIDesK Work Package 2 (WP2) deliverables documenting the research and analysis of teaching content, methodologies, best practices and digital environments for Design for EDI. The chapter specifically draws on:

- D2.1.1 *Research and Analysis of Teaching Contents on Design and EDI*
- D2.1.1 *Annexes*
- D2.2.1 *Digital and Traditional Teaching and Learning Methodologies*
- D2.3.1 *Qualitative and Quantitative Analyses of Best Practices*
- D2.4.1 *Virtuous Contents and Methodologies for Promising Replications into Digital Environments*
- D2.4.1 *Annexes*

The complete documentation can be accessed through both the project website and the dedicated repository. Available at:

↗ EDIDesK project website – www.edideskproject.com
↗ Book repository – https://drive.google.com/drive/folders/14cizQvxRAHK4iRiII26i4I1pOMGmDUDF

Endnotes

1 CAME is used here as a general analytical tool for structuring design strategies, while the A+D Matrix and the accessibility-satisfaction relationship are specifically oriented towards assessing accessibility and inclusion within design processes.

2 The online toolkits and resources cited in this section are dynamic resources. Their official websites and current versions should be consulted together with the bibliographic references when adopted, adapted or replicated in teaching contexts.

3 Some classic inclusive design tools are included for their methodological and pedagogical relevance, even when datasets, software environments or interface solutions may require updating. This distinction is important when they are used for teaching purposes rather than as current empirical measurement instruments. See, for example, the Inclusive Design Toolkit developed by the University of Cambridge: https://www.inclusivedesigntoolkit.com/.

4 Community-led co-design is not used here as a generic synonym for participation. It refers to approaches in which affected communities have meaningful agency in framing problems, shaping methods, contributing knowledge and evaluating outcomes. See the Community-Led Co-design Kit: https://community-led.design/.

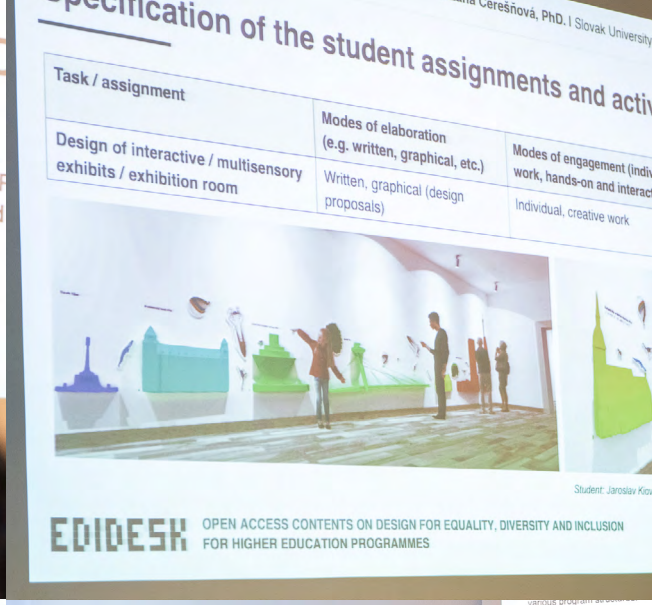
5 FLOE stands for Flexible Learning for Open Education. The FLOE Inclusive Learning Design Handbook is an evolving Open Educational Resource developed within the FLOE Project and the Inclusive Design Research Centre at OCAD University. It supports the creation of adaptable and personalisable educational resources for diverse learning preferences and individual needs. See: https://handbook.floeproject.org/.

6 Universal Design for Learning is considered here as a pedagogical framework for flexible and inclusive learning. References should be aligned with the CAST UDL Guidelines 3.0, updated in 2024: https://udlguidelines.cast.org/.

7 The ICT4IAL Guidelines for Accessible Information are cited as an operational reference for accessible learning information and digital content. See: https://www.european-agency.org/resources/publications/guidelines-accessible-information.

8 Collaborative platforms such as Miro, Mural and Figma are treated as enabling environments, not as inherently inclusive methodologies. Their educational value depends on accessibility, usability, facilitation and learning-design criteria. See, for example: https://miro.com/miroverse/; https://www.mural.co/; https://www.figma.com/community/.













On this page: selected moments from the hybrid conference “EDIDesK Project Presentation at the ICEQ Congress”, Katowice, Poland, 24 October 2024. Photo: Michał Jędrzejowski.









On this page: selected moments from the EDIDesK workshop on Activity 3.1 at the Academy of Fine Arts and Design in Katowice, Poland, 25 October 2024. Photo: Michał Jędrzejowski.

03

Overcoming Aleatory Approaches through Teaching Experimentation

Edited by Patrycja Rudnicka, Marta Więckowska, Alessia Brischetto

With contributions by
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3.1 Setting up parallel teaching experimentations

Patrycja Rudnicka, Marta Więckowska, Alessia Brischetto

From Mapping to Experimentation

The analysis presented in **Chapter 2** revealed a heterogeneous teaching landscape in which principles, methods and practices related to Equality, Diversity and Inclusion were already present, but often unevenly integrated into design education. Their implementation frequently depended on individual educators, locally developed initiatives, specific project opportunities or disciplinary traditions, rather than on shared and assessable pedagogical structures. While this plurality generated valuable experiences, it also limited their comparability, transferability and cumulative development.

The next phase of the EDIDesK project therefore moved from the mapping and interpretation of existing practices to their exploration within real teaching contexts. This transition was necessary to investigate how the findings emerging from the comparative analysis could inform the design, implementation and assessment of educational activities across different fields of design studies (see General note on Chapter 3).

The purpose was not simply to add EDI-related topics to existing modules. Rather, the testing phase examined how EDI could become an observable and operative dimension of Design Education, informing the formulation of briefs, the selection of teaching and research methods, the involvement of users and stakeholders, the development of student outcomes and the criteria adopted for reflection and assessment. In this perspective, EDI was approached not as an additional thematic layer, but as a lens capable of influencing the entire learning process.

Parallel teaching experimentations were consequently conducted across five disciplinary fields: System Design, Industrial Design, Product Design, Digital Design, and Architecture and Urban Design. The modules differed in their curricular positioning, duration, cohort size, teaching format, pedagogical traditions, and previous degree of engagement with EDI. This diversity was not treated as an obstacle to comparison, but as a condition through which the adaptability and transferability of a shared pedagogical orientation could be explored.

A Parallel and Situated Testing Strategy

The term parallel teaching experimentations does not imply identical or controlled testing conditions. The modules were developed within existing curricula and retained their disciplinary identities, institutional constraints, learning objectives and teaching approaches. The project did not seek to homogenise these differences or impose a single model of Design for EDI. Instead, it established a shared structure through which heterogeneous experiences could be documented, interpreted and compared.

The comparative strategy was therefore grounded in structural equivalence rather than standardisation. Each experimentation addressed a common pedagogical question: how can EDI be translated from a general ethical orientation into concrete teaching choices, design activities, student outcomes and assessable forms of learning? The answers necessarily varied according to the disciplinary field, educational level, context and actors involved. This situated approach made it possible to preserve disciplinary specificity while identifying recurring pedagogical mechanisms. It also allowed the project to examine which principles could be transferred across contexts, which required

adaptation and which remained dependent on local resources, institutional cultures or opportunities for stakeholder engagement. The purpose was therefore not to rank the modules or compare student performance, but to understand how a shared orientation towards EDI could be activated through different forms of design education.

A Common Analytical Framework

Epistemological positioning concerns the way each design field frames EDI within its theoretical, methodological and operational traditions. In System Design, EDI was addressed as a systemic force shaping relations among actors, territories, services, communication flows, and forms of governance. In Industrial Design, it emerged as an ethical, material, and embodied practice connected to use, production, accessibility, and social responsibility. In Product Design, it operated as a socio-cultural and critical lens through which students examined care, gender, community, disability, cognitive diversity, and different interpretations of inclusion. In Digital Design and Interaction Design, EDI was related to digital access, usability, cognitive load, participation, and the integration of physical and digital systems. In Architecture and Urban Design, it was framed through spatial, multisensory and environmental equity, accessibility, adaptability, and Universal Design principles.

Methodological activation refers to the teaching and research practices through which EDI became operative within the design process. Across the modules, these practices included contextual and user research, stakeholder mapping, interviews, participatory activities and co-design, accessibility analysis, empathic and critical exercises, scenario development, iterative prototyping, testing, peer review, and stakeholder presentations. Their specific combination varied according to the disciplinary field, teaching level, available resources, and intended learning outcomes. Together, they supported students in identifying barriers, confronting assumptions, negotiating different perspectives, translating evidence into design criteria, and evaluating the consequences of their decisions.

Assessment and reflexivity concern the ways in which inclusive learning was documented, discussed, and evaluated. EDI-related competences cannot be inferred only from the apparent inclusiveness of a final outcome. They must also be observed in the process through which students formulate the problem, engage with users and stakeholders, select and interpret evidence, make design decisions, and critically examine the limitations of their proposals. Maps, reports, personas, stakeholder analyses, user journeys, accessibility audits, design criteria, mock-ups, prototypes, videos, process books, reflective diaries, peer feedback, and final presentations therefore became part of the evidence used to make inclusive reasoning visible.

The three dimensions were not treated as separate layers. Their value lies in their interdependence: epistemological positioning clarifies what EDI means within a particular discipline; methodological activation translates this understanding into learning activities and design actions; assessment and reflexivity make it possible to examine whether these actions produced observable and critically grounded learning. Fig. 3.1 summarises this shared analytical structure and its relationship with the teaching experimentations.

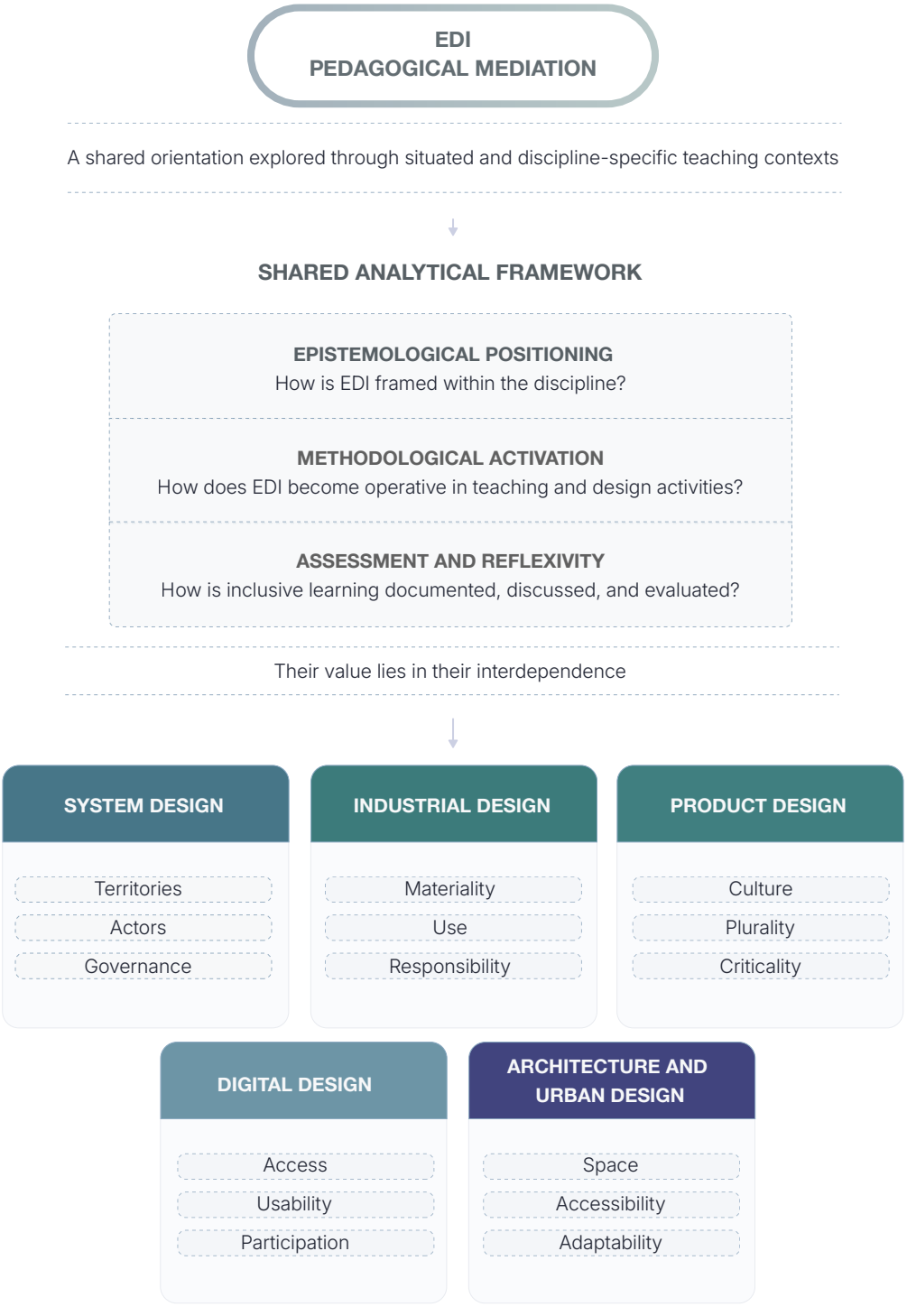


Figure 3.1. Map of parallel experimentations across design fields. Source: Graphic elaboration by the authors.

Documenting Teaching and Student Outcomes

A common reporting structure was also adopted to make the different teaching experiences legible and comparable while preserving their specific characteristics. Each disciplinary section is organised around four complementary components: the Design Brief, Students' Work, selected Hero Cases and Results, Reflections, and Considerations.

The **Design Brief** presents the institutional and educational context, the modules involved, the intended learning outcomes, the degree of EDI integration, the teaching format and the main assessment logic. It provides the conditions necessary to understand how the experimentation was embedded within an existing curriculum and how EDI influenced its pedagogical orientation.

Students' Work documents how learners interpreted the brief and translated EDI principles into research, design processes, artefacts, services, systems or spatial proposals. This component includes an overview of the tested modules and introduces the projects selected for more detailed examination.

The **Hero Cases** provide a closer reading of representative student outcomes. They should not be understood simply as showcases of successful projects or as a selection based exclusively on formal quality. Instead, they operate as analytical devices through which the relationship between the EDI issue addressed, methodological choices, stakeholder involvement, design decisions, evidence, assessment, transferability and unresolved criticalities can be examined.

Finally, **Results, Reflections, and Considerations** offers a critical synthesis of each disciplinary experimentation. It identifies the main pedagogical contributions, recurring difficulties, observable learning outcomes, and elements that may be transferred or adapted to other contexts. This final component also establishes the connection between the teaching tests presented in this chapter and the European Teaching Framework developed in **Chapter 4**.

Evidence was drawn from teaching briefs and materials, process documentation, student research, design artefacts and prototypes, presentations, reflective reports, educator observations, stakeholder feedback and, where available, user engagement and testing activities. The availability and consistency of these sources varied across the modules, reflecting the situated character of the experimentations.

Scope and Interpretative Limits

The parallel experimentations generated a broad and heterogeneous body of evidence. However, they were not conceived as controlled educational experiments, nor were they intended to produce statistical comparisons between institutions, modules or student cohorts. Differences in curricular level, duration, group size, teaching format, disciplinary traditions, available resources and previous exposure to EDI influenced both the learning processes and the forms of evidence that could be collected.

The degree and type of stakeholder involvement also varied considerably. Some modules included direct collaboration with municipalities, residents, cooperatives, users, experts or external reviewers. Others relied on interviews, consultation, peer critique, personas, scenarios or simulated user profiles. Direct participation generally provided stronger contextual grounding and allowed students to confront the consequences of

their decisions with the people concerned. Simulated engagement remained useful for introductory exploration, but could not be considered equivalent to validation with users and stakeholders directly affected by the issues addressed.

Documentation represented a further critical condition. Without traceable evidence, it is difficult to determine whether EDI informed the initial formulation of the brief, whether user and stakeholder contributions influenced design decisions, whether accessibility was tested or merely assumed, and whether the proposed solution could be adapted to another context. Process documentation was therefore considered not only a record of activities, but also a means of supporting reflection, assessment and pedagogical transferability. It also made it possible to distinguish between declared inclusive intentions and design choices that could be traced to specific evidence, interactions or validation activities. This distinction was particularly important when comparing modules that produced very different types of outcomes and documentation.

The experimentations also revealed recurring constraints. These included limited time for research, stakeholder engagement, iteration and validation; uneven student preparation, particularly where EDI was initially interpreted only in relation to disability or accessibility; and the expanded role required of educators, who had to combine disciplinary expertise with facilitation, ethical guidance and reflective assessment. Several projects also exposed an implementation gap between promising concepts and their long-term feasibility, governance, maintenance or scalability.

These limitations do not invalidate the testing phase. On the contrary, they help identify the conditions required to integrate EDI more consistently into design education. The evidence indicates the need for explicit learning outcomes, progressive methodological scaffolding, shared but adaptable assessment criteria, structured formats for stakeholder involvement, accessibility checkpoints and recurring moments of reflection connecting values, evidence and design decisions. These findings directly informed the development of the Teaching Framework presented in **Chapter 4**.

The comparison across the five fields therefore focuses on recurring pedagogical mechanisms rather than on uniform teaching solutions. What can be compared is not the specific form of each experimentation, but the way EDI is positioned within the discipline, translated into teaching and design activities, and made visible through evidence and assessment. At the same time, the different configurations of the modules show how these mechanisms operate under varying educational conditions, including different curricular levels, cohort sizes, teaching formats, degrees of EDI integration and opportunities for stakeholder engagement. Reading the experimentations through a common analytical lens therefore makes it possible to identify shared pedagogical patterns without separating them from the disciplinary and institutional contexts in which they were developed. This comparative perspective also provides a basis for distinguishing elements that appear transferable across fields from those that require adaptation to specific learning environments, resources and design cultures.

Tab. 3.1 translates the shared analytical framework into a comparative overview of the five disciplinary fields. For each field, it identifies the institutional context and number of tested modules, the prevailing epistemological positioning of EDI, the principal forms of methodological activation and the focus adopted for reflection and assessment. This comparative structure also helps clarify how shared pedagogical principles were interpreted through different disciplinary priorities and teaching conditions. The table does not reduce the experimentations to a uniform model; rather, it provides a common point of reference for reading the situated accounts developed in the following sections.

Design field	Istitution	Epistemological positioning	Methodological activation	Assessment and reflexivity
System Design 4 modules	UNICH	EDI as a systemic force shaping relations among actors, territories, services and forms of governance.	Research-driven live projects; system and stakeholder mapping; stakeholder engagement; participatory activities and co-design.	• Impact-oriented validation; • Process evidence; • Multi-actor feedback.
Industrial Design 3 modules	ASP	EDI as an ethical, material, embodied and socially responsible design practice.	Live projects; user and contextual research; participatory prototyping; critical and speculative inquiry.	• Process documentation; • Reflective practice; • Stakeholder and user feedback.
Product Design 5 modules	ELISAVA	EDI as a socio-cultural, pluriversal and critical lens through which established design practices and assumptions can be questioned.	Discursive and participatory design; co-design; contextual research; critical inquiry; scenario development.	• Reflective critique; • Socio-cultural positioning; • Project-specific evidence.
Digital Design 1 modules	UNIFI	EDI as a condition of accessible interaction, digital access, usability, collaboration and participation across physical and digital environments.	Human-Centred Design and UX methods; collaborative studio activities; hybrid prototyping; iterative testing.	• UX process documentation; • Iterative feedback; • Usability and inclusion criteria.
Architecture and Urban Design 3 modules	STU	EDI as spatial, multisensory and environmental equity, supported by accessibility, adaptability and Universal Design principles.	Accessibility audits; empathic and multisensory activities; Universal Design; Design for All; spatial analysis and evaluation.	• Spatial and environmental evaluation; • Accessibility criteria; • Reflective assessment.

Table 3.1. Comparative overview of the parallel teaching experimentations across design fields. Source: Authors' own elaboration based on research data from the EDIDesK project.

The following sections examine the five disciplinary experimentations in greater detail, showing how the shared pedagogical orientation was translated into specific briefs, teaching activities, student outcomes and reflective evidence. Together, these situated experiences provide the empirical basis for identifying both transferable principles and discipline-specific conditions for teaching Design for EDI. Their comparison also makes it possible to observe how similar EDI principles acquire different meanings and forms of implementation across disciplinary contexts.

3.2 Teaching Design for EDI in the Field of System Design

Rossana Gaddi

Design Brief

The Design Research Group at the University "Gabriele d'Annunzio" of Chieti-Pescara developed a structured pedagogical experiment aimed at translating the theoretical and operational framework of the international EDIDesK project into undergraduate (UG) and postgraduate (PG) curricula. The initiative was grounded in the paradigm of System Design for Social Inclusion, which integrates products, services, and communication within a coherent systemic framework. Through four complementary teaching modules, students explored the principles of Equality, Diversity and Inclusion (EDI) in design, fostering interdisciplinary dialogue between product-oriented and communication-oriented disciplines.

The educational framework involved the UG course Innovation Design, taught by Emilio Rossi, and the PG course Service Design, taught by Alessio D'Onofrio, both focused on systemic approaches to products and services, together with the UG course Media and Experience Design, taught by Raffaella Massacesi, and the PG course Strategic Communication, taught by Rossana Gaddi, which addressed EDI through contemporary communication practices. Although characterised by different disciplinary perspectives, all modules adopted a shared methodology combining theoretical instruction with studio-based experimentation. Student activities followed a four-stage process comprising design brief, concept development, final design, and presentation. Learning outcomes were assessed through EDI-oriented criteria, generating productive synergies across courses and encouraging collaboration among students and faculty.

The design briefs stimulated diverse socio-technical responses. Innovation Design invited students to envision inclusive futures through speculative "inclusive seed ideas", while Service Design promoted the autonomous development of accessible and sustainable service systems. In the communication domain, Media and Experience Design focused on UX/UI solutions informed by EDI principles. The Strategic Communication module, which constitutes the focus of this section, addressed the promotion of territorial cultural heritage through an inclusive communication perspective, integrating contributions from the courses "Communication Design for Eco-Social Contexts" and "Cultural Heritage".

Within this module, postgraduate students were asked to develop a strategic communication plan aimed at fostering eco-social inclusion in the municipality of Calascio. Located in the inland Apennine area of the Abruzzo Region and renowned for its medieval fortress at 1,460 meters above sea level, Calascio presents significant socio-spatial challenges. Despite a permanent population of approximately one hundred residents, the village attracts more than 70,000 visitors annually, creating tensions between tourism development, environmental sustainability, and community well-being.

To address these issues, the course adopted a communication design approach oriented towards strategic socio-territorial objectives rather than predefined media outputs (Bucchetti, 2024). The brief intentionally avoided prescriptive solutions, encouraging students to develop independent and context-sensitive responses. A broad range of analytical and diagnostic tools enabled participants to construct customised design processes tailored to local needs. Importantly, the project was supported by a formal collaboration with the Calascio municipal administration, which facilitated direct engagement

with residents and local actors. Through site visits, stakeholder meetings, and co-design workshops, students investigated the genius loci of the village and developed a nuanced understanding of its challenges and opportunities.

The educational pathway was organised according to a customised Design Thinking process (Brown, 2009), articulated into five interconnected phases. The framework conceived design as an advanced cognitive and critical practice requiring a continuous balance between divergent exploration and convergent decision-making.

The first phase "Getting to Know Calascio" focused on fieldwork and contextual investigation. Consistent with the empathetic foundations of Design Thinking, students approached the territory without predetermined assumptions. They collected qualitative and quantitative information related to geographical, historical, anthropological, economic, and social dimensions, paying particular attention to both the tangible and intangible heritage of the area and to the mechanisms shaping local cultural and economic life.

The second phase "Understanding Calascio" involved the transition from data gathering to analytical interpretation. Information collected during the exploratory stage was organised through diagnostic tools that enabled students to identify systemic relationships, critical issues, and development opportunities. This process supported the definition of preliminary strategic directions for communication interventions.

During the third phase "Experiencing Calascio", students formulated specific problem statements and design hypotheses. Working individually, they developed distinct perspectives on the challenges identified during previous stages. Each proposal included the definition of target users through empathetic personas and the elaboration of a value proposition clarifying the goals, beneficiaries, and ethical rationale of the intervention.

After the individual research stage, the process moved toward collaboration – fourth phase. Through collective discussions moderated by the teaching staff, individual proposals were evaluated, clustered, and synthesised into five coherent group briefs. Moodboards served as tools for aligning visual, emotional, and cultural references, while concept boards formalised the narrative structure of each project, including communication objectives, stakeholder relationships, symbolic references and engagement strategies. Particular attention was devoted to balancing local authenticity with broader accessibility, ensuring that heritage narratives preserved cultural identity while supporting sustainable future development.

Institution	UNICH – "Gabriele D'Annunzio" University of Chieti-Pescara
Field	System Design / Product-Service Systems
Modules Tested	Strategic Communication (PG)
EDI Integration	Fully EDI-focused
Cohort	10 students (PG) – MS Programme in Eco Inclusive Design, A.A. 2024/2025)
Modality	Studio-based
Assessment logic	Critical discussion of the design solutions developed, testing process coherence from the analysis phase through to the final prototyping stage

Table 3.2. Teaching Configuration (System Design).

The final phase focused on the design and prototyping of multi-channel touchpoints through which strategic narratives could be experienced by different audiences. Students developed both physical and digital communication systems, including environmental graphics, place-branding initiatives, wayfinding solutions, temporary installations, mobile applications, web platforms, interactive campaigns and augmented experiences. Together, these interventions formed integrated communication ecosystems capable of connecting local communities with wider cultural and tourist networks while promoting more inclusive and sustainable forms of territorial development.

Students' Work

Calascio represents a paradigmatic case among the Italian inner areas, characterised by high cultural and environmental value but also by structural fragilities, demographic decline, infrastructural limitations and insufficient visibility within contemporary tourism and communication networks (Magnaghi, 2020; Barbera, 2022; Lacorazza, 2024; Parente & Sedini, 2018; Trapani, 2022). For these reasons, the village was selected as a living laboratory in which students could test communication-driven strategies capable of mitigating the effects of overtourism (Milano, 2022) while promoting participatory models based on collaboration with local stakeholders (Carignani, 2022). While the broader UNICH experimentation involved four modules, the Students' Work and Hero Cases presented below focus on Strategic Communication as the reference module.

Module	Level	Core focus	Typical output
Innovation Design	UG	Inclusive futures and speculative "inclusive seed ideas	Inclusive design concepts
Media and Experience Design	UG	EDI-informed digital communication and UX/UI	UX/UI solutions
Service Design	PG	Accessible and sustainable service systems	Service-system proposals
Strategic Communication	PG	Inclusive communication for territorial cultural heritage	Strategic communication plan and physical/digital touchpoints

Table 3.3. System Design modules tested at UNICH.

The five Hero Cases presented here constitute a selected representation of the student outcomes. The complete documentation of the experimentation, including additional student projects, is available in Deliverable D3.2.2.a (see General note on Chapter 3).

Hero case 1

UNICH | Italy

Module – Strategic Communication

Design field	Postgraduate (PG, Year 1)
Level (UG/PG)	System Design (Service-Communication Design)
Keywords	Territorial Heritage, Inclusive Communication, Eco-Social Design, Cultural Landscape
Module description	This module examines territorial cultural heritage promotion through an inclusive communication lens, integrating Communication Design for Eco-Social Contexts and Cultural Heritage. Material and immaterial heritage is treated as a design object, not a marketing asset. Students combine critical-historical territorial analysis with EDI communication methods, building narratives that involve heritage-bearing communities. The village of Calascio served as the field case study.
EDI Level	Level 4 (selected EDI integration within the WP3 testing phase)

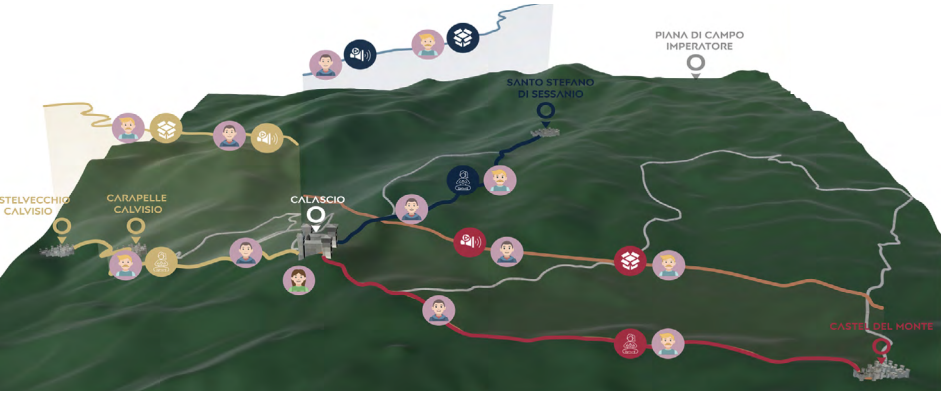
ÔN – Walk, breathe, rediscover yourself

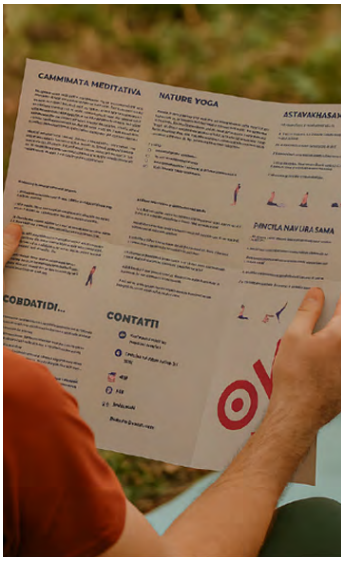
Student/s	Federico Capannolo, Gaia Pia Miele (MS Programme in Eco Inclusive Design, A.A. 2024/25)
Core EDI Issue Addressed	Communication barriers in Calascio; barriers to accessing local tourism for non-digital users; lack of an inclusive guidance system for different types of visitors.
Problem Framing	Calascio lacks a structured communication system and prevents non-digital users from exploring the area independently.
Methodological Activation	SWOT analysis; stakeholder mapping; competitive positioning map; Kapferer's brand identity analysis; definition of user personas; customer journey map; site visits; photographic documentation.
Key Design Move	Design of an integrated and scalable communication system combining physical signage with a digital presence. The project can be replicated across the entire Baronia di Carapelle area (comprising the villages of Calascio, Castelvecchio Calvisio, Santo Stefano di Sessanio and Castel del Monte).
Outputs	Brand identity system; fold-out orientation map with activity guides; signage and wayfinding system; posters and billboards; social media strategy and editorial calendar; website; "Nature Box" gadget for visitors.
Stakeholder Involvement	The site visits to Calascio guided the visual and spatial decisions; this approach was simulation-based, utilising user profiles representing the primary and secondary target audiences.
Evidence / Validation	Peer review amongst the members of the teaching module; checks to ensure consistency between the visual identity and the local context; photographic mock-ups set in real-life landscapes to verify contextual consistency.











Assessment Lens (observability)	Clarity and effective use of physical wayfinding elements; checking the consistency of the brand identity across all touchpoints; ensuring the map is accessible to non-digital users; analysing the logic behind its replication across different areas.
Transferability Note	The guidance framework and communication model can be directly applied to similar inland or peripheral areas. The “physical-first” approach (map + signage) provides a model for areas with poor digital connectivity.
Criticality / Limit	The breadth of the value proposition (slow tourism, meditation, yoga, gastronomy) risks diluting the core identity promise. The issue of communication governance (who manages and updates the brand over time) is not addressed.

Hero case 2

UNICH | Italy

Module – Strategic Communication

Design field	System Design (Service-Communication Design)
Level (UG/PG)	Postgraduate (PG, Year 1)
Keywords	Territorial Heritage, Inclusive Communication, Eco-Social Design, Cultural Landscape
Module description	This module examines territorial cultural heritage promotion through an inclusive communication lens, integrating Communication Design for Eco-Social Contexts and Cultural Heritage. Material and immaterial heritage is treated as a design object, not a marketing asset. Students combine critical-historical territorial analysis with EDI communication methods, building narratives that involve heritage-bearing communities. The village of Calascio served as the field case study.
EDI Level	Level 4 (selected EDI integration within the WP3 testing phase)

AETHER – Art Residence in Calascio

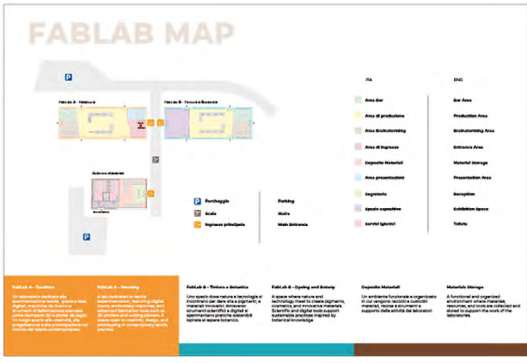
Student/s	Ekaterina Varlamova, Raffaella Maggi (MS Programme in Eco Inclusive Design, A.A. 2024/2025)
Core EDI Issue Addressed	The loss of traditional craft knowledge and skills, and the exclusion of local craftspeople from contemporary creative networks and from artistic participation at an international level.
Problem Framing	In the Baronia di Carapelle area, traditional crafts such as wool spinning, natural dyeing and stone carving are disappearing due to depopulation and a lack of intergenerational transmission. Local craftspeople are cut off from contemporary creative circles, whilst international artists have little access to artistic research in the region centred on craftsmanship.
Methodological Activation	SWOT analysis; competitive positioning map; stakeholder mapping; Kapferer's brand identity analysis; user personas; customer journey map.
Key Design Move	Creation of themed Fab Labs across the Baronia area to host international artist residencies and community workshops, integrating traditional practices with digital technologies.
Outputs	Brand identity system; posters and billboard campaign; social media editorial calendar; website.
Stakeholder Involvement	A two-stage artist selection process (portfolio + online interview). A model of collaboration with local craftspeople, botanists, scholars and residents as co-creators and knowledge holders.
Evidence / Validation	Peer review; verification of the relational consistency of the multi-site network; the poster types were tested in three distinct communication contexts.











Assessment Lens (observability)	Diversity of participants' profiles; quality and rigour of the open call process; accessibility of the open workshops; consistency between the curatorial themes and the visual identity.
Transferability Note	The "Fab Lab + Residency" model can be adapted to other marginalised areas with a heritage of craftsmanship. The thematic curatorial structure and the decentralised exhibition format are models that can be replicated.
Criticality / Limit	The issue of financial sustainability remains unresolved, as Fab Labs, open workshops and the widespread exhibition programme require substantial resources that have not been analysed. The issue of governance is not addressed.

Hero case 3

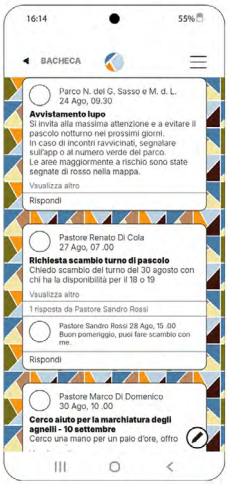
UNICH | Italy

Module – Strategic Communication

Design field	System Design (Service-Communication Design)
Level (UG/PG)	Postgraduate (PG, Year 1)
Keywords	Territorial Heritage, Inclusive Communication, Eco-Social Design, Cultural Landscape
Module description	This module examines territorial cultural heritage promotion through an inclusive communication lens, integrating Communication Design for Eco-Social Contexts and Cultural Heritage. Material and immaterial heritage is treated as a design object, not a marketing asset. Students combine critical-historical territorial analysis with EDI communication methods, building narratives that involve heritage-bearing communities. The village of Calascio served as the field case study.
EDI Level	Level 4 (selected EDI integration within the WP3 testing phase)

BE ON TRACK – Shepherding the Future

Student/s	Anna Cocuzzi, Mattia Marra (MSc in Eco-Inclusive Design, A.A. 2024/25)
Core EDI Issue Addressed	Social and information inequality affecting shepherds, a marginalised professional group; unequal access to tools for monitoring the land, which were once reserved exclusively for scientific institutions; the risk of an intergenerational loss of knowledge relating to pastoral practices.
Problem Framing	Shepherds, just like park management bodies, lack monitoring data and real-time information on the location of flocks, predators, toxic plants and weather conditions. Existing tools are designed for institutions rather than for those working in the field, and are not updated in real time, creating a structural imbalance that puts both livelihoods and the ecosystem at risk.
Methodological Activation	Stakeholder mapping; user personas; customer journey mapping; Kapferer's brand identity analysis.
Key Design Move	Design of a customised mobile app (Italian/English, two user profiles: experienced shepherd and apprentice) that integrates GPS monitoring of the flock via collars fitted with ultrasonic sensors, georeferenced maps of grazing areas, automatic alerts and tools for collaboration between shepherds. The premium model extends access to researchers, park authorities and ecotourists.
Outputs	Brand identity system; app mock-ups with different user profiles; website; social media editorial calendar; offline campaign (billboards and distribution of information material).
Stakeholder Involvement	A multi-stakeholder planning approach based on simulations featuring detailed profiles of experts and trainees, the Gran Sasso Park Authority, naturalist researchers and ecotourists.









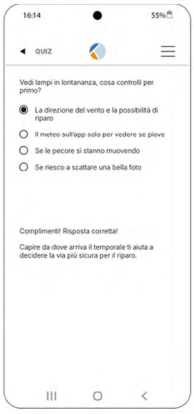












Evidence / Validation	Peer review; the route map overlaid on the aerial photograph confirms the potential spatial accuracy of the flock's movement tracking; user route scenarios were tested using different profiles.
Assessment Lens (observability)	Social equity for a marginalised professional group; the design of multi-profile interfaces; data symmetry between pastoralists and institutional stakeholders; a contribution to environmental sustainability.
Transferability Note	The app's architecture is based on the involvement of multiple stakeholders and can be adapted to similar contexts where the management and monitoring of land use is required (forestry, coastal fishing, mountain rescue).
Criticality / Limit	The technical feasibility of collars fitted with sensors is not analysed, and real-time GPS alerts in mountainous areas with poor network coverage could present significant engineering challenges. The issue of the economic sustainability of the business model is not addressed.

Hero case 4

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Module – Strategic Communication

Design field	System Design (Service-Communication Design)
Level (UG/PG)	Postgraduate (PG, Year 1)
Keywords	Territorial Heritage, Inclusive Communication, Eco-Social Design, Cultural Landscape
Module description	This module examines territorial cultural heritage promotion through an inclusive communication lens, integrating Communication Design for Eco-Social Contexts and Cultural Heritage. Material and immaterial heritage is treated as a design object, not a marketing asset. Students combine critical-historical territorial analysis with EDI communication methods, building narratives that involve heritage-bearing communities. The village of Calascio served as the field case study.
EDI Level	Level 4 (selected EDI integration within the WP3 testing phase)

ERB – Relationships Ecomuseum

Student/s	Stefania Del Biondo, Eleonora Maisto (MS Programme in Eco Inclusive Design, A.A. 2024/25)
Core EDI Issue Addressed	The invisibility of human relationships as intangible cultural heritage; communication disparities between larger and smaller municipalities within marginalised areas; barriers to multigenerational and inclusive participation in local cultural experiences.
Problem Framing	The gradual disappearance of human relationships (intergenerational ties, shared practices, local knowledge) constitutes an unrecognised form of cultural heritage loss. There is no institutional framework in place to promote relational heritage, and smaller municipalities remain marginalised in terms of communication.
Methodological Activation	SWOT analysis; competitive positioning map; stakeholder mapping involving actual local stakeholders; Kapferer's brand identity analysis; user personas; customer journey mapping.
Key Design Move	A project for a relational, itinerant and widespread Eco-museum, struc-tured around six itineraries, each identified by a symbolic colour and a specific theme. Wool, a material characteristic of the area under consideration, serves as the central theme: each participant receives a skein dyed with natural colours, and all the threads are woven together into the "Tapestry of Colours", a collective work of art and a symbol of belonging to the community.
Outputs	Comprehensive brand identity system; definition of the "Cromatic routes"; concept of the collective artwork "Tapestry of Colours"; merchandising; media launching campaign; website/app featuring a map of the routes and a marketplace for local products.









Stakeholder Involvement	Planning carried out in collaboration with specific, identifiable local stakeholders. Residents are regarded as co-creators and custodians of knowledge.
Evidence / Validation	Peer review; comparative analysis of three similar Eco-museums validates the proposed model, whilst the narrative map and the route map confirm the model's territorial coherence.
Assessment Lens (observability)	Communicative equity between neighbourhoods of different sizes; pluralism in the types of knowledge promoted; modular accessibility of itineraries for different visitor profiles; accessibility of physical contact points for non-digital users.
Transferability Note	The concept of the relational Eco-museum offers a replicable model for contexts seeking to promote the community's intangible heritage. Joint planning with specifically identified local stakeholders provides a replicable governance model.
Criticality / Limit	The complexity of the system means that its implementation is heavily dependent on an organisational infrastructure and substantial funding, which are not analysed.

Hero case 5

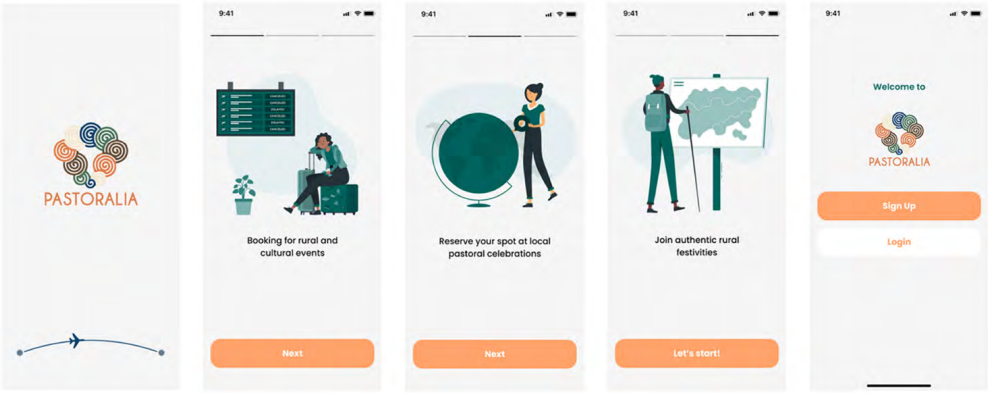
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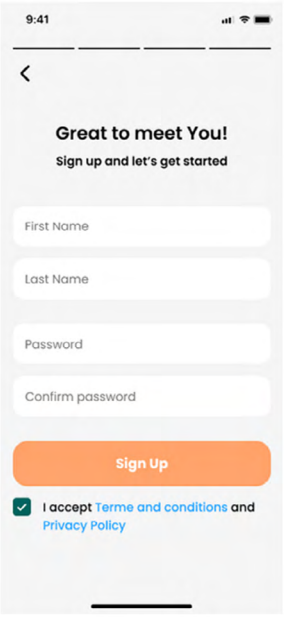
Module – Strategic Communication

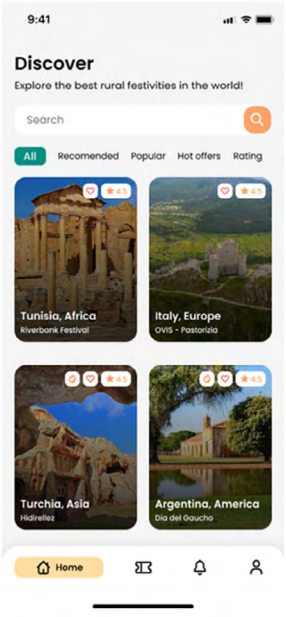
Design field	System Design (Service-Communication Design)
Level (UG/PG)	Postgraduate (PG, Year 1)
Keywords	Territorial Heritage, Inclusive Communication, Eco-Social Design, Cultural Landscape
Module description	This module examines territorial cultural heritage promotion through an inclusive communication lens, integrating Communication Design for Eco-Social Contexts and Cultural Heritage. Material and immaterial heritage is treated as a design object, not a marketing asset. Students combine critical-historical territorial analysis with EDI communication methods, building narratives that involve heritage-bearing communities. The village of Calascio served as the field case study.
EDI Level	Level 4 (selected EDI integration within the WP3 testing phase)

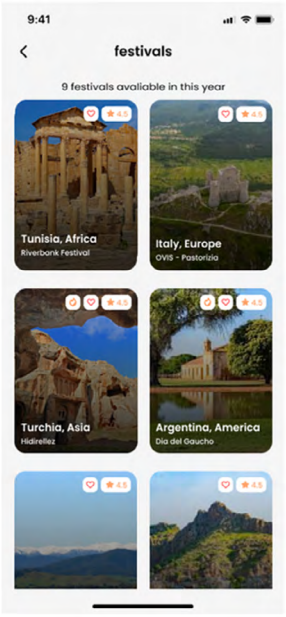
PASTORALIA – Global Platform for Pastoral Culture

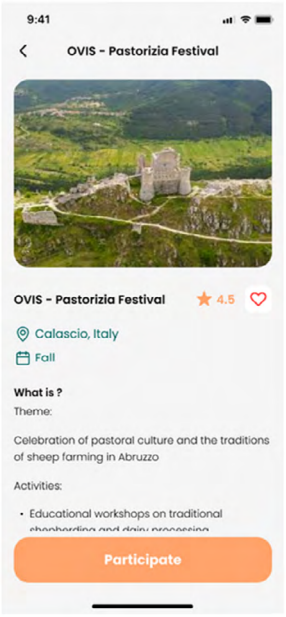
Student/s	Oumaima Achour, Khawla Gzara (MS Programme in Eco Inclusive Design, A.A. 2024/25)
Core EDI Issue Addressed	The global disappearance of pastoral cultural heritage traditions; the geographical and technological exclusion of pastoral communities at various global levels; the lack of a shared infrastructure for the intercultural and intergenerational transmission of knowledge relating to pastoralism.
Problem Framing	Pastoral traditions are a fragile form of intangible cultural heritage, threatened by rural depopulation, limited international visibility and generational discontinuity. No digital platform currently gives them equal visibility or enables local communities to independently document and share their own cultural heritage.
Methodological Activation	Kapferer's analysis of brand identity; user personas; a context map featuring local stakeholders in Calascio; comparative international case studies across five continents (Tunisia, Italy, Spain, Iraqi Kurdistan, Argentina, Australia).
Key Design Move	Design of a global digital platform structured around five functional modules, including immersive virtual tours, a multimedia gallery, interviews with traditional craft masters and a community engagement module supporting residents in documenting their own traditions independently.
Outputs	Brand identity system; mock-ups of the digital platform; two comprehensive customer journey maps; five international comparative case study sheets.
Stakeholder Involvement	A community participation module specifically designed to train and empower residents as content creators. The platform's architecture enables contributions from users around the world and from local communities.











Evidence / Validation	The comparative analysis carried out across five continents confirms the validity of the global positioning strategy; the customer journey maps (for remote and hybrid modes) validate the dual-access approach; the prototype screenshots of the platform have been tested to verify their functional consistency.
Assessment Lens (observability)	The platform's architecture, comprising five modules, can be adapted to other areas of intangible cultural heritage (for example, fishing traditions, textile practices, seasonal festivals). The "Community Participation" module provides a reusable model for strengthening communities in digital heritage projects.
Transferability Note	The concept of the relational Eco-museum offers a replicable model for contexts seeking to promote the community's intangible heritage. Joint planning with specifically identified local stakeholders provides a replicable governance model.
Criticality / Limit	The issues of governance, the production of multilingual content and the management of rights across the five continents are not addressed.

Results, Reflections, and Considerations

The decision to work on a real-world area facing genuine challenges in terms of promotion and communication places the workshop at the intersection of teaching and applied research. The results of the students' projects are not abstract exercises but genuine interpretations of a complex context that can generate innovative proposals and contribute to the debate on inclusive communication in Italian inland territories. In this sense, the brief is not merely a teaching requirement but also a research tool, as it stimulates the production of situated, contextual and design-oriented knowledge on the theme of promoting local cultural heritage.

The explicit focus on inclusion and sustainability, which runs throughout the entire process, from the selection of case studies to the construction of How Might We (HMW) questions and from the definition of the narrative framework to the prototyping of touchpoints, demonstrates that the module does not merely teach how to design for cultural heritage, but how to design cultural heritage responsibly, with an awareness of the social, environmental and cultural implications of one's communicative choices.

When discussing equality, diversity and inclusion in design, there is often a rhetorical tendency to treat EDI as a goal to be declared or a value to be stated. Strategic communication focused on EDI, however, is a matter of methodology and process that concerns choices made long before the message reaches its recipient, through an ex ante analysis of the reference frameworks used to determine how the message's effectiveness is measured and, above all, for whom that effectiveness is intended. In this sense, System Design offers a transformative perspective, not because it is a new or revolutionary methodology in itself, but because it compels the designer to step outside disciplinary isolation and consider the entire narrative ecosystem within which a communicative action takes place.

Training designers capable of working with this awareness means, first and foremost, restoring communication's relational nature: not the mere transmission of information, but the shared construction of messages and meanings (Steiner, 1978), which are never universal but always situated within specific bodies, languages, memories and cultural contexts. Designing strategic communication for EDI therefore means accepting this complex plurality not as a technical obstacle to be managed, but as the very foundation of the project itself (Manzini & Bertola, 2006). This has profound implications for teaching. The necessary shift is not to add a module on accessibility or a seminar on cultural diversity, but to reorient the entire educational approach towards a design practice that treats the relational complexity of place and heritage as a starting point, rather than as a variable to be controlled retrospectively.

From this perspective, the territory becomes a fundamental analytical category. Inclusive communication is not communication that reaches the greatest number of people in the abstract, but communication able to engage with specific contexts, understand the cultural geographies of its audience and recognise the difference between visibility and authentic representation. A narrative system that speaks of a territory without involving the communities that inhabit it is not inclusive communication but symbolic appropriation (Bucchetti, 2024). Contextual research, the active involvement of local stakeholders and the ability to listen before designing are necessary conditions for communication that does not reproduce the power asymmetries it claims to overcome.

Finally, one aspect often overlooked in the debate on EDI in design is the assessment of the effectiveness of inclusion. This requires addressing two fundamental questions:

What indicators are used to measure the inclusiveness of a communication system? Through what verification processes?

The answer cannot be based solely on quantitative metrics (reach, engagement, conversions), which measure the penetration of a message but not the quality of the interaction it generates.

Evaluating EDI-oriented communication requires mixed qualitative and participatory tools capable of measuring not only how many people received a message, but also whether and how they felt recognised in the communication process. Inclusion, following this logic, is not an added value but a condition for legitimising the project itself.

Taken together, these findings suggest that EDI-oriented strategic communication becomes transferable when inclusion is embedded throughout the design process, from the initial framing of the brief and stakeholder engagement to narrative development, prototyping and evaluation. This experience therefore provides a basis for the Teaching Framework presented in the following chapter, where tested pedagogical mechanisms are translated into more structured and adaptable principles for Design for EDI.

Criterion	Evidence across modules	Critical issue	Transferability
Structural inclusion	Each hero case targets a distinct structural barrier (digital exclusion, craft marginalisation, occupational inequity, disparities between municipalities, global exclusion of pastoral communities) and proposes multi-site or multi-module systems (Baronia network, Fab Lab network, app architecture, six-route eco-museum, five-module platform) designed to extend beyond the single case of Calascio.	Even if not requested in the module, the governance of who manages and maintains the inclusive systems over time is largely unaddressed.	A deliberately broad, objective-driven brief that assumes relational and territorial complexity as the project's foundation is transferable to other place-based design curricula.
Assessment alignment	The module was assessed through a single joint exam integrating cultural-heritage and communication-design criteria via critical discussion of the design process, mirrored at project level by specific assessment.	No shared, standardised indicators for measuring inclusiveness were defined; the closing reflections explicitly flag the absence of verification processes beyond quantitative reach metrics.	The joint-examination format and phase-based deliverables offer a replicable assessment model for integrated, multidisciplinary modules.
Stakeholder logic	Engagement ranges from simulated personas (ÔN) to a two-stage real selection process (AETHER), multi-actor simulation (BE ON TRACK), identified local co-creators (ERB) and a global participation module (PASTORALIA), building on real meetings with stakeholders.	Simulated and real stakeholder involvement are not clearly differentiated at the validation stage, which weakens the grounding of some proposals.	Joint planning models built with identified local stakeholders offer a replicable governance pattern for community-based heritage projects.

Observability	Each project defines explicit observability indicators (identity consistency across touchpoints, participant diversity, data symmetry, communicative equity, geographic representation), validated through peer review, contextual mock-ups and comparative case analysis.	Indicators remain qualitative and project-specific, with no common metric enabling comparison of observability outcomes across the five cases.	The assessment format constitutes a reusable evaluative structure for future EDI-oriented modules.
Scalability	All five projects articulate explicit scaling pathways: territorial extension across the Baronia di Carapelle, adaptation to other craft-heritage areas, extension of the app to forestry, fishing or mountain-rescue contexts, replication of the eco-museum model, and adaptation of the platform to other intangible heritage domains.	Scalability claims are not tested against feasibility constraints (funding, technical implementation, multilingual content management, governance).	Scalability is adaptable for similar contexts: peripheral areas with poor connectivity, craft heritage, land-use monitoring and other domains of intangible cultural heritage.

Table 3.4. Synthesis of the System Design Experimentation.

3.3 Teaching Design for EDI in the Field of Industrial Design

Patrycja Rudnicka, Marta Więckowska

Design Brief

The modules selected for testing were chosen to experiment with and validate three complementary aspects of introducing EDI into Industrial Design teaching programmes. They explored how EDI can be embedded in different dimensions of design practice: product development, research, and critical reflection. This made it possible to observe how students understand inclusion, diversity, responsibility, and exclusion when these values are translated into different design assignments. All three were MA-level courses addressed to students who had already completed BA studies in design, architecture, or related disciplines. The student groups included graduates of academies of fine arts, polytechnics, and universities, with different educational backgrounds, design competences, and levels of awareness of EDI values. This diversity made it possible to observe how the proposed teaching methods worked with different prior experiences and understandings of the social role of design.

In the Industrial Design module, taught by Agata Chmielarz and Joanna Pastusińska, EDI was positioned through product design, inclusive production, material and technological feasibility, and collaboration with a handicraft cooperative employing people with disabilities. Students were asked to design functional cushions considering the production capabilities of people with disabilities while responding to local identity, aesthetics, market expectations, and social value. EDI was therefore tested as a practical product design criterion connected with both users and makers.

In the UX Research module, taught by Marta Więckowska, EDI was positioned through inclusive research practice, focusing on empathy-led research, creative methods, user participation, bias reduction, and meaningful communication of findings. Students explored how research can identify barriers, understand diverse users, and translate insights into design recommendations. EDI was tested as a research competence: asking relevant questions, adapting methods to different users, conducting ethical fieldwork, and communicating findings accessibly and effectively.

In the Discursive Design module, taught by Jeremiasz Rzenno, EDI was positioned through critical, speculative, and discursive design. Students were encouraged to question dominant norms, stereotypes, and assumptions related to work, value, technology, power, and society. EDI was tested as a critical and reflective competence: identifying hidden social and political assumptions, imagining alternative futures, and using design artefacts to provoke debate and reflection.

Together, the three modules allowed EDI to be tested not as a single topic but as a broad design orientation developed through product design, research practice, and critical reflection. Although the briefs differed in themes, methods, and expected outcomes, all modules involved hands-on work and iterative processes of research, reflection, making, feedback, and revision. Teamwork was also incorporated through desk research, fieldwork, discussion, peer feedback, and work-in-progress presentations, supporting both individual responsibility and collective learning.

Another common element was the connection with real contexts, users, stakeholders, or external experts. Industrial Design addressed the production capabilities, needs, and social mission of a cooperative employing people with disabilities; UX Research engaged users and stakeholders through research, testing, feedback, and communi-

cation of findings; and Discursive Design explored social, political, and technological issues through critical research, public engagement, and speculative responses. In each case, EDI was activated through concrete design situations requiring students to confront assumptions, understand different perspectives, and translate insights into design decisions.

The briefs therefore created conditions for testing different forms of EDI integration: from practical adaptation and inclusive production, through ethical and empathic research, to critical reflection on norms, power, and future social models. The following students' work should be read not only as final outcomes, but also as evidence of how students interpreted EDI, used methods and tools, responded to feedback, and translated social, ethical, and inclusive concerns into design practice.

Institution	ASP – Academy of Fine Arts and Design in Katowice
Field	Industrial Design
Modules Tested	Industrial Design (PG); UX Research (PG); Discursive Design (PG)
EDI Integration	UX Research: fully EDI-focused; other modules: selected EDI integration
Cohort	Industrial Design: 5 students (PG) UX Research: 8 students (PG) Discursive Design: 4 students (PG)
Modality	Studio-based
Assessment logic	Iterative studio outcomes supported by documentation, regular reflective activities, and a final review.

Table 3.5. Teaching configuration of the Industrial Design experimentation at ASP.

Students' Work

At ASP, three modules, Industrial Design, UX Research and Discursive Design, explored different ways of integrating EDI principles into design practice.

Industrial Design is an elective module, it aims to equip students with practical skills in user-centred methodologies and design processes of product design. Students work on specific design assignments in collaboration with an external partner. During the testing phase students collaborated with LUFT – a social enterprise running workshops for people with disabilities and employing them to sew and produce the handmade goods sold in the online and stationary shop (LUFT, 2026). The LUFT product Pieroguszka became an online viral sensation during the Milano Cortina Winter Olympics 2026. The one-semester project focused on designing a functional product while taking into account the production skills and capabilities of people with disabilities. The aim was to increase the product's market appeal by combining aesthetics and functionality with a unique social value of integration and emphasising local identity. Students had the opportunity to understand and address the specific needs of people with disabilities. The structure of the assignment was based on the Double Diamond methodology, with detailed tasks assigned to each stage. Such methodology helped students in systematic research, ideation and prototyping, enabling better time management, monitoring progress and achieving the learning outcomes. A key element of the module was experiential learning through hands-on work, prototyping and testing with LUFT workers. The solution's

real-world feasibility was defined by the ability to manufacture it by people with disabilities while simultaneously maintaining functional and aesthetical features. The outcomes include prototype, documentation and presentation for stakeholders.

UX Research, a supplementary module, aims to prepare students for conducting objective and informed research processes including diverse user groups (EDI-focused) to generate insights for social innovation. Students' assignments revolve around research on how selected products or public services affect specific users group. During the testing phase students focused on public libraries, public transportation, and the healthcare system. The research projects were conducted in collaboration with external stakeholders. Collaborations with NGOs and participatory workshops are an important element of the module, students develop their communications skills and have an opportunity to interact with real users. The assignment included the use of structured qualitative and/or mixed research methods, identification of the behavioural insights, accessibility issues, and socio-cultural dynamics influencing product interaction. Students are invited to approach research in creative ways in order to build empathy and reflection. The outcomes are reported in the form of articles submitted to the module website, UXStories hosted on Medium and the presentation for stakeholders[1]. Assessment includes self-reflective exercises that help students monitor their competencies progress, especially in relation to inclusive design practices.

The Discursive Design, a supplementary module, is based on the research through design and speculative approach in order to challenge dominating perspectives on issues of power, politics and responsibility. The assessment during the testing stage included preparation of design artifacts in forms of prototypes, models or design interventions which would allow students to explore possible ways of human and non-human collaboration to produce meaning and value in post-work society. The purpose of the module is to challenge traditional design approaches and consider design as a tool of social critique, inquiry, and imagination of possible and alternative futures. There are two core components of assessment: the reflective process report (research diary) and the design artifact. Classes are structured to support students' engagement and project development, furthermore the DAS Theatre Feedback Method supports reflection and collaborative critique.

Module	Level	Core focus	Typical output
Industrial Design	PG	Industrial design assignments where an EDI approach and external partner involvement drives innovation.	Prototypes and documentation.
UX Research	PG	EDI-focused design research that tackles public services.	Research report in the form of a presentation and an article.
Discursive Design	PG	Discursive design methodology that focuses on challenging existing stereotypes and norms.	Artefacts and Research Diary.

Table 3.6. Industrial Design modules tested at ASP.

The three Hero Cases presented here constitute a selected representation of the student outcomes. The complete documentation of the experimentation, including additional student projects, is available in Deliverable D3.2.2.b (see General note on Chapter 3).

Hero case 1

ASP | Poland

Module – Industrial Design

Design field	Industrial Design
Level (UG/PG)	Postgraduate (Year 1)
Keywords	Inclusive Design, Product Design, User-Centred Design, EDI, Social Responsibility, Local Identity, Participatory Design
Module description	The module supports students in developing a responsible and reflective design practice. Through projects focused on real user needs, especially those of people with disabilities, students learn to identify barriers, formulate design requirements, prototype, test solutions, and also how to communicate them effectively. The studio strengthens empathy, creativity, practical skills, and the ability to combine function, social value, and sustainability.
EDI Level	Level 5 (a module focused on EDI and social responsibility in industrial design)

Product Design for a Handicraft Cooperative of People with Disabilities – “Seroguszki”

Student/s	Agnieszka Szafarczyk
Core EDI Issue Addressed	The professional and social inclusion of people with disabilities through product design. The project addresses how design can support work opportunities, recognise the production capabilities of people with disabilities, strengthen their agency, and create products that combine social value with aesthetic and market quality.
Problem Framing	The challenge was to design functional, attractive cushions that people with disabilities could produce and that reflected the cooperative’s local identity and social mission.
Methodological Activation	Double Diamond, Human-Centred Design, Inclusive Design / UDL, and the Inclusive Design Toolkit guided analysis, definition, creation, and prototyping. Activities included research, interviews, observation, material and local-context analysis, scenarios, sketching, mockups, SCAMPER, workshops, and stakeholder consultations.
Key Design Move	Production capabilities and limitations were reframed as design criteria and assets. Students combined makers’ abilities, local identity, materials, and market expectations to develop products suited both to users and to the people producing them.
Outputs	Product concepts; sketches; mock-ups; prototypes; moodboards; user scenarios; design assumptions; production guidelines; final presentation; communication strategy. The implemented output was the cushion “Seroguszki”, inspired by the regional product oscypek and designed for serial and commercial production.



Photo: Michał Jędrzejowski

Stakeholder Involvement	The module involved the LUFT craft store and Social Cooperative Honolulu, which employs people with disabilities. Students engaged with the cooperative through workshops, conversations, observation, interviews, and final presentations to understand production possibilities, community needs, expectations, and final proposals.
Evidence / Validation	Evidence was generated through direct contact with the cooperative, observation of the workspace, interviews with employees, analysis of production techniques, prototyping, stakeholder feedback, and final presentation. The validation was strengthened by the selection of one project for serial and commercial production, showing that the design could meet criteria of feasibility, simplicity, aesthetic quality, local identity, and production accessibility.
Assessment Lens (observability)	EDI can be observed through the degree to which the project responds to the abilities and limitations of people with disabilities, supports professional integration, and respects the role of makers in the production process. Assessment also considers functionality, simplicity, ease of sewing and filling, material choices, cost efficiency, aesthetics, local identity, market potential, stakeholder feedback, project management, communication, empathy, and sustainability.
Transferability Note	The module can be transferred to other product design studios working with social cooperatives, craft organisations, NGOs, local communities, or inclusive production contexts.
Criticality / Limit	Tensions between aesthetics, market expectations, production feasibility and designers' personal visions were revealed.

Hero case 2

ASP | Poland

Module – UX Research

Design field	Industrial Design
Level (UG/PG)	Postgraduate (1st Year)
Keywords	UX Research, Service Design, Participatory Research, Inclusive Research, Accessibility, Visual Communication
Module description	The UX Research module teaches students to plan inclusive research, adapt methods to diverse users, reduce bias, and critically reflect on how research choices shape participation, representation, and the understanding of user needs. A strong focus is placed on translating research findings into clear insights, recommendations, and accessible narratives for teams, partners, and stakeholders.
EDI Level	Level 5 (module fully focused on EDI issues in research practice)

Inclusive communication in autonomous buses

Student/s	Alicja Walczyk, Paulina Rusinek
Core EDI Issue Addressed	The needs, safety concerns, and communication barriers experienced by users aged 65+ in autonomous public transport were addressed in this project.
Problem Framing	The research explores how driverless buses affect older passengers' confidence and whether multisensory communication can improve clarity, trust, and safety.
Methodological Activation	Students used diverse research methods to understand the passenger experience, including desk research, field research, user testing in autonomous buses, interviews, generative sessions, stakeholder meetings, data analysis and visualisation. The teaching support process included active classes, research status checkpoints and student-led sessions, where students prepare materials, facilitate activities, collect feedback and communicate findings.
Key Design Move	The key educational move is to treat UX research as a way of revealing hidden barriers, emotions, uncertainties, and communication needs. Students design and conduct a structured research process with seniors: introduction and discussion of previous experiences, a bus ride with specific tasks and unexpected emergency stops, and a specially designed feedback method to capture emotions, challenges, positive moments, uncertainties, and questions.
Outputs	Research plan; Research questions; User testing scenario; Generative session materials; Feedback tools; Data analysis; Visualisations; Design recommendations; Stakeholder presentation; Article; Interactive website report documenting hypotheses, experiment stages, user quotes, scenarios, and final recommendations.



Photo: Kajetan Srokosz

Stakeholder Involvement	The module involves an NGO (Zakątek Pokoleń), which engages people aged 65+ as research participants and feedback providers. It also includes meetings with Blees company (autonomous bus producer), where students consult and co-organise testing, present findings and translate complex research insights into accessible and compelling narratives that support awareness, engagement, and potential action.
Evidence / Validation	Evidence is generated through user testing with seniors, including an autonomous bus ride, emergency-stop situations, feedback sessions, observation of reactions, and analysis of uncertainty, clarity, emotions, and communication needs. Findings show that some bus elements require clearer explanation, emergency signals may go unnoticed, and virtual or multisensory communication can increase passengers' sense of safety.
Assessment Lens (observability)	EDI is observed through the quality of research planning, the ability to identify who may be excluded and why, the adaptation of methods to diverse users, ethical and empathic fieldwork, the clarity of research questions, data analysis, and the translation of findings into accessible recommendations. Assessment also considers how students communicate insights to stakeholders and connect user needs with usability, accessibility, safety, and social responsibility.
Transferability Note	The module can be transferred to service and social design courses, especially those addressing public services and communication with diverse groups.
Criticality / Limit	Further testing with other user groups would strengthen the module. It also revealed the need to develop students' communication skills and emotional resilience.

Hero case 3

ASP | Poland

Module – Discursive Design

Design field	Industrial Design
Level (UG/PG)	Postgraduate (1st Year)
Keywords	Critical Design, Speculative Design, Research through Design, Discursive Design, Post-work, Automation; AI
Module description	The module uses cultural critique, speculation, and research through design to challenge dominant perspectives and explore alternative narratives, values, and systems. It creates a situated learning environment where disciplinary boundaries are suspended and design artefacts support critical reflection, debate, and the production of new knowledge.
EDI Level	Level 3 (module addressing selected EDI issues in a broader context)

Interactive map visualising a future society shaped by Universal Basic Income

Student/s	Łukasz Zygieł
Core EDI Issue Addressed	Stimulation of critical thinking and speculative exploration about challenging norms for broadening understanding of EDI in the area of work crisis. The case addresses how future systems such as Universal Basic Income may reshape inclusion, dignity, social participation, access to resources, and the meaning of work.
Problem Framing	The module examines the crisis of work as a social and existential challenge, encouraging students to question dominant myths and imagine post-work societies.
Methodological Activation	Students work through desk research, contextual mapping, qualitative research, public engagement, speculative inquiry, research through design, discursive design, prototyping, model-making, and iterative critique. The process includes contextualisation, narrowing the focus through public engagement, responding through design, and producing a final presentation supported by a reflective process report.
Key Design Move	The key educational move is to use speculative and discursive artefacts as tools for questioning the status quo. Instead of solving a predefined problem, students design objects, maps, diagrams, prototypes, or interventions that make hidden assumptions visible and provoke discussion about possible futures. In the UBI City project, the student creates an interactive map of a future society with Universal Basic Income, allowing users to explore both benefits and tensions of a post-work social model.
Outputs	Speculative design artefact; Reflective process report.
Stakeholder Involvement	The module combined user testing to improve interaction quality with public engagement to observe reactions, stimulate reflection and gather additional feedback on how the speculative artefact was understood and experienced.





Evidence / Validation	Evidence is produced through the design artefact, iterative feedback sessions, bi-weekly consultations, critique and the reflective process report.
Assessment Lens (observability)	Awareness of EDI values can be observed through the student's ability to identify social, political and ethical tensions; question dominant norms; understand the role and limitations of the designer; integrate knowledge from the social sciences; use design as an intervention in a specific context; and reflect critically on the consequences of technological and social change.
Transferability Note	The module structure can be transferred to other projects addressing emerging EDI-related issues, e.g. technological exclusion, social inequality, environmental crisis, labour precarity and digital infrastructures.
Criticality / Limit	The open-ended brief may challenge students in defining scope, managing time, and grounding ideas in research.

Results, Reflections, and Considerations

Testing the ASP modules provides an important basis for developing an Industrial Design Teaching Framework oriented towards EDI. The pilot covered three postgraduate modules – Industrial Design, UX Research, and Form and Meaning – with different EDI integration levels and teaching formats. Industrial Design and UX Research were assessed as level 5 modules, while Form and Meaning was assessed as level 3, enabling observation of how EDI competences develop in product-oriented, research-oriented, and critical/speculative learning environments. The testing involved 17 students, four teachers, external stakeholders, reviewers, and experts, including Honolulu Social Cooperative, NGO Zakątek Pokoleń, scientists, and other external audiences.

The educational value of the tested modules lies first in showing that EDI can be integrated into Industrial Design education in more than one way. In the Industrial Design module, EDI was linked to socially responsible product development, inclusive production, material feasibility, and collaboration with a cooperative that employs people with disabilities. In UX Research, EDI was developed through research ethics, empathy-led methods, user engagement, and communication of findings. In the Form and Meaning module, EDI appeared through critical reflection on power, responsibility, stereotypes, dominant norms, and alternative futures. This variety is important for the framework because it shows that EDI should not be treated as one isolated topic, but as a design orientation that can be translated into different competences, methods, and outputs.

The strongest shared value across the modules was the connection between EDI and active learning. The assessment shows that all modules included ethical and unbiased practice, public engagement, dialogue, participatory practices, and communication strategies highlighting social value. At the same time, the teaching methods were based on student-centred learning, one-to-one consultations, collaborative learning, and hands-on activities. This confirms that EDI-oriented education works most effectively when students are not only introduced to concepts but are asked to work with real contexts, interpret needs, test assumptions, and translate values into design decisions.

The effectiveness of the modules is also evident in the reported changes in students' perspectives. The student feedback summary indicates that students developed a stronger critical lens: they began to question who is excluded, anticipate unintended consequences, and verify assumptions through research and testing. It also shows stronger research and design skills, improved facilitation, better usability and accessibility thinking, and a shift in professional identity from "creative problem-solver" to "socially responsible designer". This suggests that the modules were effective not only in delivering knowledge, but also in changing how students understood their role as designers.

In terms of transferability, several pedagogical patterns can be extracted from the ASP testing. The first is the use of real contexts. Students should work with concrete situations, organisations, users, or stakeholders, because EDI becomes clearer when it is connected with actual barriers, constraints, and consequences. The second is iterative feedback, including teacher consultations, peer feedback, stakeholder reviews, and reflection. The third is hands-on, research-based learning, in which prototyping, testing, fieldwork, interviews, and documentation serve to develop EDI competences. The fourth is structured reflection, which helps students understand not only what they designed, but also how their assumptions, decisions, and communication affected the process.

The tested modules also point to the importance of understanding assessment as a process, rather than limiting it to the evaluation of the final artefact. Assessment should

be combined with feedback loops and moments of self-reflection throughout the whole learning process. This is important for strengthening students' awareness of their own development, so that progress can be not only corrected and guided, but also consciously recognised by students themselves.

At the same time, the testing revealed several limitations that require particular care. The first is complexity. Students found it challenging to confront personal bias and privilege, communicate with people with disabilities without unintentionally offending them, and translate abstract EDI principles into concrete design mechanisms. The results also point to difficulties in balancing aesthetics, accessibility, and user autonomy. This means that EDI assignments need clear stages, examples, and support structures. They should be ambitious, but also manageable.

The second limitation concerns cognitive load. Some students experienced moderate or high overload, especially in UX Research and Form and Meaning, where the topics were demanding and time-intensive. This does not weaken the value of the modules, but it shows that EDI education requires careful workload planning, clear milestones, and regular feedback. The framework should therefore help teachers structure difficult topics gradually, so that students can move from awareness to application without becoming overwhelmed.

Another marked limitation concerns stakeholder engagement. Working with real partners was one of the most valuable educational experiences, but it also requires preparation. Students need support with communication, ethical conduct, gathering feedback, and navigating differing expectations. This suggests that stakeholder collaboration should be supported by clear protocols, roles, and reflection tools.

Taken together, these experiences also show that EDI competences can develop progressively across different forms of design learning. Product development, user research, and critical speculation activate different but complementary dimensions of awareness, responsibility, participation, and decision-making. Rather than prescribing a single teaching method, the framework should therefore support educators in selecting and combining approaches according to disciplinary objectives, student level, available resources, and opportunities for engagement with users and stakeholders.

Overall, the tested modules confirm that EDI-oriented Industrial Design education is most effective when it combines practical design work, research, stakeholder engagement, reflection, and assessment. Its transferable value lies in showing that EDI can be taught through product development, research practice, and critical speculation, while remaining adaptable to different learning contexts and disciplinary objectives. Its main limitation is that it requires careful facilitation, explicit framing of competences, appropriate workload planning, and institutional support. These findings provide a concrete basis for the principles and teaching strategies developed in the Teaching Framework presented in the following chapter.

Criterion	Evidence across modules	Critical issue	Transferability
Facing complexity & failure.	Real-life cases and broad context for the project, multi-concept generation and prototyping, iterative process, feedback-loops, collecting feedback from stakeholders and users.	Reflection on failure often came too late. Some projects lacked research depth or clear scope; abstract briefs made real-world relevance harder to define.	Use real-life briefs, building multi-stage process. Building stable relation with stakeholders and users.
Stakeholder engagement	Industrial Design: Honolulu Social Cooperative. UX Research: Zakątek Pokoleń, Upper Silesian Metropolitan Area and Academy of Fine Arts and Design in Katowice Library. Form and Meaning: student-led consultations with non-governmental organisations, scientists and external audiences.	Misalignment between designs and market needs due to insufficient demand/user analysis. Some students did not connect their work meaningfully to real-world users or stakeholders.	Partner involvement from the beginning of the process. Co-defining the scope. Building a structure of cooperation with clear roles, ethical communication, realistic expectations and structured support.
Design for diversity	Modules addressed in their core aims empathy/ social sensitivity, unbiased practice, inclusive research, accessible and socially responsible products, public engagement and communication of social value.	Challenges in understanding various dimensions of diversity. Possible difficulties in reaching a diverse target group of respondents.	Translate and under-stand diversity into a broader context and its implication. Techniques for defining EDI criteria into design assumptions.
Process reflection.	Evaluation using questionnaires, teacher sessions, retrospectives and competence forms. Students' self-assessment of critical skills and professional identity shift.	Reflection was not always deep or systematic. Open-ended tasks sometimes led to time-management problems and superficial execution.	Use process reports, peer review, self-assessment and competency tracking at key milestones.
Independence and self-direction.	Module briefs support autonomy through open tasks, one-to-one consultations, peer feedback and self-directed external consultations.	Teacher support needs to be limited to tutoring. Students found interdisciplinary and open-ended research overwhelming without enough scaffolding.	Use an open brief. The teaching process should place greater emphasis on supporting the development of management and work-organisation skills.

Table 3.7. Synthesis of the Industrial Design experimentation.

3.4 Teaching Design for EDI in the Field of Product Design

Julia Carrasco Parodi, Massimo Menichinelli

Design Brief

Within the WP3 testing phase, Product Design was approached as a domain in which Equality, Diversity and Inclusion could be integrated through individual design projects with research-led development. The experimentation positioned EDI as a critical lens through which students could frame design questions, conduct research, and create design artefacts. The testing focused on Final Degree Projects (TFGs) and Final Master's Projects (TFMs), as these constitute the culminating educational experience within undergraduate and postgraduate programmes. Their high level of student autonomy, combined with their emphasis on independent research and professional-level project development, provided an appropriate setting for examining how EDI principles can shape advanced design practice.

At Elisava, TFGs and TFMs require students to independently develop a complete design project, demonstrating their capacity to conduct research, define a design brief, develop a methodological approach, and produce a prototype, system, service, or other design outcome. These projects represent the culmination of the knowledge and competences acquired throughout the degree programme (which is four years in undergraduate education and one year in most Master's programmes) and encourage students to pursue topics aligned with their own interests, previous academic work, or emerging social challenges. Over a four-month period, students frequently collaborate with external organisations, including companies, NGOs or cultural institutions, allowing projects to engage with real stakeholders and situated contexts.

Within the EDIDesK experimentation, five students developed their final projects within a Design for EDI framework under the supervision of Prof. Massimo Menichinelli. Students were encouraged to integrate the disciplinary knowledge acquired throughout their studies while critically engaging with questions of equality, diversity, accessibility, participation, representation, care, and social inclusion. The pedagogical model combined collective learning activities with personalised supervision, creating a learning environment that balanced shared methodological foundations with project-specific guidance. This structure enabled students to collectively explore EDI concepts and methodologies while receiving individual support to translate these discussions into their own research and design decisions.

A central component of the experimentation consisted of a series of open workshops conceived as opportunities to introduce perspectives, methods, and debates that are often only partially addressed within conventional design curricula. These workshops complemented students' ongoing projects by expanding their methodological repertoire and exposing them to different approaches to inclusive and socially engaged design.

They also sought to address gaps identified in traditional design education by bringing together expertise from different disciplinary and professional backgrounds. The workshops were delivered by academics and practitioners specialising in different EDI-related themes: Prof. Massimo Menichinelli, Director of Elisava Research; Rosario Hernández, Head of Equality at Elisava; Julia Carrasco Parodi, researcher and member of the feminist design collective Oblicuas; and Prof. Iván Paz, who is also a member of the Axolot Collective and TopLab Barcelona.

The workshops functioned simultaneously as knowledge-transfer activities and reflective spaces. Most sessions combined theoretical discussions with practical exercises that allowed students to experiment with the concepts introduced during the workshop, test new methodologies, and collectively reflect on their relevance to ongoing projects. Dedicated short question-and-answer sessions at the end of the workshops also enabled students to discuss methodological uncertainties, ethical dilemmas, and project-specific challenges in an open environment. The workshops were also open to the wider academic community, bringing together undergraduate students, Master's students, PhD researchers, academic staff, and external participants. This openness created opportunities for interdisciplinary and informal dialogue and mentoring, which established collaborative networks that extended beyond the formal tutor-student relationship.

The workshops were complemented by two collective tutoring sessions and ten individual supervision meetings throughout project development. Collective tutoring sessions brought together all students participating in the EDIDesK experimentation to discuss common methodological questions, share progress, exchange feedback, and identify possibilities for collaboration. These sessions sought to challenge the highly individualised nature that often characterises final design projects by fostering collective learning processes and encouraging students to give feedback to one another and recognise shared challenges. Individual tutoring sessions focused on supporting each student's specific research trajectory and translating EDI principles into concrete research questions, methodological decisions and project outcomes. These meetings combined critical feedback with practical support, including academic literature, case studies, visual and material experiments, and reflection on prototypes, graphic materials, and research findings. Tutors also encouraged students to explore methodologies and perspectives that had received limited attention during their previous studies, introducing approaches such as participatory design, feminist methodologies, intersectional frameworks, and co-design. Particular emphasis was placed on extending the projects beyond the university by establishing relationships with external stakeholders through interviews, participatory workshops, co-design sessions, collaborations with organisations, and other forms of situated engagement. In this way, EDI was understood not only as a conceptual framework but also as a methodological commitment to designing with diverse communities rather than for them.

Institution	Elisava School of Design and Engineering, UVic-UCC
Field	Product design / Design
Modules Tested	Final Degree Projects; Human-Centred Design and Co-design; EDI in Design Education; Community-centred Design; (Re)designing Gender; EDI and Digital Tools/Culture.
EDI Integration	Fully EDI-oriented project development framework
Cohort	5 students (UG and PG)
Modality	Hybrid
Assessment logic	Assessment based on project development outputs, short exercises, research outputs, and a final project review.

Table 3.8. Teaching configuration of the Product experimentation at ELISAVA.

Students' Work

Across the testing phase, student projects showcased various approaches to translating EDI principles into design practice. Due to the autonomous nature of the final projects, the outcomes reflected a wide variety of interests, scales and design approaches. Most students chose topics with which they had a direct personal connection, often addressing issues affecting themselves or a family member. This demonstrated that designing for EDI is not about isolated cases, but about issues affecting the majority of people (Costanza-Chock, 2020; Holmes, 2020). Although many projects originated from personal experiences, students were encouraged to expand the scope of their research, helping them to understand design challenges as part of interconnected systems of power. This approach encouraged interventions that addressed not only users' immediate needs, but also the broader structures and relationships that shape those needs.

The pedagogical framework supported this shift through the workshops, which addressed complementary dimensions of Design for EDI. Human-centred and co-design methodologies introduced participatory approaches to problem framing and solution development; community-centred design expanded the focus from individual users to collective forms of agency and shared needs; the inclusion education workshop encouraged students to critically examine design education itself through an EDI perspective, reflecting on institutional structures, accessibility, and inclusion within higher education; the sessions on gender and design encouraged critical reflection on normative assumptions embedded in products and systems, and discussions on EDI and digital culture highlighted the role of emerging technologies in reproducing or challenging exclusionary practices.

Module	Level	Core focus	Typical output
Final Degree Projects (TFG/TFM)	UG, PG	Project on Design for EDI	Final project (research + design)
Human-Centred Design and co-design	UG, PG	Design for EDI Methodologies	Discussion
EDI in Inclusive Education	UG, PG	Inclusion in design education for neurodiverse students	Mapping + discussion
Community-centred design	UG, PG	Understanding community complexity in design	Icon selection + discussion
(Re) designing gender	UG, PG	Gender and design	Mapping + discussion
EDI and Digital Tools/Culture	UG, PG	Inequalities in AI models	Collection of images + discussion

Table 3.9. Product Design modules tested at ELISAVA.

The Hero Cases presented below constitute a selected representation of the student outcomes. The complete documentation of the experimentation, including additional student projects, is available in Deliverable D3.2.2.d (see General note on Chapter 3).

Hero case 1

Elisava | Spain

Module – Final Degree Projects

Design field	Product Design
Level (UG/PG)	Undergraduate (Year 4) and Postgraduate
Keywords	Final degree projects; EDI Methodologies; EDI in design topics; Design Research
Module description	The module proposed the development of Final Degree Projects (TFG) and Final Master's Project (TFM) through a framework grounded in Design for EDI. The task was to apply the skills and knowledge acquired throughout their design studies while critically and creatively responding to EDI challenges through design practice.
EDI Level	Level 5 (fully EDI-focused module)

Re-connect

Student/s	Lola Voskens
Core EDI Issue Addressed	Communication with people living with Alzheimer's disease.
Problem Framing	The project explores how interactive and sensory design can support moments of connection despite cognitive decline.
Methodological Activation	Research-driven inquiry; interviews with experts and users; visits to the context; continuous tutoring; iterative prototype design and testing.
Key Design Move	The core design intervention was the development of an inclusive multisensory experience that combines interaction, tactile stimuli and shared activities to trigger memory and encourage emotional engagement. The design creates opportunities for communication and connection between people with Alzheimer's and their loved ones.
Outputs	Written report; Use scenarios; Prototype.
Stakeholder Involvement	Internal simulation during reviews; Continuous external simulation experiments with users; iterative review; design critiques focused on accessibility; real-life testing.
Evidence / Validation	The project was developed through iterative prototyping, user-centred research and continuous feedback during the design process. Validation focused on the depth of the research, the accessibility of sensory elements and the experience's potential to facilitate meaningful shared moments.
Assessment Lens (observability)	The project was assessed through the depth of the research, the effectiveness of sensory engagement, the accessibility of the experience and its ability to encourage participation and emotional connection between users.



Transferability Note	The approach can be adapted to other healthcare and well-being contexts where communication or cognitive abilities are affected. Designing through multisensory interaction to create a common language offers a strategy for making experiences more inclusive for people with diverse cognitive needs.
Criticality / Limit	Risk of error due to short user testing.

Hero case 2

Elisava | Spain

Module – Human-Centred Design and Co-design Workshop

Design field	Product Design
Level (UG/PG)	Undergraduate and Postgraduate
Keywords	EDI in design methodologies, Co-design, Human-Centred Design, Participatory practices, Workshops
Module description	Module on Human-Centred Design and co-design that explored how design practices can shift from traditional expert-driven approaches to participatory and inclusive frameworks. It provided basic concepts, historical context and practical insights into designing with and for users, with an emphasis on equitable participation in design processes.
EDI Level	Level 3 (student work engaged with EDI themes)

Accessible and visible medicine

Student/s	Júlia Jordana Gras
Core EDI Issue Addressed	Accessibility for people with visual impairments.
Problem Framing	Pharmaceutical packaging often fails to meet the visual accessibility, needs of people with low vision, limiting their ability to identify and use medications independently.
Methodological Activation	Research-driven inquiry; interviews with experts and users; co-design with user; prototype design.
Key Design Move	Development of an accessible graphic system for pharmaceutical packaging. Through improved typography, visual hierarchy, color coding, Braille integration and clear iconography, the redesign translates accessibility principles into practical packaging solutions.
Outputs	Written report; Accessible graphic design for pharmaceutical packaging toolkit; Use scenarios; Product prototypes.
Stakeholder Involvement	Field observation; Comparative analysis; Visual accessibility criteria; Co-design; real-life iterative testing.
Evidence / Validation	Evidence was generated through the comparative analysis of existing pharmaceutical packaging, typographic and visual accessibility studies, and the redesign of real medication packages from Spanish laboratories. The proposal was evaluated against established accessibility criteria and inclusive graphic design principles.



Assessment Lens (observability)	Accessibility was assessed through the legibility of information, clarity of visual hierarchy, effectiveness of colour and iconographic systems, integration of Braille, and the overall potential of the design to improve users' autonomy and safe medication use.
Transferability Note	The proposed graphic system can be adapted to other pharmaceutical products and healthcare communication materials.
Criticality / Limit	Short experimentation and testing time, which prevented more creative solutions.

Hero case 3

Elisava | Spain

Module – Inclusive Education Workshop

Design field	Design
Level (UG/PG)	Undergraduate and Postgraduate
Keywords	EDI in design education, Accessibility, Neurodiversity
Module description	Participant-driven exploration of how traditional classrooms fail to accommodate cognitive diversity, and how Universal Design principles could transform these spaces. The session tested participants' understanding of inclusive design principles and their ability to develop adaptive teaching strategies through participatory methods.
EDI Level	Level 3 (student work engaged with EDI themes)

Invisible

Student/s	Laura Subirats
Core EDI Issue Addressed	Accessibility for children with visual impairments.
Problem Framing	Addresses the lack of accessible signage systems for children with visual impairments in educational environments.
Methodological Activation	Research-driven inquiry; interviews with experts and users; inclusive requirements definition; visits to the context; continuous tutoring; iterative prototype design and testing.
Key Design Move	Revalorising school signal systems as an accessibility infrastructure: orientation cues are embedded into a coherent, inclusive signage framework that integrates children's navigational needs with accessibility principles for people with visual impairments, supporting equitable independent movement throughout the school environment.
Outputs	Written report; Guidelines for signal systems in schools; use scenarios; ready-to-use prototype adopted by the school.
Stakeholder Involvement	Internal simulation during reviews; external simulation and validation with schools and users. Iterative review; design critiques focused on accessibility and doability; real-life iterative testing.
Evidence / Validation	Evidence was generated through contextual research, accessibility guidelines, iterative design development and the application of the proposal within a real educational environment. The project evaluated how the signage system responded to the orientation needs of children with visual impairments and its replicability.



Assessment Lens (observability)	Legibility and clarity of the signage; effectiveness of tactile and visual cues; ease of navigation; potential to promote autonomy and accessibility within the school environment.
Transferability Note	The signage system can be adapted to other educational settings. It highlights the importance of designing orientation systems that are accessible from the outset, ensuring that wayfinding supports users with diverse visual abilities while creating more inclusive and intuitive environments for everyone.
Criticality / Limit	Risk of error due to short user testing.

Hero case 4

Elisava | Spain

Module – Community-centred Design Workshop

Design field	Design
Level (UG/PG)	Undergraduate and Postgraduate
Keywords	Community-centred design; participatory methodologies, community dynamics.
Module description	Workshop that provided participants tools to analyse community dynamics, emphasising how designers can engage as active collaborators rather than external experts. The group explored, through theories and exercises, both the potential of community-driven design (e.g. democratised innovation, resilient networks) and its complexities (e.g. power imbalances, “sticky” local knowledge and conflicting priorities).
EDI Level	Level 3 (student work engaged with EDI themes)

Inclusive makeup

Student/s	Laura Pastañé
Core EDI Issue Addressed	Inclusion of diverse skin tones in cosmetic products.
Problem Framing	Addresses the lack of inclusive representation of darker skin colors within the cosmetics industry.
Methodological Activation	Research-driven inquiry; interviews with experts and users; visits to makeup stores; continuous tutoring; prototype design.
Key Design Move	Reframing foundation shade selection to be more inclusive. A pigment mixing kit, shade chart and visual guide were developed to create a do-it-yourself process for identifying skin tones.
Outputs	Written report; pigment mixing kit prototype; inclusive shade chart; visual guide for skin tone identification; use scenarios.
Stakeholder Involvement	Iterative reviews with tutors; continuous feedback throughout the design process to refine the inclusiveness and usability.
Evidence / Validation	Evidence was generated through theoretical research, interviews with users, prototype development and the creation of physical pigment mixtures to simulate a broad spectrum of skin tones. The project evaluated how the proposed system improved the representation of shade selection.
Assessment Lens (observability)	Inclusiveness of skin tone representation; clarity and usability of the shade identification system; accessibility of visual communication; coherence between graphic design decisions and users’ needs.



Transferability Note	The proposed methodology can be applied to other cosmetic products. It demonstrates how graphic design can challenge exclusionary standards by better reflecting diversity.
Criticality / Limit	Risk of error due to limited user testing.

Hero case 5

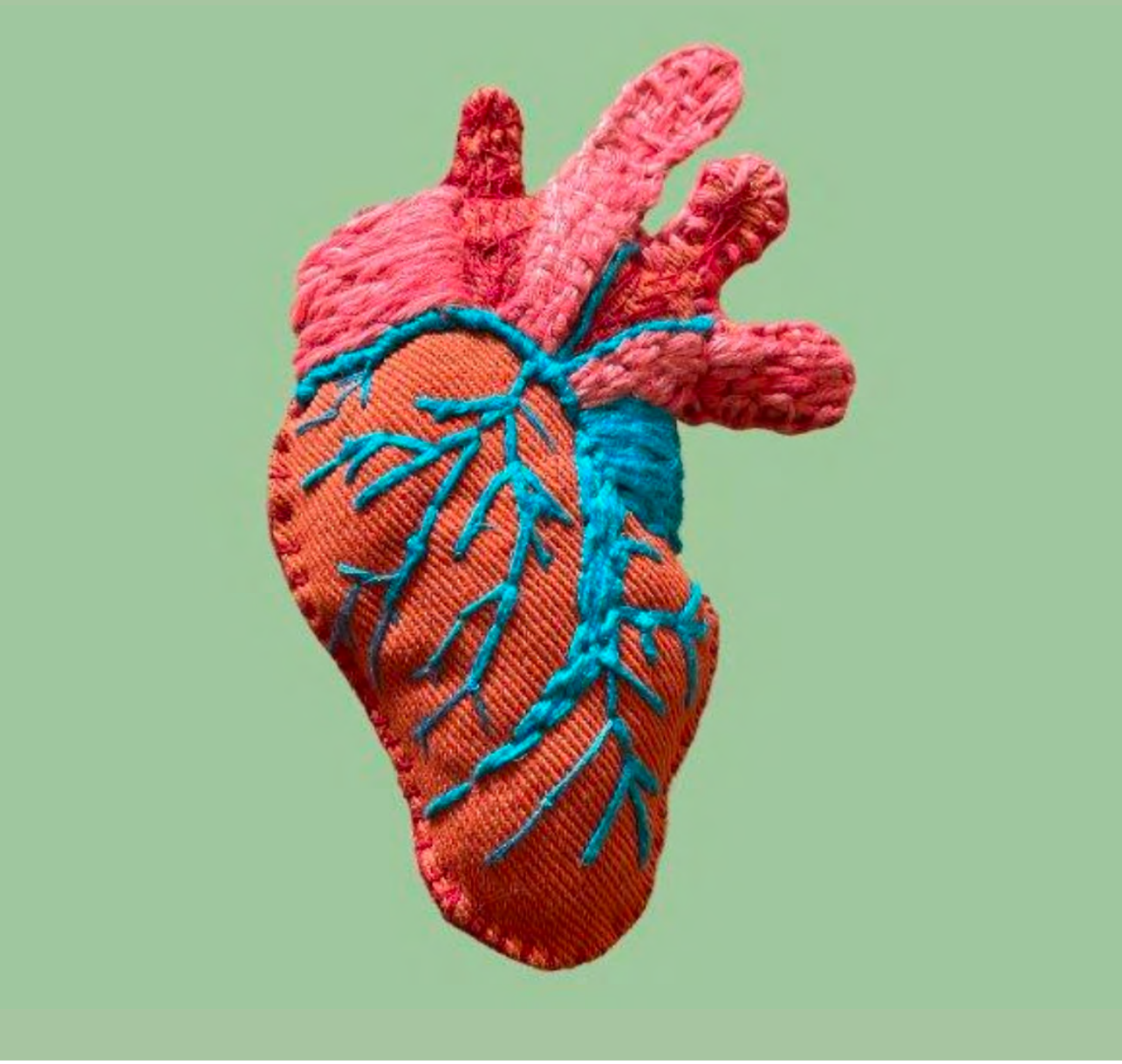
Elisava | Spain

Module – (Re)Designing Gender Workshop

Design field	Design
Level (UG/PG)	Undergraduate and Postgraduate
Keywords	Gender, Design and Feminism, Queering Design, Care-centred Design
Module description	Workshop on gender and design that critically examined how design practices reproduce – and can challenge – social norms around gender. It introduced feminist, queer and care-centred approaches through real-world examples and collaborative discussion, encouraging participants to reflect on how design can reinforce or challenge inequalities.
EDI Level	Level 3 (student work engaged with EDI themes)

Designing through care, for inclusion and human well-being

Student/s	Mariana Ferreiro Álvarez
Core EDI Issue Addressed	Participatory design for care and social inclusion.
Problem Framing	It addresses the need for individuals in communities at risk of social exclusion to form the caring bonds that are necessary to sustain their lives.
Methodological Activation	Research-driven inquiry; interviews with experts and users; co-design workshop; continuous tutoring; prototype design and testing.
Key Design Move	It creates a replicable and adaptable framework for creating co-design care-centred workshops that facilitate dialogue, strengthen social bonds, and generate meaningful encounters within socially excluded communities, contributing to individual and collective well-being.
Outputs	Written report; Co-design workshop; Co-design workshop toolkit.
Stakeholder Involvement	Internal simulation during reviews; Iterative review; real-life testing.
Evidence / Validation	Evidence was generated through participatory research, co-creation activities and qualitative engagement with participants throughout the design process. Continuous feedback informed the development of the experience.
Assessment Lens (observability)	The project was assessed through the quality of the research, participants' engagement, the quality of interpersonal interactions, the ability to include people facing social exclusion and the transferability of the materials.
Transferability Note	The methodology can be adapted to different communities and social contexts where strengthening relationships and well-being is a priority.



Criticality / Limit	Due to time restrictions it was tested only once, so there's a risk of error when transferring the workshop to other contexts.

Results, Reflections, and Considerations

The Product Design testing phase demonstrates that EDI can be effectively integrated into advanced design education when inclusion is treated as a research and project-development framework. By embedding EDI within final degree and master's projects, students were encouraged to critically interrogate existing design assumptions, engage with diverse perspectives, and consider the broader social consequences of design decisions.

A first key result concerns the integration of EDI into more advanced design practices. The testing phase showed that final projects provide a particularly valuable context for experimenting with EDI because students are required to develop a complete design proposal, allowing them to engage with inclusion in greater depth and complexity. As these projects often mark the beginning of their professional design trajectory, they also have the potential to shape future practice, encouraging graduates to embed EDI principles in careers across design, the cultural and creative industries, research, and the public sector.

A second result concerns the expansion of students' understanding of EDI within design. The workshops created a flexible teaching structure and exposed students to a wider range of concepts, methodologies, and perspectives than those typically encountered within standard design curricula. Topics such as co-design, community-centred design, gender-sensitive approaches, and digital inclusion contributed to a broader understanding of how exclusion operates across socio-technological contexts. This supported the development of more critically informed design proposals and encouraged students to view design as a practice capable of contributing to social transformation.

A third result concerns the combination of collective learning and project-specific supervision. Open workshops provided a shared conceptual and methodological basis, while collective and individual tutoring allowed students to translate EDI principles into the specific questions, methods, and outcomes of their projects. Iterative reviews, research documentation, prototyping, and engagement with external stakeholders also made it possible to discuss inclusion throughout project development rather than only in relation to the final outcome. This combination helped make EDI more observable within the design process and supported the adaptation of common principles to different project contexts.

At the same time, the experimentation revealed several limitations, the most significant of which was student engagement. While some participants demonstrated sustained interest in EDI topics and methodologies, actively participating in the workshops, others engaged with the framework more superficially. This uneven participation affected the depth of collective discussion, as well as the processes and outcomes of the final degree projects. These differences were accentuated by students' initial limited understanding of EDI. Many participants initially associated inclusion primarily with disability or functional accessibility, reflecting a relatively narrow interpretation of the field. Broader dimensions of diversity, including gender, ethnicity, and class, were less frequently considered during the early stages of project development.

Additionally, students often struggled with participatory methodologies, being more accustomed to involving users as validators of design decisions than as active contributors throughout the design process through approaches such as co-design. These limitations suggest that EDI-oriented programmes would benefit from preparatory activities introducing the multidimensional nature of EDI and participatory design practices

before students define their project topics, while also helping to foster early motivation and engagement.

The testing phase also indicates several opportunities for future implementation. First, the availability of open EDI-focused workshops throughout the academic year could increase awareness and encourage wider participation among students who are not directly involved in EDI-oriented projects. Second, integrating EDI concepts earlier within design curricula would provide a stronger conceptual foundation upon which advanced project work can build. Third, the findings suggest the need for more accessible and engaging pedagogical strategies capable of demonstrating the relevance of EDI across diverse design domains. Finally, clearer examples of how EDI methodologies can be applied beyond accessibility-focused projects may help students recognise the broader applicability of inclusive design principles.

Taken together, these findings suggest that transferability depends on a shared pedagogical structure rather than a single EDI methodology. Early exposure to EDI concepts, diverse methods, iterative supervision, stakeholder involvement, and traceable design evidence can support different project contexts while preserving student autonomy. These elements contribute to the Teaching Framework presented in the following chapter.

Criterion	Evidence across modules	Critical issue	Transferability
Structural inclusion	EDI is embedded within the whole project development.	EDI remained associated with accessibility in most projects, while broader dimensions (gender, ethnicity, class) were less explored.	Introduce EDI as a transversal design theme and methodology across different studios.
Assessment alignment	Iterative design reviews, research documentation, and prototyping were used to evaluate inclusion.	External validation was stronger in some projects than others.	Assessment contemplates real-world testing.
Stakeholder logic	Stakeholder engagement through interviews, design ethnography, co-design and user testing.	Participatory practices were uneven; time restrictions didn't allow long-term engagement with stakeholders.	Create frameworks to include stakeholders during the whole design process (co-design/co-research, design ethnography, workshops, testing).
Observability	Inclusive outcomes were documented through prototypes, scenarios, accessibility guidelines, design toolkits, testing reports and research.	Short development periods didn't allow to verify real social impact.	Require traceable evidence throughout the design process (interviews, co-design workshops, test).
Scalability	Adaptable framework across UG/PG projects and different design domains.	Requires earlier student preparation in EDI concepts and methods.	Modular workshops throughout the career.

Table 3.10. Synthesis of the Product Design Experimentation.

3.5 Teaching Design for EDI in the Field of Digital Design

Alessia Brischetto

Design Brief

Within the WP3 testing phase, the Digital Design module, taught by Alessia Brischetto and Francesco Leoncino (computer engineer), was positioned as a field in which EDI can be explored through the relationship between access, interaction and participation. The University of Florence experimentation framed inclusion not as a topic to be represented, but as an operative condition affecting how digital and hybrid systems are conceived, structured, prototyped and validated.

The design brief focused on hybrid collaborative games and social tools for educational and social environments. Starting from formal and informal learning contexts, students were invited to investigate situations in which participation may be limited by cognitive, sensory, cultural, linguistic, social or technological barriers. The expected design response was not a single interface, but an interaction system combining physical and digital elements – such as cards, boards, platforms, sensors, smart objects and gamified dynamics – to support dialogue, accessibility and shared learning.

The brief was intentionally open, but methodologically structured. It required students to move from the critical analysis of contexts of exclusion and inclusion to the definition of participatory, user-driven concepts and, subsequently, to prototype development. Research activities, empathy-based exercises, UX tools, collaborative canvases and scenario building supported the translation of qualitative insights into project requirements (ISO 9241-210, 2019; Clarkson *et al.*, 2007). The Double Diamond model provided the general sequence of the process, allowing students to move iteratively from exploration to concept definition, development, testing and final communication (Design Council, 2019).

A central aspect of the experimentation was the integration between design reasoning and technical implementation. The Digital Design component supported problem framing, inclusive UX research and interaction scenarios, while the Informatics for Design component enabled the development of interfaces, platforms and physical-digital prototypes. In this way, EDI became observable in design decisions: in the definition of user needs, in the construction of interaction rules, in the accessibility of the proposed systems, and in the documentation produced for review and assessment.

The methodology also used a sequence of assignments that made the learning process progressively explicit: general design brief, concept design, final design of the solution and final presentation. Each step required both visual and written documentation, so that design decisions could be discussed and revised during intermediate reviews rather than evaluated only at the end of the course. This organisation supported a gradual transition from empathy and exploration to technical development and public communication.

The teaching structure therefore combined methodological guidance, iterative feedback and progressive technical development. Intermediate reviews and collaborative activities gave students recurring opportunities to discuss assumptions, compare different interpretations of EDI and revise their design choices before moving towards implementation. Rather than separating inclusive design principles from technical development, the module encouraged students to verify how accessibility, participation and interaction were translated into the behaviour of the proposed system. This integration between research, design and implementation provided the common pedagogical structure through which the different student projects were developed and assessed.

Institution	UNIFI – Università degli Studi di Firenze
Field	Digital Design / Interaction Design / Hybrid Product-Service Systems
Modules Tested	Digital Design Laboratory – Digital Design & Informatics for Design
EDI Integration	Fully EDI-focused module (Level 5)
Cohort	48 postgraduate students: Master's Degree in Advanced Sustainable Design
Modality	Studio-based and hybrid learning environment; physical, digital and collaborative activities
Assessment logic	Iterative studio outputs + UX documentation + prototype development + peer/stakeholder feedback + final review.

Table 3.11. Teaching configuration of the Digital Design experimentation at UNIFI.

Students' Work

Although the UNIFI experimentation involved one tested module, the Digital Design Laboratory was articulated through two integrated teaching components that worked in continuity throughout the semester. The Digital Design component focused on human-centred and inclusive interaction design, EDI-oriented research, user needs mapping, collaborative tools, and the translation of inclusion principles into design criteria. The Informatics for Design component supported the technical development of interfaces, digital platforms, smart objects, and tangible interaction systems. This structure allowed students to connect critical analysis and concept development with the construction of demonstrable prototypes, making the relationship between EDI, interaction design, and technical implementation explicit within the learning process.

The two components were not treated as separate tracks, but as complementary layers of the same studio experience. Research, scenario building, and UX definition informed technical development, while prototyping and testing helped students verify the clarity, accessibility, and feasibility of their design assumptions. This organisation reflected the specific nature of Digital Design, where inclusive outcomes depend not only on the relevance of the topic, but also on how information architecture, interaction flows, visual language, tangible interfaces, and feedback mechanisms are configured. It also made the assessment process more transparent, as each project could be discussed through both design intentions and technical evidence, without separating the methodological and technical dimensions of the work.

Across the semester, students progressively translated the analysis of exclusion into design criteria, interaction scenarios, and defined prototypes. User and context maps, EDI canvases, moodboards, scenarios, concept boards, wireframes, and interaction flows were used to connect research findings with subsequent design choices. Intermediate reviews provided opportunities to compare alternative solutions, identify inconsistencies, and reconsider accessibility and participation before technical implementation. These moments also encouraged students to make the rationale behind their choices explicit and to relate technical decisions back to the needs and barriers identified during research. The development process therefore remained iterative, allowing research, design, and prototyping to inform one another rather than being treated as separate phases.

Student work resulted in eight final projects addressing EDI from complementary perspectives. Designable, Edinside, ReThink, VOCIPARI, Kaleido, Mind the Gap, UNO and UNO/ALL explored accessibility and Universal Design, EDI learning, cultural diversity, gender equality, LGBTQ+ inclusion, stereotypes and physical-digital barriers. The projects took the form of hybrid toolkits, digital platforms, interactive games and reflective learning tools. Rather than producing a single thematic direction, the module generated different interpretations of EDI within Digital Design. Accessibility-oriented projects addressed barriers, usability and design criteria; cultural and gender-related projects focused on dialogue, stereotypes and representation; learning-oriented projects translated EDI concepts into guided activities. Across these outputs, students transformed research findings into scenarios, interaction rules, prototypes and narrative documentation, using both digital technologies and co-design tools.

This variety is relevant because it shows how inclusion can be addressed through different interaction models, from awareness tools to collaborative games and design-support systems, while maintaining a common methodological structure within a shared studio process. It also highlights the capacity of Digital Design to make EDI visible through interaction logic and prototype behaviour. In this sense, the projects functioned not only as final outputs, but also as learning devices through which students tested inclusive design reasoning.

A further methodological dimension emerged from the integration of Digital Design and Informatics for Design. Human-Centred Design, UX research and iterative prototyping were combined with technical experimentation through coding, physical computing and interactive hardware. This also encouraged elements of computational thinking, as students broke complex interaction problems into manageable components, defined relationships between inputs, behaviours and outputs, and progressively tested how design intentions could be translated into functional systems. Activities involving HTML/CSS, Python, Raspberry Pi and other interactive technologies supported this connection between design reasoning and computational logic, while keeping accessibility, participation and EDI criteria visible throughout implementation. Technical development was therefore approached not as a separate phase, but as part of the iterative design process through which inclusive intentions could become operational and testable.

For the purposes of this chapter, Designable is presented as a representative case because it makes explicit the integration between Digital Design and Informatics for Design, combining a digital platform, a smart object and a card-based toolkit to support inclusive design reasoning and scenario construction

Across the eight projects, a common pedagogical element was the traceability between research evidence and subsequent interaction choices. Each group moved from the identification of barriers and user needs to concept definition, development and validation through prototypes, testing and review. Although the final forms varied, the process generated comparable forms of evidence: user needs maps, EDI-oriented briefs, scenarios, UX structures, mock-ups, physical-digital prototypes and final communication materials. This made it possible to discuss not only what students designed, but also how the initial EDI issue was progressively translated into design criteria, interaction rules and technical choices.

The diversity of the outcomes also shows how the same methodological structure can support different dimensions of EDI. Designable and Mind the Gap foregrounded accessibility, barriers and inclusive design criteria; Edinside, ReThink and Kaleido used interactive and guided activities to support learning, cultural awareness and reflection;

VOCIPARI, UNO and UNO/ALL explored gender equality, identity, stereotypes and everyday forms of discrimination. These different thematic directions were also reflected in the types of interaction developed, ranging from collaborative and game-based activities to digital platforms, tangible interfaces and hybrid tools combining physical and digital components. Despite these different focuses, all projects required students to connect research, interaction design, prototyping and communication within a coherent design process, translating initial observations and EDI-related issues into explicit design criteria and progressively testable solutions. The resulting body of work therefore provides complementary evidence of how Digital Design can make EDI operational through different forms of physical, digital and hybrid interaction, while preserving a shared methodological sequence across projects with different objectives, users and technological configurations.

Module	Level	Core focus	Typical output
Digital Design Laboratory: Digital Design	PG	Human-Centred and inclusive interaction design; EDI-oriented design brief and UX research; mapping of barriers and user needs; collaborative activities for learning, dialogue and participation; translation of EDI principles into interaction criteria and scenarios.	Design brief; EDI canvas; user needs maps; UX scenarios; concept boards; wireframes and interaction flows; visual storytelling; reflective process documentation.
Digital Design Laboratory: Informatics for Design	PG	Technical development of digital and hybrid systems; interface implementation; physical computing; integration of digital platforms, smart objects and tangible interaction; iterative prototyping and testing of technical and interaction requirements.	Functional prototypes; Figma mock-ups; HTML/CSS interfaces; Python-based experiments; Raspberry Pi / Arduino components; physical-digital prototypes; testing documentation and final demonstration.

Table 3.12. Teaching components within the Digital Design experimentation.

The Hero Case presented below constitutes a selected representation of the student outcomes. The complete documentation of the experimentation, including additional student projects, is available in Deliverable D3.2.2.e (see General note on Chapter 3).

Hero case 1

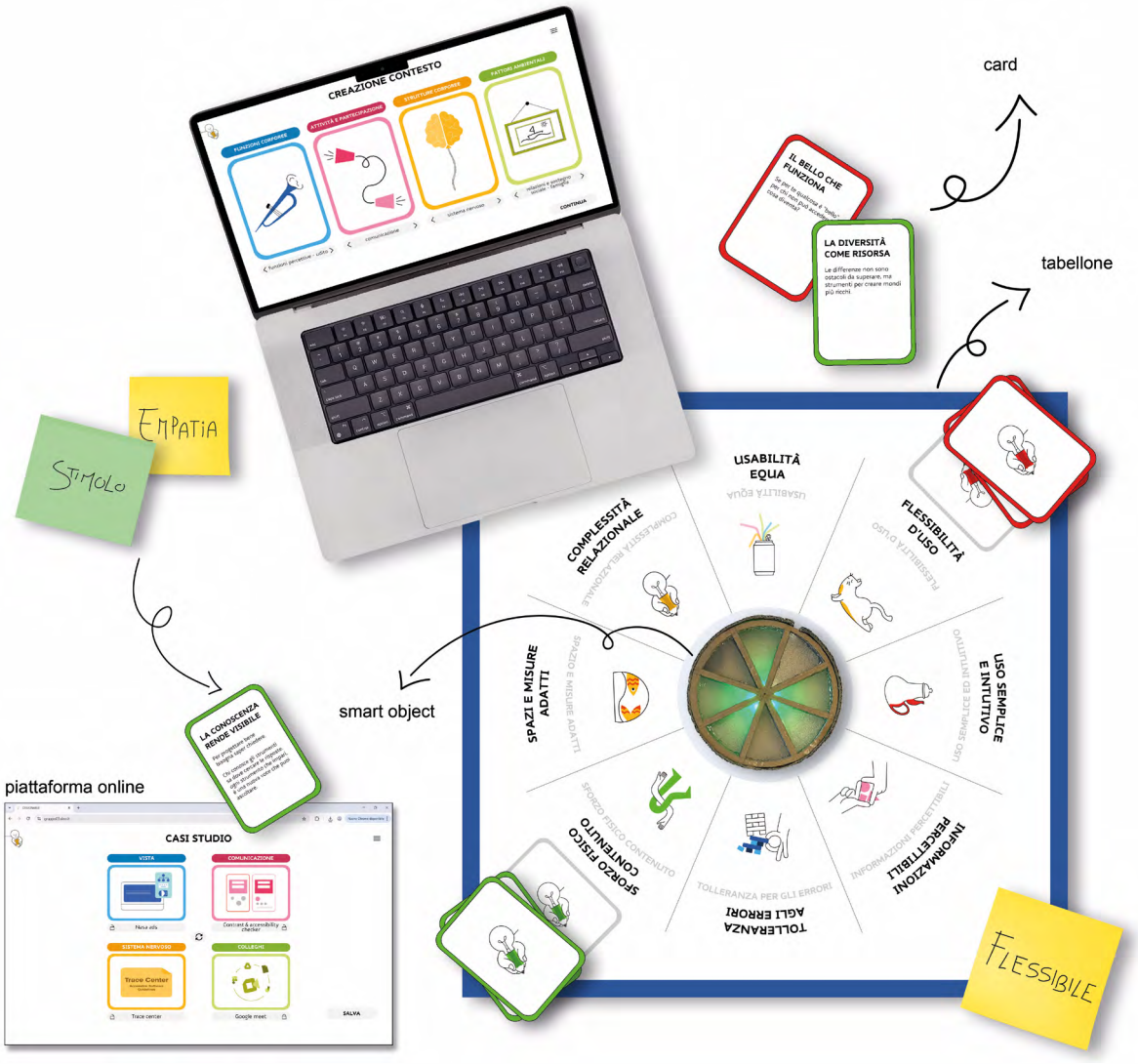
UNIFI | Italy

Module – Digital Design

Design field	Design
Level (UG/PG)	Postgraduate (PG)
Keywords	Interaction Design, Human-Centred Design, Design for Learning Experience, Social Innovation
Module description	The module explored hybrid collaborative games and social tools focused on EDI. Students worked in teams to develop interactive and educational systems combining analog, digital and physical components. The teaching process integrated Human-Centred Design, inclusive UX, collaborative learning, prototyping and technical development. Particular attention was given to the translation of theoretical EDI principles into concrete design actions.
EDI Level	Level 5 – fully EDI-focused module

Designable – Inclusive Design Toolkit

Student/s	Giulia Costa, Rosa Morinelli, Alessia Patrizio, Stefano Petaccia, Virginia Piombino, Enrico Testoni.
Core EDI Issue Addressed	The difficulty of translating EDI, Inclusive Design, Universal Design and accessibility principles into concrete design criteria, scenarios and project decisions.
Problem Framing	EDI concepts may remain abstract if they are not supported by operational methods and design tools. The teaching activity therefore guided students in identifying barriers, defining user needs, building scenarios and connecting inclusive principles to design choices.
Methodological Activation	Students worked through human-centred and inclusive UX research, analysis of accessibility references, user needs mapping, scenario development, hybrid prototyping, iterative reviews and final evaluation.
Key Design Move	The main educational move was to make EDI actionable through interaction design. Digital platforms, cards, smart objects, interfaces and game-based dynamics were used to transform reflection on inclusion into tangible and testable design systems.
Outputs	Hybrid toolkits; digital platforms; smart objects; card-based systems; inclusive scenarios; visual documentation; prototype presentations; design process reports.
Stakeholder Involvement	The module included studio activities, peer critique and final review with Alessandro Guarducci, Ester Iacono, course instructors and invited stakeholders. Feedback focused on design coherence, communication, technical feasibility, inclusive value and future development, helping students critically assess the consistency between their initial EDI objectives and the interaction choices embodied in the final prototypes.



Evidence / Validation	Evidence was produced through iterative reviews, prototype testing, peer discussion and final evaluation. The process assessed how clearly students translated EDI principles into interaction logic, accessibility choices and documented design criteria.
Assessment Lens (observability)	Inclusion was observed through EDI criteria, scenario-building, accessibility and usability, integration between digital and physical components, and quality of communication and reflective documentation.
Transferability Note	The approach can be transferred to other design studios or workshops through a common sequence of exclusion analysis, definition of EDI criteria, scenario construction, hybrid prototyping, validation and reflection, while remaining adaptable to different disciplinary contexts and learning objectives.
Criticality / Limit	The module would benefit from deeper real-user testing and from more systematic accessibility evaluation across both digital and physical components.

Results, Reflections, and Considerations

The UNIFI experimentation shows that EDI becomes operational in Digital Design education when it is embedded into research, interaction choices, prototyping and validation. The module supported the transition from general awareness to visible design evidence: maps of barriers and needs, EDI canvases, UX scenarios, interaction flows, mock-ups, testing materials and reflective documentation. Inclusion therefore became assessable through the way each project framed users, structured interaction and made access, participation and dialogue possible.

Three main results emerged. First, hybrid prototyping allowed students to test inclusion as an experiential condition through digital interfaces, tangible components, cards, sensors, smart objects and physical-digital interaction. Several projects used tactile, visual, audio or game-based strategies to improve accessibility, engagement and collaboration, supporting learning through interaction, experimentation and situated feedback (Gee, 2003; Deterding *et al*., 2011). Second, teamwork, peer critique, collaborative activities and final discussion with reviewers and stakeholders helped students understand that EDI-related design problems require dialogue, contextual interpretation and revision of assumptions. These activities included EDI moodboards, scenario-building, case study analysis, shared Miro canvases and the Minecraft Hour of Code – Inclusion exercise, used to explore cooperation, empathy and inclusive interaction through playful digital environments. Third, the integration between design reasoning and technical implementation made the learning experience more concrete, but also more complex. Tools such as Figma, HTML/CSS, Python, Raspberry Pi and interactive hardware required students to balance conceptual depth, technical feasibility and accessibility requirements[2].

The integration of the two teaching components was particularly relevant in this respect. Design decisions developed through research and UX activities had to be translated into interfaces, interaction flows and physical-digital behaviours, while technical experimentation frequently required students to reconsider assumptions about usability, accessibility and participation. This reciprocal relationship helped prevent design and implementation from becoming separate stages, making technical constraints and opportunities part of the iterative project development. It also provided further occasions to question whether an inclusive intention was actually supported by the behaviour of the proposed system.

The final evaluation workshop consolidated this process. Each group presented slides, storyboards, summary boards, mock-ups, video prototypes and physical or digital materials. The discussion addressed design coherence, communicative clarity, technical and inclusive aspects and possible future development. This multi-actor review helped students test whether their proposals were understandable beyond the studio context and whether the inclusive intention was supported by actual interaction choices.

The review also highlighted the value of assessing projects through multiple forms of evidence rather than through the final prototype alone. A technically functional solution did not necessarily demonstrate an inclusive design process, just as a concept explicitly addressing EDI did not automatically ensure accessible or coherent interaction. Comparing research materials, scenarios, design criteria, prototypes and final demonstrations made it possible to discuss the consistency between the problem initially identified and the solution eventually developed. In this way, assessment became part of the learning process itself, encouraging students to explain and justify the relationship between evidence, design decisions and implementation.

A further outcome concerns the role of documentation in making EDI visible throughout the design process. Maps, canvases, scenarios, interaction flows and iterative prototypes did not function only as intermediate project outputs, but as evidence connecting identified barriers and user needs with subsequent design choices. This traceability is particularly relevant in Digital Design, where inclusion may otherwise remain implicit or be assessed only through the final interface. Making the relationship between research evidence, EDI criteria, design decisions and validation explicit therefore supported both student reflection and more transparent assessment.

This approach also reinforced the idea that accessibility should not be treated as a final verification applied once a digital or hybrid solution has already been defined. Within the experimentation, accessibility and participation could be reconsidered at different moments: when identifying users and barriers, when defining interaction scenarios, during interface and prototype development and again through testing and review. Maintaining these criteria across successive stages made it easier to identify inconsistencies before they became embedded in the final solution. It also encouraged students to understand accessibility as part of interaction quality and design responsibility rather than as an additional technical requirement.

The experimentation also clarified some limits. Expert and stakeholder feedback was meaningful, but it could not replace extended field validation with specific communities. Future editions should therefore combine peer testing, expert review and direct testing with users affected by the issues addressed. They should also introduce more structured EDI-oriented toolkits, clearer accessibility checkpoints and intermediate validation moments. The experience also highlighted the importance of progressive methodological scaffolding. Students were required to move continuously between understanding exclusion, defining EDI-oriented criteria, developing interaction concepts and implementing technically feasible solutions. In this process, intermediate reviews and iterative testing can help prevent technical development from becoming disconnected from the initial social and accessibility objectives. For Digital Design education, the challenge is therefore not simply to add EDI requirements to a brief, but to maintain them as explicit criteria throughout research, prototyping, implementation and evaluation.

Another relevant finding concerns the balance between openness and methodological structure. The brief allowed student groups to address different EDI issues and experiment with different technological configurations, while common milestones, shared design tools and iterative reviews provided a consistent framework for project development. This combination supported autonomy and experimentation without reducing EDI to a fixed set of requirements. At the same time, it enabled tutors to verify whether accessibility, participation and inclusion criteria remained connected to the evidence collected during research as projects moved towards technical implementation. In this sense, the learning process combined flexibility in project direction with a shared sequence of reflection, prototyping and validation.

Overall, the module offers a transferable pedagogical pattern for Digital Design programmes: starting from exclusion, translating insights into EDI criteria, developing hybrid prototypes, testing interaction and documenting the process. Its main contribution lies in showing that EDI can become a design variable within digital and hybrid systems, provided that the learning environment supports research depth, technical experimentation, feedback loops and reflective assessment. This progression also contributes to the Teaching Framework presented in the following chapter by showing how EDI can be made observable and assessable across successive stages of the digital design process.

Criterion	Evidence across modules	Critical issue	Transferability
Structural inclusion	Inclusion was embedded in hybrid systems combining digital interfaces, tangible components and collaborative rules.	EDI risks remaining a project topic rather than a design structure.	Keep EDI visible in the brief, research, interaction logic and documentation.
Assessment alignment	Reviews, UX documentation, prototypes and final presentations made the process observable.	Prototype maturity and documentation varied across groups.	Use criteria linking research evidence, accessibility, interaction quality and reflection.
Stakeholder logic	Tutors, reviewers and stakeholders contributed through feedback during reviews and final discussion.	Direct testing with diverse users remained limited.	Combine peer testing, expert feedback and targeted user validation.
Observability	EDI appeared through canvases, user maps, scenarios, flows, prototypes and testing notes.	Inclusion is difficult to assess when decisions are not linked to barriers and needs.	Require traceable artefacts: UX maps, criteria, iterations and rationale logs.
Scalability	Outputs included toolkits, platforms, games and awareness tools adaptable to other studios.	Outcomes may remain fragmented without a shared sequence.	Use a common progression: exclusion analysis, EDI criteria, prototype, validation and reflection.

Table 3.13. Synthesis of the Digital Design Experimentation.

3.6 Teaching Design for EDI in the Field of Architecture and Urban Design

Zuzana Čerešňová, Klára Macháčová

Design Brief

The testing phase within WP3 was implemented in three courses/modules in the field of Architecture and Urban Design at the Faculty of Architecture and Design, Slovak University of Technology in Bratislava (FAD STU):

- Universal Design;
- Design Studio III-Public Buildings;
- Architecture and Environment.

The first module focuses on Universal Design with the highest EDI potential with a greater theoretical scope. The second module, Design Studio, is oriented towards practical studio experience in the field of architecture and urban planning. The third module, Architecture and Environment, has a general scope in various topics of the creation of the built environment.

In the Universal Design module, a total of 74 students were given three thematic assignments that were entirely focused on EDI issues and implementation in practice:

- Topic 1: Accessibility audit of buildings for higher education in Slovakia (teachers: Zuzana Čerešňová, Lea Rollová, Michal Kacej, Danica Končeková, Pavol Korček);
- Topic 2: Adaptability of the residential environment in Bratislava (teacher: Lenka Suláková);
- Topic 3: The impact of architecture on people (teacher: Natália Bošková Filová).

In the Design Studio III-Public Buildings module, 108 students were offered a choice between two thematic assignments, each addressing a distinct typological and societal challenge:

- Topic 1: Outpatient Social Care Facility;
- Topic 2: Experiential Winery in the Small Carpathians Region.

A cohort of seven students, under the guidance of Michal Kacej, participated intensively in the testing phase conducted as part of the EDIDesK project.

As part of this course, a short workshop (3 hours) was conducted with students and stakeholders (from the Bratislava Municipality) in cooperation with the European Accessibility Resource Centre – AccessibleEU, focusing on EDI in public buildings and spaces, including cognitive accessibility and the concept of intuitive architecture. An important part of the workshop was the involvement of students in an interactive way by using digital questionnaires (SLIDO) via their mobile phones (QR code in presentation and students answering in mobile phones – collecting data via SLIDO)[3].

In the Architecture and Environment course, the topic of EDI was addressed as part of the first assignment titled Multisensory Experience, which 73 students worked on in small groups during a workshop, drawing on their personal experiences, observations and sensitivities.

Taken together, the three modules enabled EDI to be explored through complementary educational approaches: theoretical and methodological learning in Universal Design, application within an architectural design studio, and experiential and multisensory investigation of the built environment. This combination made it possible to observe how principles of accessibility, adaptability, participation, and sensory awareness can be introduced at different stages and through different formats of Architecture and Urban Design education.

Institution	Slovak University of Technology (STU) – Faculty of Architecture and Design (FAD)
Field	Architecture and Urban Design
Modules Tested	Universal Design (UG); Design Studio – Public Buildings (UG); Architecture and Environment (UG).
EDI Integration	Universal Design: fully EDI-focused; Other modules: selected EDI integration
Cohort	Universal Design: 74 students (UG); Design Studio – Public Buildings: 7 students out of a total of 108 in the course (UG); Architecture and Environment: 71 students (UG).
Modality	2 Theoretical courses with practical exercises; 1 Studio-based course (predominantly physical; hybrid components depending on module).
Assessment logic	Student works supported by regular consultations, reviews, and a final defence or exam.

Table 3.14. Teaching Configuration of the Architecture and Urban Design Experimentation at FAD STU.

Students' Work

One of the assignments in the Universal Design course was focused on the accessibility audit of buildings for higher education (HE) in Slovakia. The aim was to identify barriers and propose recommendations on how to remove obstacles to provide an inclusive educational environment. Students were given an evaluation checklist and an example of an evaluation report created by faculty members from the Centre for Design for All (CEDA) at FAD STU[4]. Evaluation of accessibility of the buildings was conducted according to the requirements based on legislation and EDI principles. An on-site survey of selected buildings consisted of photo documentation and measurements of interior and exterior spaces according to the evaluation checklist for the HE buildings (Čerešňová, 2018). Based on the data from the evaluation checklist, students prepared a final evaluation report and poster.

The second type of assignments in the Universal Design course was aimed at the analysis and assessment of the adaptability of apartment buildings in the city of Bratislava and on the comparison of two selected buildings (new and old). Students explored the possibilities of spatial flexibility and adaptability of the residential environment to changing situations and needs of its residents during their life (Rollová *et al*., 2023). It was recommended that methods such as "Aging in Place" and "Independent Living" be considered in the assignment (Čerešňová & Rollová, 2023). Part of the assignment was to test students' knowledge on EDI issues and their ability to communicate with residents in participatory planning. An important part of the student work was the questionnaire survey with residents focused on their experiences and needs regarding accessibility and adaptability of their living environment (Suláková *et al.*, 2024).

The third type of assignments in the Universal Design course was focused on researching the impact of architecture on people. The aim was to draw inspiration from art or nature and translate abstract feelings into images of positive inclusive educational environments. Students used their own designs and sketches and combined them with AI outputs to learn how to use this new tool in an ethical way. They wrote essays

on positive expression and inclusion in educational spaces. Finally, they evaluated the impact of the images created by other students by providing feedback in questionnaires.

The first type of assignment in the Design Studio-Public Buildings was aimed at developing an architectural design for a facility providing outpatient social care services to older adults and people with disabilities. Departing from traditional large-scale, impersonal institutions, the design should respond to current social care models that promote small-scale, welcoming community-based environments (Rollová & Čerešňová, 2015).

The objective of the second type of assignment in the Design Studio-Public Buildings was to design an experiential winery situated at the foothills of the Small Carpathians, in the region of Pezinok in Slovakia. The proposal should respond sensitively to the surrounding landscape character and reflect the cultural and historical traditions of regional winemaking, while simultaneously introducing innovative approaches in the fields of architecture and sustainability – environmental, social, and economic. Both assignments emphasised the integration of architectural, social, and environmental considerations within a broader framework of contemporary design thinking, and required students to develop a conceptually robust, context-sensitive, and technically feasible architectural proposal.

The assignment in the Architecture and Environment course was completed during the Multisensorial Experience workshop linked to the lecture "Human and Environment, a complex perception of the Environment". It reveals to students the complexity of human beings, their way of perceiving the environment, and their differences. Designing multisensory experiences is a complex, nuanced process that requires a deep understanding of how individuals perceive and interact with their environment. By understanding how the senses evoke emotions, memories, and associations, students can strategically use sensory elements to create emotionally resonant experiences. Ensuring the accessibility of multisensory experiences is key to creating an inclusive environment where all people can equally participate and enjoy the full spectrum of experiences, using all their senses.

Module	Level	Core focus	Typical output
Universal Design	UG	EDI principles and methods in the built environment, understanding the needs of diverse users, identification of barriers in the built environment.	Semestral project (e.g. Access Audit, design of inclusive space, research on impact of the built environment) – report and poster.
Design Studio – Public Buildings	UG	Architectural design of small public buildings considering sustainability and EDI principles.	Architectural designs – project documentation and presentation.
Architecture and Environment	UG	Relationships and complexities of architecture and environment (physical, social and cultural).	Small workshops (topic: Multisensoriality) – discussion, poster, presentation.

Table 3.15. Modules Tested within Architecture and Urban Design, STU.

The three Hero Cases presented below constitute a selected representation of the student outcomes. The complete documentation of the experimentation, including additional student projects, is available in Deliverable D3.2.2.c (see General note on Chapter 3).

Hero case 1

STU | Slovakia

Module – Universal Design

Design field	Architecture and Urban Design
Level (UG/PG)	Undergraduate (UG)
Keywords	Human-Centred Design, Universal Design, Design for All, People-Friendly Design, Inclusive Design, Adaptability, Accessibility
Module description	The module is focused on EDI principles and Human-Centred Design methods (e.g. Universal Design, Design for All, Inclusive Design) to create an inclusive environment for all people, including people with physical, sensory, intellectual and other limitations. Students will be able to understand the needs and requirements of diverse users, identify barriers in the built environment, and design solutions to create inclusive environments.
EDI Level	Level 5 – The module is entirely/fully focused on EDI issues, and all student works properly address EDI issues

Adaptability of the residential environment in Bratislava

Student/s	Veronika Krajčírová
Core EDI Issue Addressed	Adaptability of residential environment in accordance with principles of “Aging in Place” and “Independent Living”
Problem Framing	The aim was to identify how flexibly and adaptively the residential spaces in Bratislava were designed in relation to the changing needs and limitations (temporary and permanent) of residents.
Methodological Activation	On-site survey, interviews with residents (users), adaptability and accessibility analyses, presentations of findings.
Key Design Move	Students examined the spatial flexibility and adaptability of two selected residential buildings, one old and one new, in relation to different life situations and residents’ changing needs of residents, such as changes in health status, modifications for different age groups, etc.
Outputs	Questionnaire survey; Comparative analyses and recommendations in poster with graphical evaluation of the residential spaces (in photos).
Stakeholder Involvement	Residents (as stakeholders) of selected buildings were involved in a questionnaire survey focused on their experiences and needs regarding the adaptability of their living environment.
Evidence / Validation	Evidence was generated through the comparative analyses of adaptability and accessibility of existing residential buildings, questionnaire survey and interviews with users/residents, discussion and final evaluation. The proposal was evaluated based on established accessibility criteria and principles of Universal/Inclusive Design.

UNIVERZÁLNE NAVRHOVANIE 2024/2025

Seminárna práca na tému: **Adaptabilita obytného prostredia v Bratislave**
Garant predmetu: **doc. Ing. arch. Zuzana Čerešňová, PhD.**

STU FAD

Študent: **Veronika Krajčírová**
Vedúci práce: **Ing. arch. Lenka Suláková**

Názov stavby:
Obytný dom Šándorova

Adresa/Lokalita:
Šándorova 4, Bratislava, Slovensko

Rok realizácie/výstavby:
70-te roky, 20. stor.

Architekt/Developer:
-

Podlažnosť: **8**

Byt, podlažie: **3**





Názov stavby:
Polyfunkčný objekt B10

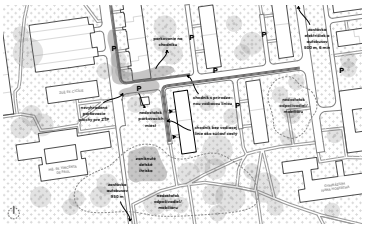
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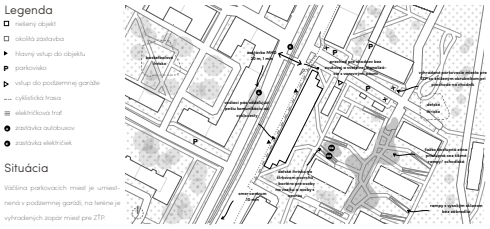
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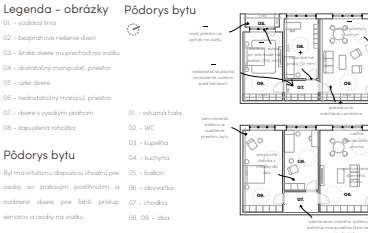
Architekt/Developer:
Sadovsky & Architects s.r.o., Superatelier s.r.o.

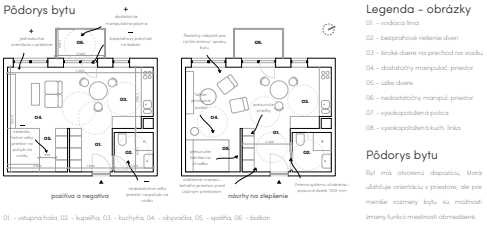
Podlažnosť: **8**

Byt, podlažie: **6**

















Assessment Lens (observability)	Quality of adaptability and accessibility analyses, depth of critical thinking, relevance and originality of the proposed solutions, graphic processing, terminology, cooperation and consultations during the semester, overall processing of the assignment.
Transferability Note	The proposed methodology can be applied to workshops and design studios focused on the built environment. It demonstrates how adaptability and accessibility of the environment can help to better reflect diversity and changing needs of people during their life.
Criticality / Limit	Challenges in engaging residents in questionnaires and interviews; lack of time for the creative phase of the design.

Hero case 2

STU | Slovakia

Module – Design Studio & Public Buildings

Design field	Architecture and Urban Design
Level (UG/PG)	Undergraduate (UG)
Keywords	Human-Centred Design, Adaptability, Accessibility, Composition, Architectural Typology, Structural and Technical Principles
Module description	The module is focused on architectural design of small public buildings, such as cultural, healthcare, educational, or recreational facilities. Students apply their knowledge of composition, construction, and typology while considering sustainability and EDI principles. The module emphasises creative work and prepares students to analyse, conceptualise, and present architectural designs with professional standards.
EDI Level	Level 4 – The module covers selected EDI issues, most student works include EDI elements, and a cooperation with an external partner is carried out.

Community-based social care center

Student/s	Klára Miškufová
Core EDI Issue Addressed	The project is focused on designing a day care centre for people with neurodegenerative diseases.
Problem Framing	The main idea was to create a clear, accessible and welcoming environment that helps users with way-finding and offers a sense of safety and social inclusion.
Methodological Activation	On-site survey, site analyses, review of case studies – good practises, discussions, presentations of findings.
Key Design Move	Throughout the semester, students made visible progress in understanding architecture as a tool for inclusion.
Outputs	Sketches, analyses; Floor plans, sections, elevations, visualisations, and 3D models; A3 portfolio; Poster and 3D model.
Stakeholder Involvement	The module included studio activities, critique and final review with course instructors and invited stakeholders.
Evidence / Validation	Projects showed increasing sensitivity to the needs of diverse users, from clear circulation and legibility to the role of thresholds, orientation points and multisensory experiences.
Assessment Lens (observability)	Quality of analyses, depth of critical thinking, relevance and originality of the proposed solutions, graphic processing, terminology, cooperation and consultations during the semester, overall processing of the assignment.



Transferability Note	It is important to move beyond mere compliance with accessibility rules towards empathy, designing environments that are not only accessible but also intuitively supportive and welcoming to everyone.
Criticality / Limit	The level of integration of EDI principles varied. In some cases, they were limited to ramps and toilets, without deeper reflection on cognitive accessibility, social inclusion, or long-term usability.

Hero case 3

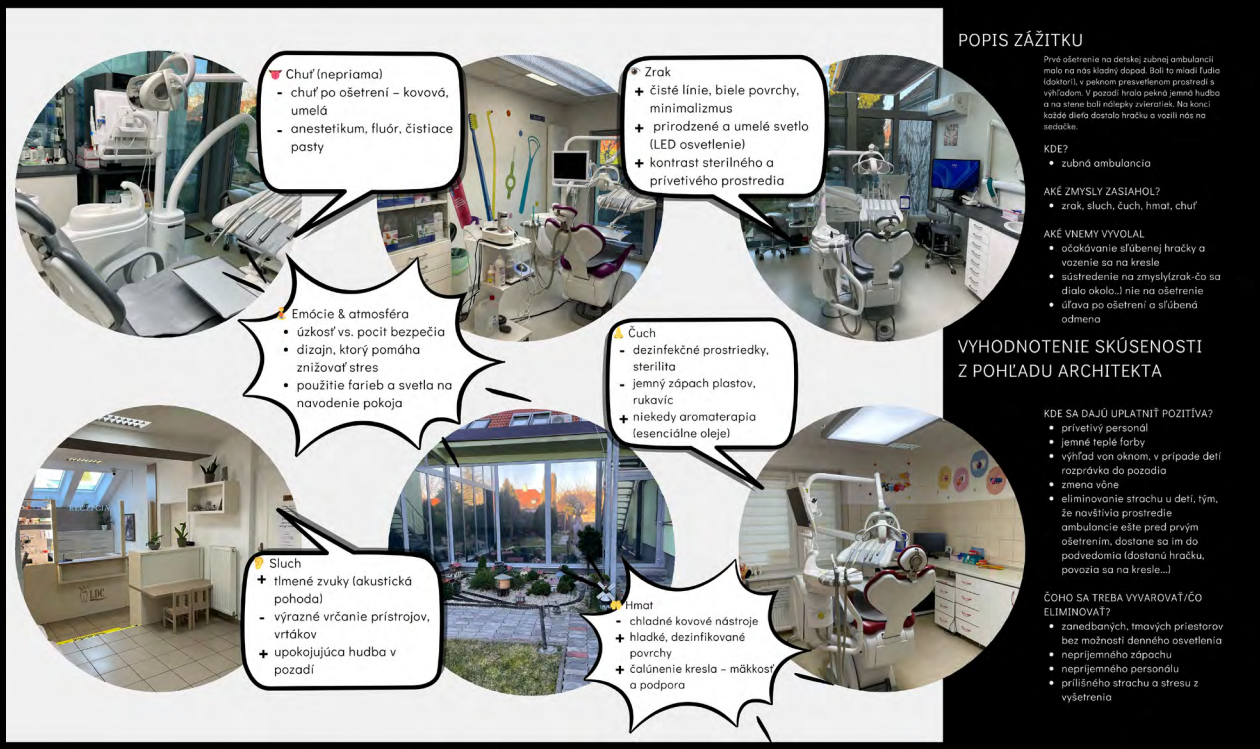
STU | Slovakia

Module – Architecture and Environment

Design field	Architecture and Urban Design
Level (UG/PG)	Undergraduate (UG)
Keywords	Architecture; Environment; Sustainability; Perception; Relationships
Module description	The module is focused on relationships and complexities of architecture and environment, discovering them in three perspectives: • Architecture and physical environment (climate, materials, energy, etc.); • Architecture and social environment; • Architecture and cultural environment, including complex perception of the environment and EDI issues.
EDI Level	Level 3 – The module covers selected issues about EDI, and most of the student work shows elements concerning EDI issues.

Multisensory experience

Student/s	Tamara Horáková, Terézia Labaničová
Core EDI Issue Addressed	The workshop promotes inclusive architectural thinking by recognizing that people perceive the same environment differently through their multisensory experiences. It encourages awareness of diverse sensory needs and user perspectives in spatial design.
Problem Framing	Architectural education often prioritises visual and technical aspects of design while overlooking the multisensory nature of human experience. The workshop addresses this gap by encouraging students to analyse how environments influence perception through all senses.
Methodological Activation	Students work collaboratively through memory recall, brainstorming, discussion, poster development, and presentation. They analyse a shared multisensory experience, classify sensory perceptions, and reflect on their architectural implications.
Key Design Move	The workshop introduces multisensory analysis as a structured design method, requiring students to evaluate environments through individual sensory modalities and translate their findings into architectural design recommendations.
Outputs	Students produce a poster documenting the selected environment, sensory analysis, positive and negative perceptions, architectural lessons learned, and proposals for improving the space from a multisensory perspective.
Stakeholder Involvement	Students collaborate in small groups, compare individual perceptions, and engage in peer discussion. The instructor facilitates reflection and supports the objectification of subjective experiences.



Evidence / Validation	Learning is demonstrated through workshop participation, the quality of the poster, proposed design interventions, oral presentations, and students' ability to justify and discuss their conclusions.
Assessment Lens (observability)	Assessment focuses on students' ability to identify and evaluate multisensory experiences, generalise findings into architectural principles, propose design improvements, and communicate their reasoning effectively.
Transferability Note	The workshop can be integrated into design studios and courses focused on architecture, interior design, landscape architecture, or environmental psychology. The multisensory analysis framework is transferable to other creative disciplines that emphasise user-centred design and experiential learning.
Criticality / Limit	The approach relies on subjective personal experiences, making reflection difficult without guided discussion. Group work may reduce the authenticity of individual experiences while simultaneously enriching comparison and shared learning.

Results, Reflections, and Considerations

The topic of EDI was strengthened in all tested modules in architecture and urban design at STU by using inclusive student-centred methods, such as Universal Design for Learning, multisensory and interactive forms etc. These methods consider different learning and communication styles, abilities and individual differences of students, as well as support of collaborative work and hands-on activities. An important part of EDI teaching are empathetic simulation exercises that can activate students and help them understand the diversity of users in the built environment. Another very useful educational method is the presentation and analysis of examples of good practice with a focus on social inclusion.

An important part of teaching Design for EDI was focused on real-world projects with stakeholder's involvement, especially the municipalities – the Bratislava City Hall in the Universal Design course and the Pezinok City Hall in Design Studio – Public Buildings. Stakeholders participated in presentations and consultations, as well as expert reviewers in the Design Studio. The involvement of expert centres dedicated to EDI issues was also very beneficial, for example collaborating with the European resource centre AccessibleEU and with the Slovak Blind and Partially Sighted Union (UNSS), which is a civic association whose mission is the advocacy of rights and activation of people with visual impairment[5].

Feedback from students was collected via questionnaires to record opinions, areas for improvements, and general comments. The aim was to capture student perceptions, cultural and professional progress, and critical reflections regarding the teaching of EDI-related themes within the EDIDesK project context. The results of the questionnaires demonstrate a broad interest in EDI topics among students, with the majority of students (92%) considering these topics important in architectural education and practice. This shows that there is a growing social and cultural awareness of EDI within the student community and that the modules have successfully translated it into the academic environment.

Students appreciated the opportunity to engage in participatory and interactive methodologies in physical and digital learning environments. They recognised that designing for EDI requires thematic understanding and specific methodological approaches, including inclusive teaching methods. Students identified EDI as an ethical framework and a practical tool with the power to transform the way architects and designers think and work.

At the same time, the testing highlighted several challenges. EDI was still frequently associated with accessibility and with the needs of specific user groups, rather than being understood as a broader design strategy. Direct involvement of different users was sometimes limited by time constraints, large student cohorts, and the availability of teachers with specific EDI expertise. The testing also showed the need for clearer and more consistent assessment criteria, supported by self-assessment, peer feedback, and evidence collected throughout the design process.

Overall, the tested modules offer a transferable pedagogical pattern for Architecture and Urban Design programmes: starting from building empathy by simulation exercises, monitoring and testing existing environments (accessibility, usability, adaptability, safety, etc.), using human-centred approach, participatory and co-design strategies to create inclusive solutions.

The experience suggests a progressive integration of EDI across architectural education: from early awareness-building through empathic and multisensory exercises, to accessibility audits and evaluation of existing environments, and finally to participatory and

co-design activities within increasingly complex studio projects. This progression should be supported by stakeholder engagement and explicit assessment criteria, making EDI competences observable throughout the design process. These findings contribute to the Teaching Framework presented in the following chapter.

Criterion	Evidence across modules	Critical issue	Transferability
Structural inclusion	Real-world tasks and projects on EDI topics, collecting feedback from stakeholders and users.	EDI remained associated with accessibility in most projects, focusing on a small group of users.	Integrate EDI as a design strategy and methodology across different courses and studios.
Assessment alignment	Critical reviews with users/stakeholders, research and project documentation, final presentations made the process observable.	The assessment varied in some groups, sometimes based on individual preferences of teachers and stakeholders/users.	Reduce subjective evaluation (only by one teacher), provide the possibility of self-assessment and peer assessment.
Stakeholder logic	Stakeholder/user engagement through interviews, critical reviews, collaborative design and final discussion.	Collaborative design with different users remained limited due to time constraints and the large number of students.	Strengthen stakeholder/user engagement throughout the whole process, combine peer and expert feedback.
Observability	EDI is evident through inclusive guidelines, access audits, user scenarios, flows and analyses.	Inclusion is sometimes difficult to assess in project proposals without real testing.	Provide clear EDI evidence throughout the design process (audit, checklist, interviews, etc.).
Scalability	Adaptable framework across UG/PG courses with different scales of EDI modules.	Insufficient coverage of EDI issues due to the insufficient number of teachers who are experts in EDI issues.	Implement EDI modules from the beginning of studies and gradually increase the difficulty of assignments.

Table 3.16. Synthesis of the Architecture and Urban Design Experimentation.

3.7 From Teaching Experimentation to Framework Development

Alessia Brischetto

The parallel teaching experimentations presented in this chapter demonstrate that EDI can be integrated into design education through different disciplinary approaches, teaching formats, methods and levels of student involvement. Despite these differences, recurring elements emerged across the five contexts, including the importance of experiential and reflective learning, engagement with diverse users and stakeholders, the integration of EDI throughout the design process and the assessment of both design outcomes and the processes through which they are developed.

The comparison also showed that the value of a shared approach does not lie in standardising teaching practices, but in identifying pedagogical mechanisms that can remain recognisable while being adapted to different disciplines and educational settings. Across the experimentations, EDI became more observable when it was translated into explicit learning objectives, methodological choices, forms of participation, traceable design evidence and moments of reflection and assessment. At the same time, the testing confirmed that these elements need to remain responsive to disciplinary traditions, educational objectives, student levels, available resources and local contexts.

The five disciplinary contexts also revealed different ways of making EDI operational. Depending on the field, inclusion became visible through systemic and territorial relationships, product and production choices, participatory and critical design practices, accessible interaction and hybrid technologies, or spatial and multisensory qualities. These differences reinforce the need for a framework capable of establishing common pedagogical principles without reducing disciplinary specificity. They also show that transferability depends less on reproducing individual teaching activities than on understanding the underlying mechanisms through which EDI is introduced, developed, documented and assessed.

The experimentations therefore provided more than a collection of teaching cases: they generated an empirical basis for understanding which elements can be shared, which require adaptation and which conditions are necessary for EDI to become an explicit, assessable and transferable component of design education. At the same time, the limitations encountered during testing, including differences in student preparation, opportunities for stakeholder involvement, available time, resources and forms of validation, became part of the evidence itself. Rather than weakening the comparison, these situated constraints helped clarify where methodological guidance, progressive scaffolding, documentation and adaptable assessment criteria are particularly necessary.

These findings informed the formalisation of the European Teaching Framework presented in **Chapter 4**, where the lessons emerging from situated teaching practice are translated into a shared and adaptable pedagogical structure intended to support further application across disciplines and contexts. The framework, in turn, provides the basis for **Chapter 5**, which examines its relationship with digital learning environments and resources, and **Chapter 6**, which critically addresses its transferability, assessment and sustainability across different educational contexts. In this progression, the teaching experimentations presented here act as the bridge between the comparative analysis developed in the preceding chapters and the framework, resources and critical reflections that follow.

General note on Chapter 3

This chapter draws on the research, experimentation and outcomes developed within EDIDesK Work Package 3 (WP3), which encompassed the development, testing, assessment and subsequent formalisation of the Teaching Framework on Design for EDI. In particular, it refers to D3.1.1, *Generalized Teaching Framework on Design for EDI*; D3.2.1, *Testing the Teaching Framework on Design Modules*; D3.2.2, *Results of Testing Teaching Framework and Modules*; D3.3.1, *Assessment of Results Produced During Tests with Students*; and D3.4.1, *European Framework on Design Education for EDI*.

The disciplinary experimentations and **Hero Cases** presented in this chapter draw particularly on the institutional documentation developed within the **D3.2.2 series**, which provides the complete descriptions of the tested modules, teaching activities, student outcomes and additional student projects. The Hero Cases included in the chapter therefore constitute a selected representation of the broader body of evidence produced during the WP3 testing phase.

The complete documentation can be accessed through both the project website and the dedicated repository. Available at:
↗ EDIDesK project website – www.edideskproject.com
↗ Book repository – https://drive.google.com/drive/folders/14cizQvxRAHK4iRiII26i4I1pOMGmDUDF

Extended documentation of the teaching experimentations

The Hero Cases presented in this chapter provide a curated selection of the student work developed during the EDIDesK testing phase. The complete documentation of the tested modules, teaching activities and student outcomes is available in the extended institutional booklets:
- D3.2.2.a *"Gabriele d'Annunzio" University of Chieti-Pescara – System Design*
- D3.2.2.b *Academy of Fine Arts and Design in Katowice – Industrial Design*
- D3.2.2.c *Slovak University of Technology in Bratislava – Architecture and Urban Design*
- D3.2.2.d *Elisava Barcelona School of Design and Engineering – Product Design*
- D3.2.2.e *University of Florence – Digital Design*

Pilot participants and institutional credits

The EDIDesK testing phase involved students, teachers, tutors and stakeholders from the partner institutions participating in the pilot activities. The following acknowledgement is organised by institution and module. Student numbers refer to the module-based figures reported in the institutional booklets.

"GABRIELE D'ANNUNZIO" UNIVERSITY OF CHIETI-PESCARA, ITALY
- Innovation Design – Students: Giorgia D'Isidoro; Alessandro Cavaliere; Valeria Novello; Camilla De Gennaro; Mattia Miccoli; Abigail Akosua Sarpong; Aurora De Martino; Kristian Dante Marinucci; Mary Montefiore; Francesco Di Paolo; Marco D'Addario; Martina Picchi; Erika De Pasquale; Alice Ciampoli; Antonio Zuccarini; Nicole Piscicelli; Benedetto Bianco; Samuele Albano. Teacher: Emilio Rossi.
- Media and Experience Design – Students: Andrea Corbo; Sara Pia Bruno; Luca D'Anastasio; Lorenzo Modesti; Mattia Trani; Francesca Berardi; Laura Marcone; Federica Di Bonaventura; Lisa Di Bonaventura; Lorenzo Cipriani; Federica Cannella; Lorenzo Frenna; Erica Lo Giudice; Laura Scutti; Ceren Ozcan; Francesca Pia Vecchione; Naomi Roccalba; Martina Di Tillio; Ludovica Di Marco; Gaia Mastrangelo; Federica Baldacci; Giulia Angelini; Giorgia Costantini; Nausicaa Napolione; Mascia Montemaro; Sara Rega; Erica Ciuffetta; Camilla Campa; Samuele Iannone; Iolanda Farino; Pietro La Torre; Claudia Fuiano; Giordana Facchini; Chiara Meccia; Oana Raluca Teleasa; Martina Omicini; Sara Callegaro; Alisia Monticelli; Mariapia D'Alessandro; Alessia Bianchini; Laura Hoxha; Gioia Palantone; Siria Renni; Valeria Conti; Laura Marcone. Teacher: Raffaella Massacesi.
- Service Design (A) and Strategic Communication (B) – Students: Oumaima Achour; Diego Bomba; Federico Capannolo; Anna Cocuzzi; Stefania Del Biondo; Khawla Gzara; Raffaella Maggi; Eleonora Maisto; Gaia Pia Miele; Mattia Marra; Maria Vargemezi; Ekaterina Varlamova; Enrico Viani. Teacher (A): Alessio D'Onofrio. Teacher (B): Rossana Gaddi. Stakeholder: Comune di Calascio.

ACADEMY OF FINE ARTS AND DESIGN IN KATOWICE, POLAND

- Industrial Design – Students: Alicja Strządała; Mikołaj Jarosz; Nicola Rajda; Agnieszka Szafarczyk; Sławomir Wawrzkiewicz. Teachers: Agata Chmielarz; Joanna Pastusińska. Stakeholder: LUFT.
- UX Research – Students: Paulina Rusinek; Alicja Walczyk; Kinga Zając; Jagoda Pyka; Olga Borowiec; Katarzyna Jojko; Julia Shestopalov. Teacher: Marta Więckowska.
- Form and Meaning – Students: Zofia Gala; Adrianna Makowska; Julia Shestopalov; Łukasz Zygieł. Teacher: Jeremiasz Rzenno.

UNIVERSITY OF FLORENCE, DEPARTMENT OF ARCHITECTURE, ITALY

- Digital Design Laboratory: Digital Design & Informatics for Design – Students: Alessandra Franceschini; Alessia Patrizio; Amira Elhamzawy; Anastasiia Kovalskaia; Angela Lucia; Agiimaa Raashzeveg; Carolina Fioretti; Celeste Mariottini; Clarissa Buono; Clara Callipo; Cristina Di Nunzio; Emanuele D'Acunto; Emma Laurini; Enrico Testoni; Federico Perini; Francesco Fanfani; Francesco Venturi; Giada Arena; Giulia Costa; Giulia Romani; Giulio Baldini; Giusy Telli; Hamza Marcel; Hongtian Wang; Jacopo Fillin; Leonardo Calosi; Leonardo Macchiarini; Li Xiang; Luca Pertici; Maria Gaia Spadaro; Marcello Bembale; Marco Bettucci; Marta Bolognese; Michelle De Paris; Riccardo Dami; Rosa Morinelli; Silvia Lunardon; Simone Giannini; Stefano Petaccia; Victoria Sabba; Virginia Conti; Virginia Piombino; Yihuan Liu; Ying Yang. Teachers: Alessia Brischetto; Francesco Leoncini. Stakeholders and invited experts: Alessandro Guarducci, professional socio-pedagogical educator at Cooperativa Sociale Macramè, Campi Bisenzio, Florence; Ester Iacono, expert in UI/UX design, usability and inclusive design; course instructors, academic tutors, students from other programmes and invited professionals involved in the review and validation activities.

ELISAVA, BARCELONA SCHOOL OF DESIGN AND ENGINEERING, SPAIN

- Final Projects Focused on EDI in Design – Students: Lola Voskens; Laura Subirats Pérez; Júlia Jordana Gras; Laura Pastañé Romero; Mariana Mabi Ferreiro Alvarez. Teacher: Massimo Menichinelli. Tutors: Massimo Menichinelli; Julia Carrasco Parodi. Stakeholder: Julia Carrasco Parodi / Oblicuas Collective.
- Human-Centred Design and Co-design – Participants: Lola Voskens; Laura Subirats Pérez; Alberto Imberti; Claudia Zampella. Teacher: Massimo Menichinelli. Stakeholders / staff involved: Julia Carrasco Parodi / Oblicuas Collective; Rosario Hernández.
- EDI in Design Education – Participants: Lola Voskens; Laura Subirats Pérez; Alberto Imberti; Claudia Zampella. Teacher: Rosario Hernández. Stakeholders / staff involved: Julia Carrasco Parodi / Oblicuas Collective; Massimo Menichinelli.
- Community-Centred Design Workshop – Participants: Lola Voskens; Alberto Imberti; Mariana Maibi Ferreiro Álvarez; Júlia Jordana Gras. Teacher: Massimo Menichinelli. Stakeholder: Julia Carrasco Parodi / Oblicuas Collective.
- (Re)Designing Gender Workshop – Participants: Lola Voskens; Mariana Maibi Ferreiro Álvarez; Ana Isabel Sandoval García; Iratxe Aldasoro Berazierto. Teacher / facilitator: Julia Carrasco Parodi. Stakeholder / staff involved: Rosario Hernández.
- EDI and Digital Tools/Culture – Participants: Mariana Maibi Ferreiro Álvarez; Kamran Yahyazadeh-Noujookambari. Teacher: Iván Paz. Stakeholders/staff involved: Rosario Hernández; Massimo Menichinelli; Julia Carrasco Parodi and Oblicuas Collective.

SLOVAK UNIVERSITY OF TECHNOLOGY IN BRATISLAVA, SLOVAKIA

- Universal Design – Students: 74. Teachers: Zuzana Čerešňová; Natália Bošková Filová; Michal Kacej; Lea Rollová; Lenka Suláková; other teachers involved.
- Design Studio – Public Buildings – Students: 108. Teachers: Lea Rollová; Michal Kacej; other teachers involved.
- Architecture and Environment – Students: 73. Teachers: Henrich Pifko; Klára Macháčová; other teachers involved.

Endnotes

1 LUFT is a social enterprise involved in the ASP Industrial Design experimentation, employing people with disabilities in the production of handmade goods and providing a real-world context for inclusive product development and prototyping. See: LUFT Sklep, https://luft-sklep.pl/. UXStories is the online space used in the ASP UX Research module to publish and communicate student research outcomes. See: UXstori.es from Katowice https://uxstori.es/.

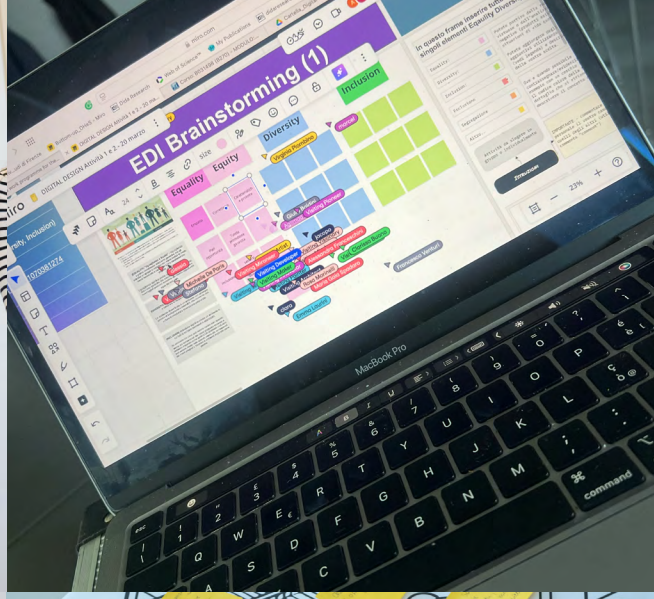
2 Digital resources used during the UNIFI experimentation included collaborative platforms and prototyping technologies such as Miro, Figma, HTML/CSS, Python and Raspberry Pi, together with the Minecraft Hour of Code – Inclusion exercise. These tools supported collaborative analysis, interaction design, technical experimentation and the development of physical-digital prototypes.

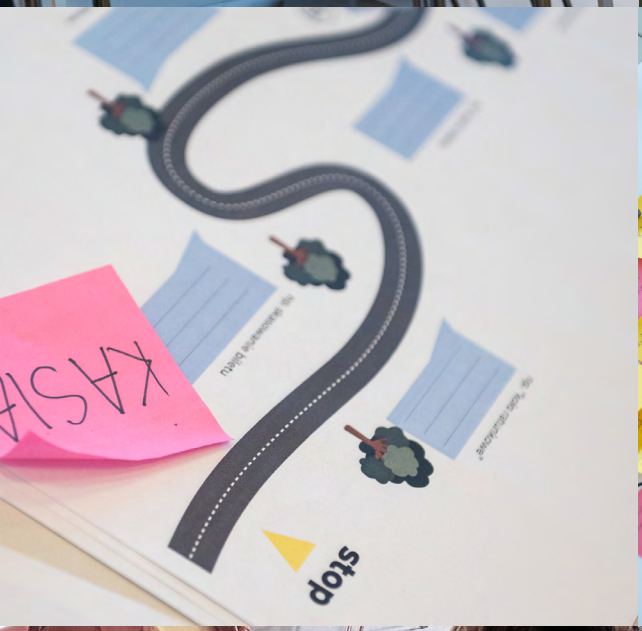
3 SLIDO was used during the STU workshop as a digital tool for interactive questionnaires, enabling students to respond through their mobile devices via QR codes and supporting real-time participation and feedback collection.

4 The Centre for Design for All (CEDA) at the Faculty of Architecture and Design, Slovak University of Technology in Bratislava, provided methodological expertise and materials used in accessibility-related teaching activities, including evaluation checklists and examples of accessibility assessment reports.

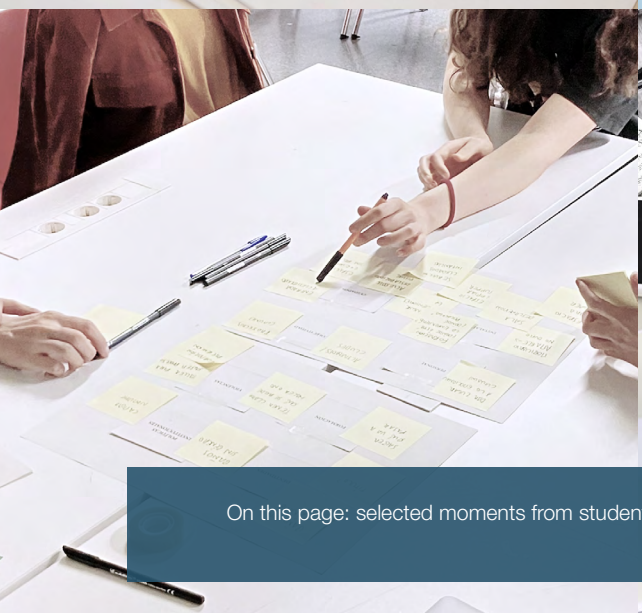
5 External organisations involved in the STU experimentation included AccessibleEU, the European Accessibility Resource Centre, and the Slovak Blind and Partially Sighted Union (UNSS). Their involvement supported the exploration of accessibility, cognitive accessibility and the needs of people with visual impairments within architectural education.

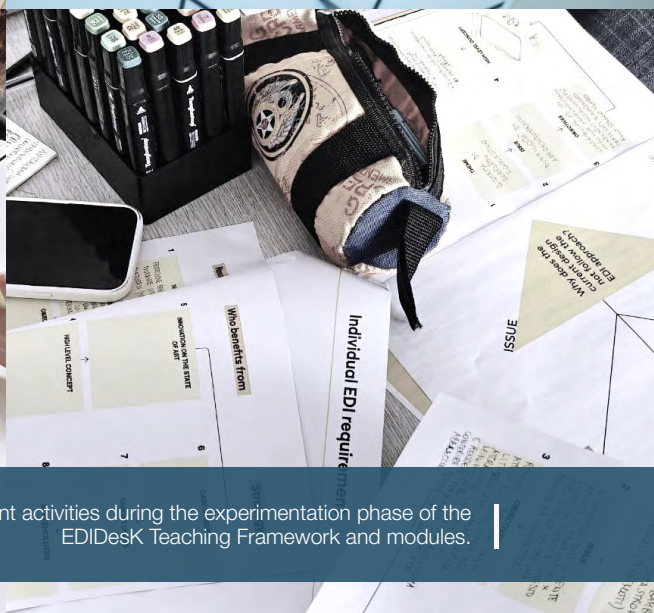












On this page: selected moments from student activities during the experimentation phase of the EDIDesK Teaching Framework and modules.

Documents

Work Packages +

Deliverables +

Scientific Papers +

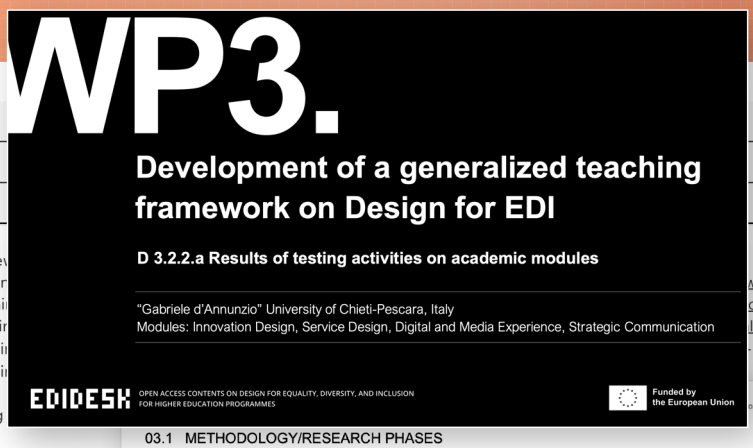
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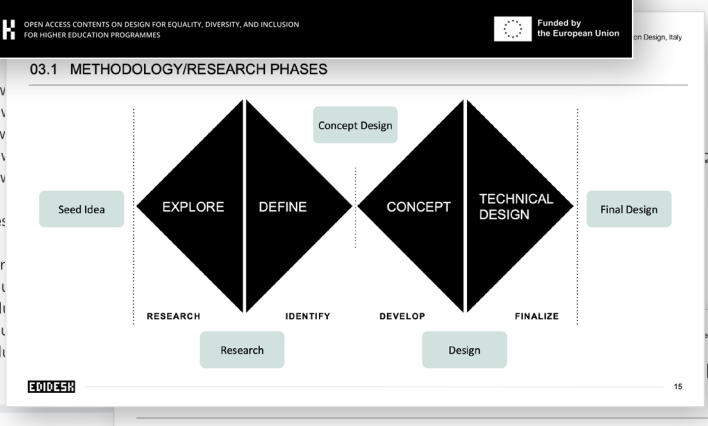
D 3.2.2 Results of testing teaching

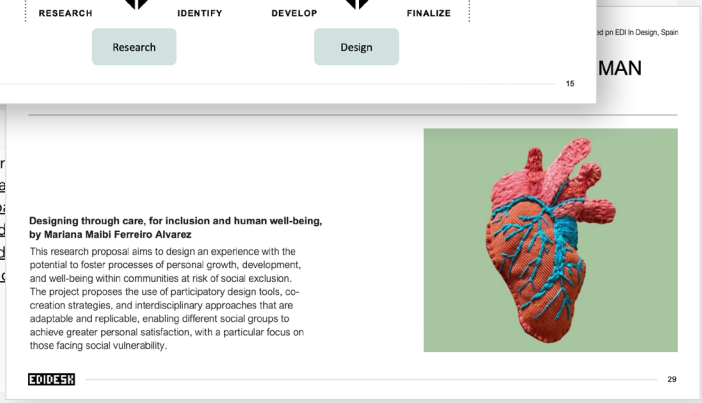
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D 3.4.1. European Framework on Design Educatior
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- D 3.4.1.b - European Framework on Design Edu
- D 3.4.1.c - European Framework on Design Edu
- D 3.4.1.d - European Framework on Design Edu







WP4 Deliverables

D 4.1.1. Design of the Digital Learning Platform: Service Design ar
D 4.2.1. Rules for content creation and sharing | English - downloa
D 4.2.1. Rules for content creation and sharing | Spanish - downloa
D 4.2.1. Rules for content creation and sharing | Italian - download
D 4.2.1. Rules for content creation and sharing | Polish - download
D 4.2.1. Rules for content creation and sharing | Slovak - downloa

(1) (2)

On this page: direct access to Deliverable D3.2.2, ***Results of Testing the Teaching Framework and Modules***, and related booklets via the (1) **EDIDesK project website** ↗ and the (2) **Book repository** ↗.

04

European Teaching Framework on Design for EDI

Edited by Zuzana Čerešňová, Emilio Rossi

With contributions by
Alessia Brischetto, Julia Carrasco Parodi, Zuzana Čerešňová,
Alessio D'Onofrio, Patrycja Rudnicka, Marta Więckowska

4.1 The Benefit of a Multi-Layer European Teaching Framework on Design for Equality, Diversity and Inclusion (EDI)

Zuzana Čerešňová

The European Teaching Framework presented in this chapter builds on the comparative analysis of teaching contents, methodologies, tools, and competences developed in **Chapter 2** and on the parallel teaching experimentations discussed in **Chapter 3** (see General note on Chapter 4). Rather than defining the Framework a priori, these stages made it possible to identify recurring pedagogical conditions, disciplinary specificities, and transferable elements through which EDI can be progressively integrated into Design Education. The Framework therefore represents a process of formalisation: it translates evidence emerging from analysis and teaching experimentation into a shared structure that can be adapted across different design fields, educational levels, and institutional contexts.

Across all disciplines, Design for EDI (Equality, Diversity, and Inclusion) is conceptualised as a human-centred approach grounded in empathy, equity, and ethical responsibility. It seeks to ensure that all individuals – regardless of physical, sensory, cognitive, cultural, or social differences – can fully participate in society and benefit from society. This European Teaching Framework on Design for EDI demonstrates a multi-layer understanding of inclusivity, spanning physical, systemic, social, and digital dimensions of human experience related to the built environment, products, services, communication and information systems.

A central theme across all design fields (system design, industrial design, product design, digital design, architecture and urban design) is the transformation of teaching methodologies from traditional forms, such as instructor-centred models, to experiential form, based on participatory, and reflective student-centred teaching and learning processes. This pedagogical approach includes empathic simulations and on-site surveys, real-world projects, stakeholder collaboration, personalised mentoring, hands-on workshops, user engagement, prototyping and real-user testing.

Core Strategic Pillars of the European Teaching Framework on Design for EDI:

- **Systemic curricular integration:** Inclusive design principles cannot function as isolated elective courses, therefore Design for EDI must be systematically embedded across curricula from introductory courses to advanced design studios and modules for professional practice.
- **Ethical leadership and social responsibility:** The integration of EDI principles emerges as a transformative framework that redefines both the goals and methods of design education and extends the designer's role beyond technical problem-solving toward ethical leadership, social responsibility, and systemic awareness.
- **Real-world societal collaborations:** EDI-centred design education should connect academic projects with real societal needs through collaborations with municipalities, communities, industries, NGOs, and other stakeholders, including participatory and co-design methodologies.
- **Multidisciplinary collaboration:** Complex societal challenges require a synthesis of spatial, human, and engineering sciences to build a comprehensive systemic awareness connecting design, architecture, urban planning, sociology, psychology, neuroscience, and technology.

A multi-layer teaching framework on Design for EDI provides a structured approach to embedding EDI into design education. Rather than treating inclusion as an isolated topic, this approach connects high-level ethical goals with real-world practice, collaborative learning, and technical standards.

The European Teaching Framework on Design for EDI implements strategic elements rooted in human-centric empathy, co-creation, and systemic complexity. Pedagogy shifts from the "average user" toward pluriversal and discursive design, combining ethical responsibility with rigorous technical compliance and participation. These strategic elements of the European Teaching Framework on Design for EDI include:

1. **Human-centricity and empathy-driven methodology.** The foundational premise of the framework requires moving beyond the "average user", which systematically marginalizes diverse human bodies and minds:
   - Utilise empathetic simulation and field observations to help students better understand lived experiences of disability and neurodiversity.
   - Develop contextual empathy and transform the everyday challenges faced by marginalised groups into practical design insights.
2. **Co-creation and shifting power dynamics.** The framework requires a shift from a traditional model of "designing for" the community to a democratic model of "designing with" its members:
   - Emphasising co-design as a tool to redistribute competencies by treating users as co-creators rather than passive subjects, designers mitigate the risk of imposing dominant, globalized standards on local communities (see Pluriversal Design).
3. **Addressing systemic complexity and bias.** Design is recognised as a force that can either maintain or dismantle systemic inequality:
   - Frame EDI as a systemic force, addressing historical injustices and power dynamics, prompting students to analyse how design choices impact social inclusion.
   - Use Discursive Design to challenge gendered norms, androcentrism, and automated oppression, ensuring that technical solutions do not reinforce harmful stereotypes.
4. **Standardised excellence and regulatory compliance.** Innovation is balanced with rigorous adherence to international accessibility standards to ensure universal participation:
   - Integration of human rights conventions and standards ensures that solutions in both the built environment and digital spheres are not just inclusive by intent, but also in compliance with the law and technical requirements.

Key Student Competencies for EDI-Oriented Design

These operational dimensions also connect the Framework with the competence perspective introduced in **Chapter 2**. Rather than defining a separate competence model, they translate knowledge, attitudes, and skills into capabilities that can be progressively developed and observed through design activities.

The strategic framework of the European Teaching Framework on Design for EDI culminates in the definition of key student competencies to bridge soft skills (e.g., empathy,

communication, ethical reasoning) and hard skills (e.g., technical execution, prototyping, digital modelling, and analytical methods), creating well-rounded professionals capable of engaging with both human and technical complexity:

- Empathy and contextual awareness – acquired through direct observation, immersion, and dialogue with users.
- Critical and ethical thinking – the capacity to evaluate the socio-political implications of design decisions.
- Collaborative and co-design skills – engaging diverse users and stakeholders as equal partners.
- Research literacy and methodological adaptability – data collection and the ability to modify standard design procedures when they fail to serve diverse populations.
- Technical and prototyping proficiency – through modelling, testing, and studio iteration.

Structure of the European Teaching Framework on Design for EDI

The European Teaching Framework on Design for EDI is presented in five different design areas and consists of three modules at different EDI levels. These modules are structured to provide students with foundational content about EDI (introductory modules), selected issues related to EDI (intermediate modules), and expert-level content about EDI (advanced modules). The modules are designed to function either as standalone offerings addressing the complexity of design solutions or as an integrated learning pathway. This pathway progresses from introductory understanding of EDI, through the translation of user and stakeholder needs into design criteria and concepts, to advanced interventions in which communities and stakeholders can assume more active roles within the design process.

This three-level structure provides a common progression without imposing identical contents or methods across the five design fields. Each disciplinary framework translates the shared principles according to its own design objects, methods, forms of stakeholder involvement, and modes of assessment. In this way, progression and comparability can coexist with disciplinary and contextual adaptation.

For each design area and level, the Framework is organised through three recurring components:

- Important teaching objectives, which describe the overall purpose or targets of the module.
- Teaching and learning activities, which define important lecture, seminar activities and project-based activities and topics of the module.
- Learning outcomes and assessment, which provide a clear description of the specific knowledge, skills, or attitudes that students should be able to demonstrate after completing the module.

The following sections translate this common architecture into the five disciplinary fields, showing how shared EDI principles can generate different but comparable teaching pathways in System Design, Industrial Design, Product Design, Digital Design, and Architecture and Urban Design. Each field adapts the Framework to its specific methods, scales of intervention, and forms of stakeholder engagement, while maintaining a common structure of objectives, activities, outcomes, and assessment. In this way, disciplinary specificity is preserved within a coherent and transferable pedagogical model.

4.2 Teaching Framework on Design for EDI in the Field of System Design

Alessio D'Onofrio

4.2.1 Philosophy, Topics, Best Practices and Teaching and Learning Outcomes

Philosophy

Rather than being viewed simply as an educational structure, the EDIDesK framework for teaching can be seen as a pedagogical stance that supports embedding of equality, diversity and inclusion (EDI) into systems design curriculum, and encourages students to develop an inclusive lens to analyse and evolve complex service system designs. The EDIDesK approach is in line with both Inclusive Design and Design Justice perspectives on design as a way to challenge structural forms of exclusion, rather than just accommodating diversity (Costanza-Chock, 2020; Holmes, 2018). The importance of this is demonstrated by the fact that Service Design and Product/Service Systems are typically defined by a number of components including products, interfaces, processes, communications, infrastructures, and people interactions. Thus, barriers to participation will seldom result from a single factor but more commonly arise due to cumulative effects of several relatively minor factors such as technology types used, different payment mechanisms available, languages spoken at the service location, accessibility characteristics of buildings used by services providers, social rules that govern how users behave while interacting with the service etc. As Holmes (2018) observes, these "mismatches" form the base elements for exclusion; therefore, inclusivity needs to be treated as a property of the entire service delivery system rather than an afterthought (Aceves-González *et al.*, 2015). The new model builds on an ethic of "designing with" and not "designing for". Ethically and methodologically this requires that students see users/stakeholders as knowledgeable agents and not just as data providers. The use of Design Justice, specifically the principle of "nothing about us without us", demonstrates that users who have been impacted by designs should be actively involved in the design process (Costanza-Chock, 2020). Consequently, there will be encouragement to go beyond the notion of the 'average' user and learn from edge cases and experiences of exclusion (Holmes, 2018).

Topics

The framework offers an incremental progression for learning. Students are first introduced to the Building Blocks of EDI in Systems Design at the introductory level. This includes the distinction between equality, equity, inclusion, unconscious bias, bundled exclusion and the myth of the average user. A particular focus is made on the differentiation between equality and equity with regard to this area as it acknowledges that each individual has a unique need for support in order to have comparable outcomes (Fisk *et al.*, 2018). Over time the students will also be able to find systematic gaps across products, services and communications layers by developing the ability to create inclusive journey maps and edge-case personas.

Intermediate-level education in Service Design is concerned with understanding stakeholders' ecosystems, developing and evaluating a service through feedback loops and service recovery as well as the development of services within "Living Labs" and coordinating across all touchpoints.

Advanced levels include engaging students to develop their ability to conduct participatory action research, demonstrate transformative leadership, apply decolonising

perspectives, conduct community-led design and understand positionality. The above themes reflect the evolution in Service Design from being focused solely on user-centredness toward an approach that will be equity-centred and community-driven, redistributing design agency and recognise situated knowledge (Costanza-Chock, 2020).

Best Practices

Practice as an educator is central to the model. Students need a common language for concepts but they also need to learn from experiences in which exclusion can be seen and debated. Examples include bias audits, comparative case studies, layered service system maps, stakeholder analyses, inclusive journey maps, service failure simulation exercises, touchpoint prototyping and co-designing with stakeholders. These types of experiences enable students to recognise how exclusionary patterns operate within all service systems (Aceves-González *et al.*, 2015).

Both physical and virtual learning environments are capable of facilitating these types of activities, through fieldwork, collaborative boards, digital audits, collaborative platforms and accessibility checks. Within this process, the teacher's role changes from solutions provider to facilitator of reflection, experimentation and learning. A critical consideration for teachers working with marginalised communities is that poorly designed participation can collect community knowledge without redistributing decision-making power (Costanza-Chock, 2020).

Teaching and Learning Outcomes

The expected outcomes combine information, competences and mindsets. Students will have learned how to explain EDI-related terms in System Design as well as identify both intended and structural exclusions. They are to have developed an understanding of the potential obstacles that exist across service systems and a means of creating accessible contact points for users at all stages of the process. In addition to these basic capabilities, students are to have the capability to lead co-design processes, coordinate user ecosystems and design long-term governance structures.

The diversity of the assessment is demonstrated by a number of outputs such as bias audits, inclusive journey maps, touchpoint prototypes, validation reports, systems blueprints, impact statements, partner evaluations and positionality statements. The outputs demonstrate how students are able to shift from evidence to interpretation, then to design action and finally to responsible evaluation. From this perspective, inclusion becomes a design competence that can be systematically learned, practised and assessed, rather than an abstract ethical aspiration (Fisk *et al.*, 2018; Holmes, 2018).

4.2.2 Teaching Framework on Design for EDI for Introductory Modules

Study level

This course is intended for undergraduates who would prefer to take it in their second or third year of study in Service Design, System Design, Product-Service Systems Design, etc. Ideally the students should already be familiar with some basic design methods; user research; product design; and some of the elementary tools for service design. However, as there is no prior requirement for advanced experience in systemic and/or strategic design, the lack of such experience will not hinder a student's ability to complete this course. This introductory module seeks to provide an initial understanding of the key principles of equality, diversity and inclusion (EDI) in designing for service and

system-based solutions. To achieve this goal at this entry-point into the field, the focus is not on developing the complexities of full-service ecosystems. Instead, the primary aim of this module is to empower students to become aware of how services may include/exclude various types of users via: the individual service elements (touchpoints); the communication layers between these elements; the protocols used between them; and the way that both physical and digital interactions influence accessibility across all of the above. To develop the foundational awareness of EDI concepts described above, the module utilises case studies; facilitated group discussions; systemic gap analysis techniques; stakeholder mapping; and early-stage inclusive journey-mapping. As part of the process, students are encouraged to begin questioning the common belief of "the average user" and recognise patterns of bundled exclusions which exist in current services. They also learn about how unintentionally biased services can result from service procedure designs, digital interface designs, product designs and communication system designs which do not consider diverse needs and context.

Learning Objectives

1. Distinguish between Equality, Diversity, and Inclusion within the System Design architecture.
2. Identify “bundled exclusion” and “unintentional bias” in existing large-scale public and private systems.
3. Execute a systemic gap analysis to map structural barriers across product, service, and communication layers.
4. Construct complex edge-case personas and inclusive journey maps that move beyond the “average user” myth.
5. Apply EDI principles to specific system touchpoints, ensuring they are situated and context-aware.

Lessons	Topics / Lectures	Activities / Assignments
EDI Foundations and Systemic Exclusion	Equality, equity, diversity and inclusion as principles for service and system design; Introduction to systemic exclusion, bundled exclusion and unintentional bias in large-scale public and private services.	• Guided analysis of inclusive and non-inclusive service examples. • Bias hunt audit of a selected service system. • Comparative critique of two service offerings. • Short reflection on systemic bias and the myth of the “average user”.
Systemic Gap Analysis and Mapping	Service systems as layered architectures composed of product, service and communication components, identification of EDI gaps across physical, digital and organisational touchpoints.	• Layered system gap map. • Mapping of exclusion points across products, protocols and communication layers. • Bright Spot Identification. • Visual synthesis of structural barriers and possible inclusive opportunities.

Situated Design and Inclusive Personas	Inclusion as situated and context-dependent; Stakeholder ecosystems, marginalised actors, edge-case users, neurodiversity, cognitive load and diverse socio-economic conditions.	• Stakeholder mapping with an EDI focus. • Development of edge-case personas. • Motivation matrix for barriers, needs and drivers. • Discussion of assumptions, stereotypes and overlooked users within a service ecosystem.
Inclusive Journey and Touchpoint Mapping	Inclusive journey mapping and touchpoint design; Synchronisation of physical, digital and human service interactions; Service recovery and context-based design constraints and touchpoints adaptation to diverse socio-economic realities.	• Inclusive Journey Mapping (Analysis/Design). • "Service Recovery", Designing for error when the system fails diverse users. • Polarity Diagramming: Stress-testing the system design against EDI requirements using polarity metrics. • Touchpoint Prototyping: Rapid physical or digital modelling of at least one system module optimised for diversity.

Table 4.1. Teaching Framework on Design for EDI (System Design, Introductory Module).

Expected Learning Outcomes and Assessment

By the time they finish the introduction, students should have demonstrated a rudimentary understanding of what is meant by EDI, how it relates to service- and systems-oriented design, and where exclusionary mechanisms may occur within current service ecosystems. They should also understand how all the layers of a system – products, services, digital interfaces, communications protocols, and organisational processes – can create obstacles for various user groups. Students should be able to use foundational tools, including systemic bias audits, layered service gap maps, stakeholder motivation matrices, edge-case personas, and inclusive journey maps, to support the development of their thinking.

Students will likely participate in group discussions, complete a short reflective paper, develop a systemic bias audit report, produce a layered service gap map and an edge-case persona portfolio, and propose a low-fidelity inclusive redesign of one or more service points. The focus is on developing awareness of systemic biases, critical observational skills, ethics-based decision-making, and the ability to translate initial EDI-related insights into service design criteria.

Formative assessments could include peer-to-peer evaluation and feedback, rapid studio critiques, stop-start-continue evaluation tools, and self-assessments or checklists related to the formative work and/or specific aspects of the process. Summative assessments would evaluate whether the student has developed a coherent, inclusive service journey through which users move, whether they can clearly articulate their EDI-related findings, and the quality of their proposed redesigned touchpoints.

4.2.3 Teaching Framework on Design for EDI for Intermediate Modules

Study level

This course is designed for advanced undergraduates and graduate students. Students are expected to be in their final year of an undergraduate program, or in their first year of a graduate program in Service Design, System Design, Product-Service System Design, Strategic Design, etc. Students should have basic knowledge of product design, service design, communication design; and an introductory experience in conducting user research, creating journey maps, identifying stakeholders and developing prototypes. This intermediate course will build upon previous learning experiences by reinforcing EDI as an operating principle throughout service and systems-based design practices. In addition to working with real world constraints, student participants will learn about the dynamics of stakeholder ecosystems and how to create participatory environments. By focusing on the ability to identify systemic feedback loops, synchronise product/service/communication layers, and empirically validate inclusive design hypotheses via interactions with users, community members, and external partners; this course will also provide students with foundational skills and perspectives that can inform future practice as designers. From a Service Design perspective specific attention will be paid to service learning, co-design methods, living labs methodology, service recovery strategies, governance models, and sustaining viable systems over time.

Learning Objectives

1. Analyse and dismantle systemic feedback loops that reinforce social barriers within a designed system.
2. Synchronise product, service, and communication layers to provide an equitable experience for "extreme users" under real-world partner constraints.
3. Facilitate professional co-design sessions with marginalised stakeholders to bridge the gap between theory and systemic impact.
4. Manage complex stakeholder ecosystems, balancing design ideals with legal, economic, and political realities.
5. Validate system viability through empirical "Living Lab" methodologies, producing evidence-based design iterations.
6. Develop long-term governance models that ensure the inclusive system remains inclusive throughout its entire lifecycle.

Lessons	Topics / Lectures	Activities / Assignments
Strategic Management and The Ethics of Partnership	The reciprocal nature of service-learning; Ethical partnership and collaborations between internal or external organisations; potential barriers to service-learning (e.g., legal, financial, political); Ways in which inequities and biases can be present throughout the design process when it comes to collaborative service-learning projects.	• Stakeholder ecosystem mapping. • Community resource map. • Partner constraint audit. • Semi-structured interviews with marginalised actors. • Reflection on expert bias and negotiated design.

Systemic Feedback Loops and Pillar Synchronisation	Feedback mechanisms in service systems that create cycles of exclusion; Synchronisation across the product/service layer(s) and communication layer(s); Silent data and silent voices within service systems; How different groups may experience service failures and recoveries differently.	• Service failure simulation. • Co-design synthesis blueprint. • Mapping of missing voices and overlooked data. • Translation of stakeholder needs into functional requirements. • Design of inclusive service recovery protocols.
Living Lab Methodologies and Policy-Driven Validation	Validation of real world service systems; Safety, consent, and ethics in using Living Labs; distinguishing between validation and tokenism; How service systems align with local policy objectives and social impact initiatives.	• Living Lab testing sessions. • Validation and iteration log-book. • Impact statement co-evaluated with partners. • Documentation of assumption-versus-reality evidence. • Social value and impact metrics definition.
Advanced Blueprinting and Systemic Governance	Blueprinting services to include multiple stakeholders and support layers; How to ensure long-term governance, ongoing maintenance and community engagement/ ownership; Knowledge sharing; Creating accessible user guides/ manuals/hand over processes.	• Final partnered system blueprint. • Governance and handover plan. • Peer-to-peer blueprint audit. • Development of training toolkits or inclusive manuals. • Summative presentation and partner pitch.

Table 4.2. Teaching Framework on Design for EDI (System Design, Intermediate Module).

Expected Learning Outcomes and Assessment

By the time students complete the intermediate module, they will have demonstrated their ability to integrate EDI principles into complex service systems within a real project environment. In addition, students should be able to identify barriers created by service delivery processes or organisational policies, translate user and stakeholder needs into practical design specifications, analyse feedback loops within the system, and synthesise product, service, and communication components into cohesive service-system designs while considering constraints from partners and input from stakeholders and community members. At this level, particular attention is given to the ability to connect research evidence with design decisions and to revise proposals in response to stakeholder feedback and emerging project constraints. Students are therefore expected to document how EDI-related considerations evolve throughout the design process rather than addressing them only in the final solution.

Examples of assessments may include a community resource map, stakeholder audit report, co-design synthesis blueprint, service failure log, validation & iteration log book, partnered system blueprint, and/or governance handover plan. Assessment weightings could emphasise the participatory process and collaboration with stakeholders, the student's capacity to manage external factors and constraints, the alignment between research findings and design decisions, and the feasibility of operationally viable inclusive service systems. The assessment should therefore make visible both the quality of the proposed system and the reasoning through which inclusive criteria have been negotiated, tested, and progressively refined.

Possible formative assessments include peer-to-peer blueprint audits, critical feedback canvases, workshop facilitation reflections, missing voice surveys and partner pulse checks. Possible summative assessments include the final system design portfolio, an impact statement co-evaluated by an external partner, the quality of the final service blueprint and the clarity of the final pitch to partners.

In this way, the module assesses not only the design solution, but also the student's ability to act as a responsible service designer capable of negotiating complexity, power dynamics, and long-term social impact.

4.2.4 Teaching Framework on Design for EDI for Advanced Modules

Study level

This module is recommended for postgraduates who are preferably in the first or second year of a master programme that includes areas such as: Service Design, System Design, strategic design, Product-Service System Design and other related fields. It would be advantageous if students have advanced preliminary education in Service Design and System Design. Additionally, prior knowledge in participatory research, co-design, stakeholder engagement, service blueprinting, and methods of systemic design will also benefit the student.

By the time you reach the advanced module, EDI is intended to be at the heart of your development into a transformative service/system design practitioner. This means that, by the time you have completed the advanced module, you will be able to develop and implement the complex designs necessary to empower marginalised populations through their role as co-designers/co-architects of change.

This module will focus on Transformative system leadership, Participatory Action Research (PAR), decolonial design theory, advocacy, positionality and policy-oriented design outcomes. In terms of Service Design, the module views services as socio-technical/political systems and thus as either being able to reproduce or dismantle structural inequality. Therefore, students are encouraged to go beyond designing "for", to designing "with", and to create radical service-system design models that support social justice, community ownership and long-term systemic change.

Learning Objectives

1. Promote transformative system leadership by facilitating design cycles where marginalised communities act as lead architects.
2. Design inclusive system models that aim to dismantle structural inequality as their primary functional goal.
3. Apply decolonial design theory to challenge and redesign western-centric models.
4. Execute Participatory Action Research (PAR) as a radical process for co-creation in underserved communities.
5. Critically reflect on personal social positioning and biases through the development of a positionality statement.
6. Translate radical design outcomes into policy recommendations to advocate for legislative or systemic change.

Lessons	Topics / Lectures	Activities / Assignments
Radical Inclusion and PAR Theory	Designers that use participatory action research (PAR) in their practice are able to facilitate design transformation through radical inclusivity, social justice movements, and creating community led service systems, while eliminating structural barriers. They should recognise power dynamics and support shared decision-making.	• Community-led design cycle. • Initial immersion and trust-building with marginalised lead designers. • Definition of systemic equity metrics and social justice KPIs. • Initial community charter. • Intersectional failure analysis of current structural barriers. • Power and positionality mapping to identify roles and imbalances.
Transformative Leadership and Advocacy	In this way, designers can be advocates and mediators, instead of experts, in the creation of advocacy through design for systematic change. Design is also an opportunity for designers to create strategic communication plans and develop frameworks for power shifting and self correction to help eliminate the inherent bias within existing systems.	• System advocacy pitch. • Multi-dimensional EDI audit. • Stress-testing against intersectional failure points. • Self-correction framework for bias mitigation. • Reflection on power dynamics in radical co-design processes.
Designing Radical Paradigms	Designers can create new systemic models, such as community owned, non monetary, or alternative service systems. The designers can coordinate across product layers, service layers, and communication layers as tools for social justice.	• High-fidelity system blueprinting. • Mapping of radical service-system architecture. • Long-term impact roadmap. • Scenario development for 5-10 year systemic evolution. • Master System Design Portfolio focused on EDI as the core architectural goal.
Ethics, Positionality, and Policy	Using critical positionality, designers have ethical responsibilities toward their communities. Designers must obtain public validation on their design evidence. In addition to providing design evidence that shows how they were able to apply PAR principles, designers may provide policy recommendations, legislative ideas, and advocacy documents based on the design evidence.	• Positionality Statement development workshop. • Public exhibition or community sharing session. • Policy memo writing. • Final community-led validation. • Summative presentation with community members and experts.

Table 4.3. Teaching Framework on Design for EDI (System Design, Advanced Module).

Expected Learning Outcomes and Assessment

Students will have developed the capacity to lead a transformative service and/or systems design process in which EDI is central, rather than an additional criterion, and marginalised groups actively participate as co-designers. They will be able to identify systemic "success" using measures of social justice and develop service-system models that address structural barriers rather than individual deficits. Students will also be able to reflect on how their positionalities affect collaborative design processes, mediate power dynamics within community-led processes, and create design outputs that can be translated into policy- and advocacy-based recommendations.

The assessment will focus on whether the proposed service system can ensure meaningful community involvement, whether its development process is ethically defensible, whether design authority is fairly distributed among different stakeholders, and whether social justice goals, service-system structure, and policy implications are coherently integrated. It should also consider the system's capacity to sustain inclusive and socially responsible outcomes over time.

The formative assessments in the advanced module may include community dialogue circles, power-check surveys, intersectional stress tests, peer-to-peer positionality review, and/or a short policy elevator pitch. The summative assessments are expected to consist of the master system design portfolio, critical positionality statement, policy recommendation memo and final community-led presentation/exhibition. In this way, the module assesses not only the maturity of students' design proposals, but also their capacity to act as reflective, responsible and transformative service designers, connecting design research with community agency and systemic transformation.

4.3 Teaching Framework on Design for EDI in the Field of Industrial Design

Patrycja Rudnicka, Marta Więckowska

4.3.1 Philosophy, Topics, Best Practices and Teaching and Learning Outcomes

Philosophy

The Framework on Design for EDI in Industrial Design is structured around three modules of increasing complexity: the introductory module, Understanding Users: EDI Basics in Industrial Design; the intermediate module, EDI-Driven Industrial Design; and the advanced module, Advanced Industrial Design for EDI: Leadership, Strategy & Advocacy. This structure creates a progressive educational path in which students first build awareness of EDI, then learn to apply it throughout the design process, and finally develop their own strategic approaches to inclusive professional practice. The framework develops soft and critical competences alongside prototyping and craft-based skills, which remain central to industrial design education. As students engage more deeply with diverse users, the learning process also addresses the emotional and ethical aspects of this work. This helps them build resilience and maintain a professional yet caring stance. For this reason, practical classes are a core element of the framework, while lectures and seminars support them by introducing key EDI concepts, examples, and theoretical perspectives. By combining practical experimentation with critical reflection, students learn to use methods not only as tools for producing design outcomes, but also as a way to expand their understanding, and transform their own ways of knowing and acting as designers (Frascara *et al.*, 2023). As a result, they also develop transferable

competences for assessing new design challenges and anticipating their possible social, ethical, and environmental implications. This is especially important today, as design education is increasingly expected to respond to sustainability, diversity, inclusion, emerging technologies, and the wider consequences of design decisions (Frascara *et al.*, 2023; Cain & Pino, 2023).

Topics

At the introductory level, students develop an understanding of basic EDI concepts and learn to recognise how exclusion may appear in product design. They analyse everyday products to identify who is included, who may be excluded, and why, for example children, older adults, or people with disabilities. In this way, they learn through practice what accessibility, usability, safety, legibility, and ergonomics mean in industrial design. At this stage, the main competency is the ability to notice exclusion, describe it, and relate it to specific design decisions.

At the intermediate level, students learn to apply EDI as an explicit design criterion. They conduct the design process using ethical research methods, user context analysis, and stakeholder consultation to make the user experience more accessible, responsive, and equitable. At this level, prototyping and testing become tools for verifying assumptions and refining design proposals. This approach is supported by the understanding that design methods are not neutral tools, but should be selected and used critically in relation to context, values, evidence, bias, and intended impact (Frascara *et al.*, 2023; Gray, 2022).

At the advanced level, students develop strategic, reflective, and leadership-oriented competences. They plan and conduct complex research including field research, meaningful and engaging participatory co-design sessions, stakeholder dialogue, tests in real-life settings – by that build reflection on ethics, social responsibility, re-definition of innovation, and business value in design. Students learn to question stereotypes, challenge existing norms, and understand design as a socially and politically situated practice. This is consistent with approaches that position design as relational, culturally situated, and shaped by power domain (Noel *et al.*, 2023).

Best Practices

Developing these competences requires a learning environment based on real problems, direct engagement with stakeholders, and responsibility for project outcomes. For this reason, cooperation with external partners, field studies, and testing in realistic contexts are essential elements of the framework. These activities allow students to confront their assumptions, verify ideas with people who may be affected by the solution, and understand the complexity of inclusive design practice. Community engagement in design education is particularly important because it shifts the role of designers from experts to facilitators and supports mutual learning, respect for community knowledge, and more responsible forms of participation (Montt-Blanchard *et al.*, 2023).

The process is strongly based on prototyping and testing as prototypes, models, scenarios, and other “design things” can support both exploration and dialogue, allowing design research to move between understanding, making, and evaluating possible futures (Koskinen *et al.*, 2011). The type of prototype is selected according to the learning level, the project aim, and the research hypothesis. It may include 1:1 physical models, low- or high-fidelity prototypes, service blueprints, customer journeys, business model canvases, interaction scenarios, or communication materials. These prototypes are used

to test ideas with users, consult stakeholders, reveal barriers, and improve communication between the different groups involved in the project.

Within the teaching model, teachers act primarily as mentors who guide students through the design process, support decision-making, and help them understand which competences they are developing at each stage. Since many classes are based on hands-on work, teachers can continuously monitor progress, provide feedback on specific aspects of the project, and help students move their work forward. In this way, assessment becomes part of the learning process itself. Peer-to-peer feedback also plays an important role, as it helps students compare perspectives, explain their decisions, and learn from one another. Together with teacher mentoring, it creates a learning environment based on experimentation, uncertainty, failure, and critical reflection. This process is also supported by feedback from external partners and users, which helps students understand perspectives beyond the academic context and challenge their assumptions. The created atmosphere supports the idea of the module as a shared learning journey, where students gradually build confidence, responsibility, and awareness of the social meaning of their design decisions. In this way, the final evaluation at the end of the semester becomes not only an assessment of the completed project, but also a summary and culmination of the entire learning process.

Teaching and Learning Outcomes

At the introductory level, assessment focuses on the ability to identify exclusion and understand basic EDI concepts, including their connection with accessibility, usability, safety, and sustainability. At the intermediate level, it considers how effectively students translate research into inclusive and sustainable design criteria, prototypes, and tested improvements. At the advanced level, assessment also considers how well students engage with stakeholders, respond to feedback from users, reflect critically on their decisions, and connect EDI with sustainability as an important dimension of responsible industrial design.

In summary, empirical experience remains central to the framework, as interpersonal skills, collaboration, negotiation, and sensitivity to diverse user needs can only be fully developed through direct engagement with people and real design challenges. Overall, the framework creates a learning journey in which students, teachers, peers, users, and external partners can share perspectives, inspire one another, and support the development of more inclusive and socially responsible design practice.

4.3.2 Teaching Framework on Design for EDI for Introductory Modules

Study level

The module is recommended for undergraduate students, preferably in the first or second year of a Bachelor programme in Industrial Design, Design Engineering, or related fields. Students should have preliminary knowledge of basic design methods, visual communication, and simple prototyping. No advanced technical skills are required.

The module Understanding Users: EDI Basics in Industrial Design introduces students to equality, diversity, and inclusion as essential dimensions of responsible design practice. It focuses on the idea that designed products are never neutral: they can support access, comfort, safety, and participation, but they can also exclude users when their diverse needs are not considered. As an introductory module, it builds the foundation for further work with inclusive design criteria, user research, prototyping, and testing.

Learning Objectives

1. Recognise that designed products can both include and exclude different groups of users.
2. Explain basic EDI concepts in the context of industrial design (accessibility, legibility, ergonomics, safety).
3. Conduct simple analyses of everyday products focused on accessibility, legibility, ergonomics and safety for diverse users.
4. Reflect on their own assumptions about the "normal" user and how these assumptions affect design decisions.
5. Communicate the results of their analyses visually and verbally (short report, poster or presentation).

Lessons	Topics / Lectures	Activities / Assignments
Understanding User Context	Introduction to key concepts of equality, diversity, and inclusion in design, using examples of products that include or exclude different user groups.	• Seminar: EDI in Design – presentation and guided discussion. • Practical classes: the analysis of the case studies and confrontation with the initial perspectives.
User Diversity and Context of Use – case studies	EDI-based analysis of everyday objects, focused on accessibility, legibility, ergonomics, safety, and identifying who may be excluded by the design.	• Seminar: introduction to inclusive research methods (e.g. observation, interviews). • Practical classes: the analysis of selected products; conducting simple user testing; mapping "user journey" to reveal the exclusion; short in-class presentations.
Communicating EDI	Visualisation tools and presentation methods for communicating product analysis, user exclusion, and key EDI dimensions such as accessibility, legibility, ergonomics, and safety.	• Seminar: guided discussion about preparing an effective presentation, with examples. • Practical classes: development of short reports or presentations; public presentations with teacher and peer feedback focused on the clarity of arguments and improvements.
Redesigning a simple product for a specific overlooked user group	EDI as an explicit part of industrial design briefs, with a focus on overlooked user groups, barriers in product use. The role of conceptualisation, visualisation, and tangible prototyping in developing more accessible and inclusive solutions.	• Practical classes and assignment: EDI-focused redesign process based on a design brief, including product analysis, definition of design criteria, concept visualisation, tangible prototyping, informal testing, iteration, presentation, feedback, and reflection on design impact and inclusion.

Table 4.4. Teaching Framework on Design for EDI (Industrial Design, Introductory Module).

Expected Learning Outcomes and Assessment

Assessment in this module is closely connected with the learning process and is designed to show how students gradually build their understanding of EDI in industrial design. Through case study analysis and a simple redesign project, students demonstrate that they can recognise how physical products and systems may include or exclude different users, and explain these issues through basic EDI concepts such as accessibility, legibility, ergonomics for diverse bodies, and safety for all users.

The assessments also verifies how effectively students translate this understanding into design practice. In the redesign task, students are expected to treat EDI as an explicit design criterion, connected with function, aesthetics, and sustainability. Teacher and peer-to-peer feedback are focused on the clarity of the analysis, the relevance of the EDI-oriented criteria, and the extent to which the redesigned solution shows visible improvements in accessibility and inclusion.

This module is also an important first step in broadening students' design perspective. It encourages them to move beyond their own assumptions and experiences, and to consider how different users may perceive, access, and use the same product in different ways.

4.3.3 Teaching Framework on Design for EDI for Intermediate Modules

Study level

The module is recommended for undergraduate students, preferably in the second or third year of a Bachelor programme in Industrial Design, Product Design, Design Engineering, or related fields. Students should have prior experience with basic design methods, user research, visual communication, and prototyping.

The module EDI-Driven Industrial Design moves students from recognising exclusion to actively using EDI as a design driver. Students work with real user contexts, ethical research methods, and stakeholder input to formulate design assumptions, define inclusive criteria, and develop prototypes suitable for testing. At this level, they learn to connect user insights with sustainability and social impact, while understanding how design decisions are shaped by context, responsibility, and power relations. It prepares them for more advanced work with participatory processes, stakeholder dialogue, and strategic EDI-oriented design practice.

Learning Objectives

1. Perceive EDI as a regular, expected lens in design work and systematically consider user diversity and real-life context in industrial design projects and translate observations into clear user needs and design insights.
2. Conduct ethical and inclusive research to formulate design problems and design assumptions.
3. Develop product solutions to a prototype stage suitable for testing.
4. Include external partners and stakeholders in the design process.
5. Reflect broader on how EDI is linked to sustainability, politics, and power in specific project contexts.

Lessons	Topics / Lectures	Activities / Assignments
Understanding User Context	EDI as a standard lens in industrial design, with a focus on understanding users in their everyday contexts. Observation as a basis for identifying barriers, needs, opportunities, and design assumptions.	• Seminar: guided discussion and exercises introducing the key issues of the lesson. • Practical classes and assignment: short contextual observation for selected domain, with focus on specific users, and barriers.
Ethical & Inclusive Research Methods	Ethical and inclusive research methods, with focus on bias recognition; Research questions and assumptions revision; Engaging with users respectfully as partners not as objects of study (e.g. formal requirements, respectful language).	• Seminar: guided discussion and exercises introducing the key issues of the lesson; consultation with external partners to align the research focus with their needs. • Practical classes and assignment: (1) reformulating initial observations into research questions focused on diverse users; (2) planning research scenarios.
Prototyping for Inclusion	Prototyping as a learning and dialogue tool in inclusive industrial design – how testing prototypes with diverse users helps reveal barriers, needs, and opportunities for more inclusive solutions.	• Seminar: guided discussion on how prototypes can be used to uncover barriers and negotiate changes with users. • Practical classes and assignment: (1) concept generation and low-fidelity prototyping; (2) informal and target-user testing, (3) collecting insights, and refining the prototype.
Involvement of an External Partner & Refining Solutions	Refinement of concepts and prototypes into coherent design solutions, with attention to broader context, sustainability, and stakeholder perspectives. Negotiation of design decisions, articulation of social value, and reflection on responsibility, norms, and power relations in design.	• Workshop: Participatory Co-design & Stakeholder Dialogue – a session with an external partner prepared by students with prioritizing features, commenting on prototypes, and building broader context for the design. • Practical classes and assignment: adjusting the design assumption and refining the solutions to address EDI issues in the broader context (e.g. social context, technology, regulation, sustainability). • Seminar: guided reflection on norms, power relations, and the role of design in shaping more inclusive futures.

Table 4.5. Teaching Framework on Design for EDI (Industrial Design, Intermediate Module).

Expected Learning Outcomes and Assessment

In the advanced project, students act as managers of a complex design process. They plan and coordinate research, design, and prototyping activities, while deciding who should be involved, at which stage, and in what role, including users, external partners, stakeholders, and other specialists. Assessment focuses on how effectively they organise collaboration, communicate with different groups, negotiate needs and expectations, and translate diverse perspectives into coherent design decisions. In this way, the module develops not only strategic and research competences, but also soft skills such as communication, facilitation, empathy, responsibility, and leadership.

Feedback is provided in a structured form by teachers and peers, supporting both individual learning and the engagement of the whole group. This helps create a supportive learning environment in which students can observe how others approach the design process, compare different strategies, learn from one another, and build confidence through shared reflection.

After completing the module, students gain a deeper understanding of the complexity of EDI issues in design practice. They are able to map contexts and stakeholders, and they recognise that inclusive solutions require the engagement of non-designers. The analytical process becomes more complex at this level and requires both discipline and the ability to see the broader context while paying attention to important details.

4.3.4 Teaching Framework on Design for EDI for Advanced Modules

Study level

The module is recommended for Master's students, preferably in the second year of a postgraduate programme in Industrial Design, Product Design, Design Engineering, or related fields. Students should have prior experience with design research, prototyping, user-centred or participatory methods, and EDI principles.

The module Advanced Industrial Design for EDI: Leadership, Strategy & Advocacy introduces EDI both as a design framework, including methods, criteria, and tools, and as a learning strategy based on openness, reflexivity, and responsibility. At this level, students learn to connect social impact with business value and to create frameworks for implementation. This makes them more aware of the wider project context, supports the development of their professional identity, and prepares them to advocate for EDI values in real-context projects.

Learning Objectives

1. Develop and articulate a strong professional identity as socially responsible designers, linking EDI to ethics, innovation and business value.
2. Plan and conduct a design process focused on research and prototyping for diverse users in complex social contexts.
3. Understand and use EDI both as a design framework (methods, criteria, tools) and as a learning strategy (openness, reflexivity, responsibility).
4. Integrate social impact and business models into coherent design projects and position EDI as a business strategy.
5. Critically question assumptions, norms, and biases in design practice, and develop advocacy activities that promote EDI values.

Lessons	Topics / Lectures	Activities / Assignments
Contextual Empathy Design Practice	EDI as the central subject of the design process, linking social responsibility, ethics, and innovation with deep user engagement, fieldwork, observation, and the translation of complex everyday situations into design insights.	• Seminar: guided discussion on ethics, emotions, and maintaining a professional yet caring stance in participatory processes. • Practical classes and assignment: (1) conducting fieldwork, collecting stories, and moments of exclusion or inclusion; (2) translating raw observations into e.g. user profiles, needs and insight clusters. • Seminar: case studies analysis through EDI lens as framework for social change and business strategy.
Complex Ethical & Inclusive Research Methods	Advanced ethical and inclusive research methods, focused on bias, power relations, responsibility, and respectful user engagement. EDI as both a methodological framework and a reflective learning strategy based on autonomy, care, and critical reflection.	• Seminar: guided discussion on ethical and inclusive research methods, including consent, confidentiality, vulnerable groups, and power relations. • Practical classes and assignment: developing research strategies, including ethical protocols and plans for iterative user engagement. • Seminar: guided discussion on openness and responsibility in the research process.
Prototypes as Tools for Inclusion	Iterative design process in which prototyping and co-creation go beyond identifying barriers to negotiate change and challenge assumptions. Discursive and speculative design further support the exploration of more equitable futures.	• Seminar: guided discussion on prototypes as tools for Inclusion and learning strategy (discursive design). • Practical classes and assignment: developing design insights through iterative prototyping and co-creation methods as part of the research strategy.
Participatory Co-design, EDI as Business Strategy & Professional Identity	Participatory design processes and multi-stakeholder dialogue, focused on refining prototypes with communities, NGOs, or other partners. EDI as a driver of innovation, business value, and social impact. Professional identity and advocacy in design projects.	• Practical classes and assignment: participatory co-design and stakeholder dialogue focused on shared decisions, priorities, and implementation paths. • Seminar and practical classes: EDI as a business strategy, including market opportunities, policy and regulation alignment, and business models with social impact. • Seminar: professional identity, advocacy, and communication strategies for implementing EDI values. • Practical classes: project refinement focused on aligning social impact and business models.

Table 4.6. Teaching Framework on Design for EDI (Industrial Design, Advanced Module).

Expected Learning Outcomes and Assessment

Assessment is based on a structured EDI competency framework, which clearly communicates which skills are developed at each stage of the module. It combines continuous, process-based assessment across the full design cycle with summative evaluation at key milestones. Feedback focuses on the quality of research, the relevance of design decisions, the maturity of prototyping, the integration of social and business value, and the ability to create advocacy activities that promote EDI values.

After completing the module, students gain a deeper understanding of design as a practice of social responsibility, ethics, and innovation. They are able to work with complex contexts, involve diverse users and stakeholders, and translate EDI values into coherent design strategies, prototypes, and communication. At this level, students not only respond to inclusion-related challenges, but also learn to actively advocate for more equitable and responsible design practice.

4.4 Teaching Framework on Design for EDI in the Field of Product Design

Julia Carrasco Parodi

4.4.1 Philosophy, Topics, Best Practices and Teaching and Learning Outcomes

Philosophy

The teaching framework for Design for EDI in the field of Product Design is based on the understanding that designed artefacts, products, systems and services are not neutral objects (Winner, 1980; Ehrnberger *et al.*, 2012; Costanza-Chock, 2020). Product design actively shapes everyday experiences, influences access and participation, and contributes to the distribution of opportunities, resources and power within society. Products can either reinforce existing inequalities or support more equitable and inclusive ways of living. For this reason, Product Design education should address EDI not as a separate topic, but as a fundamental dimension of design research, development, production and evaluation. Within this framework, Product Design is understood as a socially embedded practice that operates at the intersection of material culture, technology, human experience and environmental contexts. Students are therefore expected to critically examine how products reflect and reproduce social norms, values and power relations. Design for EDI in Product Design requires moving beyond assumptions about the "average user"and recognising the diversity of bodies, abilities, identities, cultures, socio-economic conditions and lived experiences that shape interactions with designed artefacts.

The framework adopts a progressive pedagogical approach through which students gradually develop critical awareness, methodological competence and practical design skills. At introductory levels, students explore how structural inequalities are embedded in products, systems and designed environments, and how design participates in shaping social realities. At intermediate levels, they investigate specific forms of inequality and engage with theoretical perspectives and design approaches that seek to address them. Students are then introduced to inclusive, participatory and intersectional design methodologies that enable them to work collaboratively with diverse users and communities. At advanced levels, EDI becomes the driving force of the entire design process, guiding research, problem framing, concept development, prototyping and evaluation in response to complex social challenges. This progression supports the development of designers who are capable of producing responsible and socially responsive design interventions.

Topics

The main topics of the Product Design framework include design as a materialisation of social norms, values and power relations; the role of design in shaping inclusion and exclusion; structural inequalities related to gender, disability, race, ethnicity and class; intersectionality and its relevance for design research and practice; design approaches that address inequality such as feminist design, queering design, design justice, Universal Design and pluriversal design; care, interdependence and relational approaches to design and ethical responsibility in design.

The framework analysed the importance of research methodologies that support inclusive and socially responsible design practice (Manzini, 2015; Cranz, 2016; Schouwenberg & Kaethler, 2021). Topics include qualitative and participatory research methods such as observation, ethnography, autoethnography, interviews, visual mapping and co-design. Students learn to recognise the importance of positionality and reflexivity, understanding how their own experiences, assumptions and social positions influence the design process. Rather than positioning designers as experts who provide solutions for others, the framework promotes approaches that value situated knowledge, collective learning and designing with communities.

Best practices

The best practices identified for Product Design education combine project-based learning, theoretical concepts, participatory engagement and reflective practice. Studio-based activities play a central role because they enable students to translate theoretical concepts into concrete design outcomes while continuously reflecting on the social implications of their decisions. Through iterative processes of research, ideation, prototyping and evaluation, students learn that inclusion is not an outcome to be considered at the end of a project but a principle that should guide the entire design process.

Research-led learning is a key methodological approach within the framework. Students engage in critical analysis of case studies and contemporary debates concerning EDI in design. Seminars, workshops and facilitated discussions provide opportunities to explore the social dimensions of design and encourage students to connect theoretical perspectives with real-world challenges. Reflective learning strategies further support the development of critical awareness and professional responsibility. Positionality exercises, peer review activities and collaborative critique sessions encourage students to examine their assumptions, biases and design decisions, as well as the impact their designs have on communities and social systems (Haraway, 1988; Escobar, 2018). Feedback from peers, tutors, stakeholders and users is integrated throughout project development to support evidence-based decision-making and continuous improvement. Participatory and collaborative practices are also fundamental: co-design workshops and community-based projects allow students to experience shared decision-making processes and recognise users and communities as active contributors to knowledge production. These experiences help students to understand the value of diverse perspectives, and to develop the communication, negotiation and facilitation skills required for inclusive design practice.

Teaching and Learning Outcomes

At the end of a Product Design module focused on EDI, students should be able to understand the role of Equality, Diversity and Inclusion in product design and critical-

ly analyse how designed artefacts contribute to processes of inclusion and exclusion. They should be able to identify structural inequalities (Costanza-Chock, 2020) and evaluate how social, economic and political factors influence design outcomes and methods and demonstrate professional responsibility and a commitment to socially responsible and inclusive design practices. Students should also be able to apply EDI principles throughout the design process, from research and problem framing to concept development, prototyping and evaluation. They should demonstrate competence in the use of qualitative, and, in intermediate and advanced levels, participatory and intersectional research methods to investigate diverse user experiences and identify barriers to inclusion. Furthermore, they should be capable of selecting and applying appropriate design methodologies and theoretical approaches to address specific EDI-related challenges, demonstrating also the capacity to assess the social impact of their interventions and communicate design decisions through evidence-based and reflective arguments.

The framework also aims to develop students' ability to collaborate effectively with users, communities and stakeholders through participatory and co-design processes, specially at intermediate and advanced levels. Students should be able to translate research findings into ethically informed design proposals that respond to the needs of diverse individuals and groups. At advanced levels, students should be able to address complex societal challenges through design interventions that engage with intersecting forms of exclusion (Crenshaw, 1989; Zárate, 2021).

Assessment should therefore consider both final outcomes and the research and learning process. Relevant criteria include the quality and rigour of research, the ability to critically engage with theory, the effective application of inclusive and participatory methodologies, their ability to engage with stakeholders, the depth of reflections around design and their particular practices the coherence between EDI principles and design decisions, and the social relevance of proposed interventions. As students progress through the framework, assessment activities should increase in complexity, moving from critical analysis and exploratory research towards collaborative projects and fully developed EDI-driven design outcomes.

4.4.2 Teaching Framework on Design for EDI for Introductory Modules

Study level

This module is recommended for second-year undergraduate students. Students are expected to have prior foundational knowledge of design principles and methods. Familiarity with basic design theory will be beneficial.

Learning Objectives

1. Understand how structural inequalities are materialised through designed objects, environments, and systems.
2. Identify and critically analyse mechanisms of exclusion embedded in everyday products and design practices, including those related to gender, ability and class, among others.
3. Apply qualitative methods to examine patterns of inclusion and exclusion in everyday design contexts.
4. Use intersectionality as an analytical framework to understand how multiple, overlapping forms of oppression produce differentiated experiences of design and exclusion.

5. Develop ethically informed design responses, reflecting on one's own positionality and redesigning existing products to better accommodate diverse bodies and needs.

Lessons	Topics / Lectures	Activities / Assignments
Introduction to EDI in Design	Design as a non-neutral activity; biases as the assumptions and values that shape design decisions; the standardised anthropocentric body in design and its historical foundation; the diversity in bodies-subjects; mechanisms of exclusion in design.	• Short individual analysis of selected objects from an EDI perspective. • Selection of 2-3 barriers or mechanisms of exclusion per object. • Collective discussion about different exclusions found in the selected objects and their possible impacts on people.
Structural inequalities through design: gender	Introduction to gender: basic concepts, authors and short history; counteracting gender through feminist and queer movements; materialisation of gender in design: feminine vs masculine products; invisibilisation of care activities.	• Video watch and discussion on how design norms are produced and maintained. • Discussion about bodily diversity, normativity, interdependence and their relationship with design. • Ethnographic observation on how different users interact with a specific object or group of objects, identifying patterns of inclusion and exclusion. • Data recording through a diary that may include notes, photographs, videos, or sketches.
Structural inequalities through design: ability	Introduction to dis/ability: basic concepts, authors and short history; materialisation of dis/ability in design through products that privilege certain physical and cognitive capacities while excluding others; counteracting dis/ability through crip theory and universal design.	• Analysis of the collected data to identify possible barriers or inclusive mechanisms. • Insights presentation to peers.
Structural inequalities through design: class	Introduction to basic concepts, authors and short history about class differences; materialisation of class through design through labour, differences in access and quality of products; counteracting class differences through public design and design for the commons.	• A group (2-3 people) choose an object analysed by or one of their peers in the ethnographic exercise. • An excluded target is chosen. • Short analysis of both the reasons for the exclusion and their possible needs. • Quick redesign of the object that adapts to its new user's needs. • Insights presentation to peers.

Structural inequalities through design: race	Introduction to basic concepts, authors and short history about racism; counteracting racism through civil rights and decolonial movements; materialization of racism through design; positionality as a conscious way of understanding who we are regarding others.	• Individual written reflection examining how the student's social positioning, values, life experiences, and assumptions may have influenced their research and design decisions. • A critical reflection on how these values may have evolved throughout the module, and how this shift could inform different choices or approaches in future practice.

Table 4.7. Teaching Framework on Design for EDI (Product Design, Introductory Module).

Expected Learning Outcomes and Assessment

By the end of the introductory module, students should be able to recognise how structural inequalities can be materialised through everyday products, environments, and design practices. They should be able to identify mechanisms of exclusion, examine them through qualitative research and an intersectional perspective, and reflect on how their own positionality may influence design decisions. Students are also expected to translate this critical understanding into ethically informed design responses that better accommodate diverse bodies, needs, and experiences.

Assessment considers students' ability to connect critical analysis with observable design evidence. Activities such as object analysis, ethnographic observation, research diaries, redesign exercises, peer presentations, and individual reflection make it possible to evaluate the identification of exclusion, the interpretation of qualitative evidence, the coherence of proposed responses, and the development of critical and reflective awareness.

4.4.3 Teaching Framework on Design for EDI for Intermediate Modules

Study level

This module is recommended for third and fourth year undergraduate students, or first-year postgraduate ones. Students should ideally have completed the Level 1-2 module on design for EDI in Product Design, or demonstrate equivalent knowledge of the politics of design, understanding design as a norm-producing practice. Familiarity with structural inequalities, intersectionality, and qualitative design research methods is strongly recommended.

Learning Objectives

1. Identify and critically analyse structural inequalities (including gender, class, ability, and race) and examine how they are reproduced or challenged through designed objects and practices.
2. Develop the ability to produce a critical written article that addresses a specific inequality in relation to design, integrating qualitative research methods and engaging with relevant academic literature.
3. Demonstrate knowledge of design approaches that address inequalities, including feminist design, queer design, Universal Design, and pluriversal design, and understand their aims and limitations.

4. Understand and distinguish between inclusive design methodologies, recognising that the choice of methodology is as important as EDI content in determining the outcome of inclusive design.
5. Engage in co-design processes as collaborative and ethical practices, recognising power shifts, shared authorship, and the role of users and communities as co-creators of knowledge and design outcomes.

Lessons	Topics / Lectures	Activities / Assignments
Introduction to intersectionality and its relevance for design research and practice	Introduction to intersectionality as a lens for understanding how multiple forms of oppression overlap and compound in unique ways for different individuals and groups; brief history of intersectionality; examples of intersecting inequalities in designed objects and systems; ethical responsibilities of designers when engaging with structural inequalities.	• Selection of at least two structural inequalities as the focus of the research and the designed product/s or spaces where it is materialised. • Collection and documentation of qualitative data through at least one research methodology (auto-ethnography, ethnography, visual mapping...) of both inequalities. • Critical analysis of the collected material. • Development of a clear argument connecting the analysis with at least three reliable academic sources to support the analysis.
Design approaches addressing inequality I	Understanding design as a norm creator, but also its possibilities as a norm breaker; feminist design as a way of challenging the dominant heteronormative culture by centering in women's or gender minorities' experiences; examples of products designed from a feminist perspective; queering design as a way of subverting heteronormative standards through design; examples of queering design practices.	• Visits to a grassroot organisation or collectives. • Documentation of visits' insights through notes, recordings, or visual materials. • Collective reflection on the role of grassroots practices in challenging dominant design paradigms.
Design approaches addressing inequality II	Universal Design as a way of creating products usable by all abilities; examples of designed objects through Universal Design; pluriversal design as a way of integrating multiple cultural ontologies and knowledge systems; examples of designs from a pluriversal perspective.	• In groups, analysis of the visits' insights. • Interviews with the grassroot organisation to define a shared EDI in design research question. • Desk-based research about the question proposed. • Presentation of the research question to peers.

Introduction to inclusive and participatory design methodologies I	What's a methodology and why it is important for EDI – it is not only the what, but also the how; User-Centred Design (UCD) as a methodology that focuses on usability and user needs; Human-Centred Design (HCD) as a methodology that tackles broader societal and systemic considerations than UCD; More-than-Human Design as a way of broadening the scope about who we design for.	• Design of a co-design methodology to address the design research question. • Iterative reviews with tutors, peers or technical experts. • Preparation of materials and activities to enable inclusive participation.
Introduction to inclusive and participatory design methodologies II	Participatory design as a movement to involve workers in Scandinavia in the 70s in the design of their own tools and systems; co-design as a set of collaborative methods where users actively contribute ideas; Sanders' Map to visualise codesign methodologies by its users' involvement level; Co-design as a power shift that positions users as co-creators, challenging designer authority.	• Facilitation of the workshop, with attention to power dynamics. • Collaborative development of insights or prototypes responding to identified needs. • Reflection on the outcomes and ethical considerations of the process.

Table 4.8. Teaching Framework on Design for EDI (Product Design, Intermediate Module).

Expected Learning Outcomes and Assessment

By the end of the intermediate module, students should be able to critically analyse how structural inequalities are reproduced or challenged through design and to distinguish among theoretical and methodological approaches addressing EDI, including feminist, queer, universal, and pluriversal design. They should be able to combine qualitative research, academic literature, and intersectional analysis, select appropriate inclusive methodologies, and engage in co-design as a collaborative practice involving shared authorship and attention to power relations.

Assessment focuses on both critical reasoning and methodological application. Research documentation, written critical analysis, engagement with academic sources, field visits, interviews, the definition of EDI-oriented research questions, and the development and facilitation of co-design activities provide evidence of students' ability to connect theory, research, and design practice. Reflection on participation, methodological choices, and ethical implications is considered an integral part of the assessment process.

4.4.4 Teaching Framework on Design for EDI for Advanced Modules

Study level

This module is intended for final-year undergraduate students and postgraduate students. Students should have completed the Level 1-2 module on design for EDI in Product Design or demonstrate equivalent knowledge of the politics of design, structural inequalities, intersectionality, and qualitative design research methods. Completion of the Level 3-4 module is recommended but not required.

Learning Objectives

1. Analyse the public sphere as a contested space where diverse communities articulate visions of the common good.
2. Evaluate design and social innovation practices through EDI frameworks.
3. Apply care ethics and principles of interdependence to analyse and propose design interventions that support caring relationships in public and commons spaces.
4. Understand communities as complex, heterogeneous, and relational systems, composed of diverse roles, levels of participation, and power relations rather than homogeneous or fixed entities.
5. Use analytical tools to examine community complexity and power structures and basic network-analysis concepts to identify inclusions and exclusions within communities.
6. Apply intersectionality frameworks to understand how design shapes the distribution of risks, harms, and benefits in designed contexts.
7. Use intersectional methods such as relief maps to compare diverse users' experiences, linking social power, psychological factors, and material design elements to reveal intersecting inequalities.
8. Collaboratively design, implement, and evaluate interventions that improve care practices in public spaces from an intersectional perspective.

Lessons	Topics / Lectures	Activities / Assignments
Common good and social design. Theories and methods	The public sphere as a space where diverse people articulate visions of the common good; design and social innovation as infrastructures that redistribute power and resources; feminist critiques to assess who is excluded from design; EDI as a design orientation centred on vulnerable groups; community-led and co-design approaches that shift design authority towards communities; and critical attention to tokenism and the reproduction of inequalities within social innovation projects.	• Identification of a social design collective or practitioner working on projects in the public sphere. • Preparation of 5-7 semi-structured questions, with a focus on EDI integration. • Conducting the interview and producing a written transcript. • Writing a reflective essay analysing insights through EDI lens.
Design justice and intersectionality	Design justice as a field concerned with how designed objects distribute risks and benefits across different groups; intersectionality as a lens for understanding overlapping forms of oppression; examples of objects and spaces that intensify unequal care burdens; designers' ethical responsibilities when addressing structural inequalities; and intersectional methodologies such as Relief Maps, story mapping, co-research and co-design.	• Selection of a public or common space (park, library, market, makerspace). • Ethnographic observation over at least 2 sessions, mapping caring practices and/or their absence • Analysis of its relationship to design using fieldnotes, photos and/or sketches. • Short interviews with actors in the space.

Care and interdependence in design	The capitalist system and its privatisation and commodification; productive and reproductive work; introduction to care, supporting and fostering care relationships within designed contexts; Marxist feminists - care work as labour.	• For the selected space, creation of relief maps for at least 3 diverse users (varying by class, gender, ability, race, age). • Definition of a design/research question from the prior analysis, focusing on fostering or improving interdependence in the selected space and prioritising the concerns of the most marginalised users identified in the relief maps. • Partnering with a grassroots organisation active in that space of similar contexts.
Care and interdependence in design II	Interdependence and vulnerability as starting points for design, challenging ideals of autonomy embedded in many design processes and solutions; care ethics and what they imply for design practice; physical proximity in urban contexts to foster caring relations; designing to support and foster care relationships through maintenance and repair; case studies of community-based projects that embed care values in their methods and products.	• Facilitating a co-design workshop to address the research/design question within the community, with particular attention to those most critically affected. • Co-creation of at least two low-fidelity prototypes aimed at redesigning the space features to improve or enable care.
Understanding community complexity and its power relations	Understanding community as different people, in opposition of standardised models; community as different levels of participation; methodologies to analyse the different levels of participation in a community such as Arnstein's Ladder (power spectrum), Legitimate Peripheral Participation (learning pathways) and Participation Matrix (roles and degrees of involvement); understanding community as a network with different roles and relations within communities; methodologies for revealing hidden power structures and influential members within a community: Degree Centrality and Page Rank.	• Evaluation of the impact of the proposed redesigns. • After doing the workshop, application of at least two analytical tools to identify power structures, influential members or roles within the community explored (Arnstein's ladder, participation matrix, degree centrality, page rank). • Documentation of the whole process in a booklet, using at least four academic sources. • Presentation to peers.

Table 4.9. Teaching Framework on Design for EDI (Product Design, Advanced Module).

Expected Learning Outcomes and Assessment

By the end of the advanced module, students should be able to address complex social challenges through Product Design by combining EDI, intersectionality, design justice, care, and interdependence. They should be able to analyse communities and public spaces as heterogeneous systems shaped by different roles and power relations, identify unequal distributions of risks and benefits, and work collaboratively with communities to

develop design interventions that respond to the experiences of diverse and particularly marginalised users. Assessment considers both the quality of the design intervention and the research and participatory process through which it is developed. Interviews, ethnographic observations, reflective essays, relief maps, co-design workshops, and prototypes provide evidence of students' ability to interpret complex contexts, engage with communities, translate research into design decisions, and critically evaluate the social and ethical implications of their proposals.

4.5 Teaching Framework on Design for EDI in the Field of Digital Design

Alessia Brischetto

4.5.1 Philosophy, Topics, Best Practices and Teaching and Learning Outcomes

Philosophy

The teaching framework for Design for Equality, Diversity and Inclusion (EDI) in the field of Digital Design is based on the assumption that digital and interactive systems are not neutral artefacts. Interfaces, platforms, applications, connected devices, hybrid tools, digital services and game-based experiences can either reduce or reinforce barriers depending on how they frame users, mediate access, support participation and distribute agency. For this reason, Digital Design education should address EDI not only as a thematic content, but as a transversal design criterion embedded in research, interaction, prototyping, validation and assessment (ISO, 2019; World Wide Web Consortium, 2024).

In this framework, Digital Design is understood as an interdisciplinary field connecting UI/UX design, interaction design, digital and hybrid artefacts, product-service systems, media design, game-based experiences and emerging technologies. Its educational role is therefore twofold. Students need to acquire technical and methodological skills for designing digital and interactive solutions, but they also need to develop a critical understanding of how digital technologies affect people with different sensory, cognitive, cultural, social and economic conditions. Design for EDI in Digital Design thus requires students to move beyond the idea of the "average user" and to consider accessibility, usability, representation, participation, fairness and ethical responsibility as integral dimensions of the design process (Norman, 2013; Lazar *et al.*, 2015).

The framework is organised through a progressive pedagogical approach. At introductory levels, students are expected to recognise mechanisms of inclusion and exclusion in everyday digital experiences. At intermediate levels, they learn to apply inclusive UX methods, accessibility principles and participatory strategies to concrete design tasks. At advanced levels, EDI becomes the central driver of the whole project, guiding research, concept development, prototyping, validation and communication. This progression supports the development of designers who are able not only to create functional digital artefacts, but also to understand their social implications and act responsibly within complex technological and cultural environments.

Topics

The main topics of the Digital Design framework include foundational EDI concepts applied to digital and interaction design; inclusive and non-inclusive digital experiences; accessibility and usability in digital interfaces; human-centred and participatory design methods; user diversity and learner variability; gender, cultural and language diversity in

digital contexts; neurodiversity and cognitive accessibility (World Wide Web Consortium, 2021); bias in digital systems and algorithmic cultures (Friedman & Nissenbaum, 1996; Noble, 2018); hybrid product-service and interaction design; collaborative and game-based learning experiences; and ethical responsibility in the development of interactive systems.

Particular attention is given to the relationship between physical and digital dimensions. Digital Design for EDI increasingly operates through hybrid systems in which tangible objects, interfaces, sensors, platforms, services and social interactions are interconnected. This requires students to design not only screens or isolated digital products, but meaningful interaction ecosystems. In this perspective, collaborative games, social tools and hybrid artefacts can become educational and design devices for exploring inclusion, cooperation, accessibility and participation.

The framework also includes the use of recognised standards and methodological references, such as Human-Centred Design principles, accessibility-by-design approaches, WCAG guidelines, inclusive UX methods and Universal Design for Learning (CAST, 2024; ISO, 2019; World Wide Web Consortium, 2024). These references are not intended as rigid checklists, but as operational supports for helping students translate EDI principles into design decisions, prototypes and validation criteria.

Best Practices

The best practices identified for Digital Design education combine project-based learning, collaborative work, multimodal teaching and iterative prototyping. Studio-based activities are particularly relevant because they allow students to explore EDI through concrete design challenges, progressively moving from research and analysis to concept development, prototype construction, testing and refinement. This process helps students understand that inclusion is not a final adjustment to be added at the end of a project, but a quality that must be considered from the earliest phases of problem framing.

Collaborative and project-based learning represents a central methodological approach. Group work, peer review and shared decision-making help students develop communication skills, negotiate different perspectives and reflect on how collaboration itself can become more or less inclusive. In Digital Design, this is especially important because projects often require interdisciplinary cooperation between design, interaction, information technology and social innovation.

Universal Design for Learning and multimodal teaching strategies support the accessibility of the learning process itself (CAST, 2024; Meyer, Rose & Gordon, 2014). By offering multiple forms of representation, engagement and expression, educators can address different learning preferences and abilities. At the same time, students are encouraged to apply similar principles to the digital and hybrid artefacts they design. In this way, the teaching environment becomes a practical demonstration of the inclusive principles that students are asked to implement.

Hybrid prototyping and gamified inclusion workshops are also relevant practices (Deterding *et al.*, 2011; Qian & Clark, 2016). The use of collaborative boards, wireframing platforms, physical computing, sensors, low-fidelity mock-ups, interactive prototypes and game-based activities enables students to test ideas through both analog and digital forms. These practices make abstract EDI concepts more tangible and help students understand how barriers emerge in use, interaction, communication and participation.

A further best practice concerns iterative feedback and validation. Digital Design for EDI requires continuous testing with peers, tutors, experts, users or stakeholders. Feedback should address not only technical performance or visual quality, but also

accessibility, usability, inclusion, ethical consistency and social relevance. This process supports design maturity and helps students understand validation as an evidence-based and reflective practice.

Teaching and Learning Outcomes

At the end of a Digital Design module focused on EDI, students should be able to understand the role of Equality, Diversity and Inclusion in digital and interaction design; identify mechanisms of exclusion in interfaces, digital services, hybrid artefacts and interactive experiences; apply human-centred and inclusive UX methods to design research and concept development; translate user needs and EDI-related insights into accessible and usable design solutions; and develop prototypes that integrate digital, physical and social dimensions.

Students should also demonstrate the ability to work collaboratively, document design decisions, engage with feedback and critically reflect on the ethical implications of their projects. At advanced levels, they should be able to address complex inclusion challenges involving disability, gender, cultural diversity, neurodiversity, marginalisation, socio-economic barriers and systemic bias. They should also be able to communicate the social and educational value of their proposals through visual, written, oral and multimedia outputs.

Assessment should therefore consider both final outcomes and the whole learning process. Relevant criteria include the quality of research and analysis, the coherence between EDI principles and design decisions, the appropriateness of accessibility and usability strategies, the maturity of prototypes, the ability to respond to feedback, the clarity of communication and the depth of ethical reflection. In this way, Digital Design education can support the development of designers who are technically competent, critically aware and capable of producing inclusive digital and hybrid experiences.

4.5.2 Teaching Framework on Design for EDI for Introductory Modules

Study level

The module is recommended for undergraduate students, preferably in the first or second year of a Bachelor programme in Digital Design, Interaction Design, Communication Design or related fields. It is recommended that students have preliminary knowledge of basic design methods, visual communication and elementary digital interface analysis, although no advanced technical skills are required.

The introductory module aims to build foundational awareness of EDI in digital and interactive systems. At this level, the objective is not to develop complex digital products, but to help students recognise how digital interfaces, platforms, applications and interactive artefacts can include or exclude users. The module introduces EDI concepts through examples, guided discussions, interface analysis and basic design exercises. Students are encouraged to observe everyday digital experiences critically and to question assumptions concerning the “standard user”, accessibility, language, representation, gender, culture and socio-economic access.

Learning Objectives

1. Understand foundational concepts of Equality, Diversity and Inclusion in relation to Digital and Interaction Design.
2. Recognise mechanisms of inclusion and exclusion in everyday digital interfaces and interactive experiences.

3. Identify basic accessibility, diversity and gender-related issues in user experiences.
4. Apply empathy-based and human-centred approaches to early-stage design tasks.
5. Develop an initial critical awareness of bias, responsibility and ethical implications in digital design decisions.

Lessons	Topics / Lectures	Activities / Assignments
Framing EDI in Digital Design	Equality, Diversity and Inclusion as design principles; digital design as a field that can enable or restrict access; introduction to inclusive and non-inclusive digital experiences.	• Guided discussion on inclusive and non-inclusive digital examples. • Short reflection on personal or observed digital barriers. • Identification of preliminary EDI design criteria.
The "average user" and digital exclusion	Mechanisms of exclusion in interfaces, apps, platforms and online services; introduction to user diversity, gender, language, cultural and socio-economic barriers.	• Analysis of selected digital touchpoints. • Identification of barriers related to navigation, language, visual hierarchy, accessibility or representation. • Short group presentation of findings.
Accessibility and basic inclusive UX	Basic concepts of usability, accessibility, readability, contrast, captions, alternative text and introductory WCAG principles.	• Annotated critique of an existing interface. • Mapping of accessibility issues. • Definition of possible improvements through simple inclusive UX criteria.
Empathy-based and Human-Centred Design	Empathy mapping, simple user journeys, scenarios and early understanding of diverse needs in digital contexts.	• Creation of an empathy map or simple user journey. • Exploration of one specific user profile or situation of exclusion. • Discussion of assumptions and possible stereotypes.
Early inclusive redesign	From critique to proposal: translating observations into design criteria and low-fidelity redesigns.	• Low-fidelity redesign of a small digital interaction, screen or flow. • Wireframe, storyboard or visual scenario. • Oral presentation and peer feedback.

Table 4.10. Teaching Framework on Design for EDI (Digital Design, Introductory Module).

Expected Learning Outcomes and Assessment

By the end of the introductory module, students should demonstrate a basic understanding of EDI concepts and their relevance to digital design. They should be able to identify exclusionary elements in digital interfaces and propose simple improvements based on accessibility, usability and user diversity. Assessment may include participation in discussions, annotated interface analysis, a short written reflection, basic UX mapping artefacts and a low-fidelity inclusive redesign. The emphasis should be placed on awareness, critical observation and the ability to translate initial insights into design criteria.

4.5.3 Teaching Framework on Design for EDI for Intermediate Modules

Study level

The module is recommended for undergraduate students in the final years of a Bachelor programme or for early postgraduate students. It is recommended that students have previous experience in design methods, basic UI/UX design, visual communication, prototyping and group project work.

The intermediate module expands foundational awareness into applied design practice. Students are expected to integrate EDI principles into project development through human-centred research, inclusive UX methods, accessibility strategies, peer review and iterative prototyping. The module can be organised as a studio or workshop-based learning path in which students work on a design brief addressing a specific inclusion challenge in digital or hybrid contexts. At this level, Digital Design for EDI is approached as a process of translating user needs, contextual barriers and ethical considerations into coherent design decisions.

Learning Objectives

1. Apply EDI principles to the analysis and redesign of digital or hybrid experiences.
2. Use human-centred and inclusive UX methods to identify user needs, barriers and opportunities.
3. Translate accessibility, diversity and inclusion requirements into design criteria.
4. Develop and test low- or mid-fidelity digital or hybrid prototypes.
5. Document and communicate design decisions through UX maps, mock-ups, reports and peer review.

Lessons	Topics / Lectures	Activities / Assignments
Framing the EDI-driven design challenge	EDI-oriented design briefs; from broad inclusion issues to specific design opportunities; definition of context, users and barriers.	• Definition of a design brief based on a selected context, user group or barrier. • Team discussion on project scope and intended impact. • Initial mapping of EDI-related opportunities and constraints.
Inclusive research and UX analysis	Human-centred and inclusive UX methods; user needs; stakeholder mapping; empathy-based research; lightweight ethnographic observation; bias in research.	• Interviews, observations, UX diaries or empathy maps. • User/stakeholder mapping. • Synthesis of research findings into EDI requirements.
Accessibility and inclusive interaction criteria	Accessibility-by-design; cognitive accessibility; multimodal access; inclusive interaction requirements; relationship between user needs and design criteria.	• Analysis of existing digital or hybrid solutions. • Definition of accessibility and inclusion criteria. • Translation of criteria into design requirements.

Concept development and peer review	Collaborative ideation; concept development; UX scenarios; critique as a learning method; coherence between research insights and design proposal.	• Concept boards, scenario maps, wireframes or interaction flows. • Peer-to-peer critique. • Revision of the design concept according to feedback.
Prototyping and evaluation	Digital and hybrid prototyping; usability testing; iterative feedback loops; documentation of design decisions.	• Low- or mid-fidelity prototype. • Peer, user or stakeholder testing session. • Short testing report documenting findings, revisions and future improvements.

Table 4.11. Teaching Framework on Design for EDI (Digital Design, Intermediate Module).

Expected Learning Outcomes and Assessment

By the end of the intermediate module, students should be able to integrate EDI principles into the development of a digital or hybrid design proposal. They should demonstrate the ability to conduct basic user research, identify barriers, formulate inclusive design criteria, develop prototypes and revise their work according to feedback. Assessment should be process-based and include research quality, clarity of design criteria, coherence between user needs and design solutions, prototype maturity, peer feedback, testing evidence and reflective documentation. The final output may consist of a UX report, wireframes or mock-ups, a prototype, a testing report and an oral presentation.

4.5.4 Teaching Framework on Design for EDI for Advanced Modules

Study level

The module is recommended for postgraduate students or advanced undergraduate students in Digital Design, Interaction Design, Design for Innovation, Product-Service System Design or related programmes. It is recommended that students have previous training in user research, interaction design, prototyping, collaborative design methods and basic accessibility principles.

The advanced module positions EDI as the core design driver of the whole learning experience. At this level, students work on complex inclusion challenges involving digital, physical and social interaction. The module can be structured as an advanced studio in which teams develop hybrid collaborative games, digital tools, product-service systems, interactive artefacts or social platforms that address EDI-related issues in educational, cultural, social or community-based contexts. Students are expected to combine critical research, participatory methods, technical prototyping, usability testing, ethical reflection and communication (Sanders & Stappers, 2008; Simonsen & Robertson, 2013).

The advanced module should encourage students to work across disciplines. In Digital Design, inclusive innovation often requires collaboration between design, information technology, social sciences, education and stakeholder communities. Students should therefore be guided to understand not only how an interface works, but how a digital or hybrid system affects relationships, participation, access, representation and agency.

Learning Objectives

1. Develop advanced EDI-driven digital or hybrid projects addressing complex inclusion challenges.
2. Integrate human-centred research, participatory design, accessibility and ethical reflection into the full design process.
3. Design and prototype interactive systems, collaborative games or social tools that combine digital, physical and relational dimensions.
4. Validate design proposals through testing with users, peers, experts or stakeholders.
5. Communicate the social, educational and inclusive value of the project through multimodal documentation and public presentation.

Lessons	Topics / Lectures	Activities / Assignments
EDI as core design driver	Inclusion as a project criterion; social impact; ethical responsibility and accountability in digital and hybrid systems.	• Definition of an EDI-driven project brief. • Identification of target context, stakeholders, barriers and design opportunities. • Initial ethical reflection on project assumptions and possible impacts.
Research, empathy and contextual inquiry	Advanced user research; field observation; interviews; UX diaries; stakeholder mapping; critical reflection on bias and representation.	• Research report including user needs, barriers and scenarios. • Mapping of stakeholder roles and participation conditions. • Definition of EDI requirements and design criteria.
Collaborative and game-based interaction	Collaborative learning; game mechanics; inclusive interaction dynamics; cooperation rather than competition; participation and peer learning.	• Design of a collaborative game, social tool or hybrid interaction model. • Concept board and interaction scenario. • Reflection on group dynamics, accessibility and inclusive participation.
Hybrid prototyping and technical development	Physical-digital prototyping; UI/UX; sensors; digital platforms; mockups; coding or physical computing according to project needs.	• Development of an interactive prototype integrating digital and/or physical components. • UX, interaction and technical documentation. • Iterative reviews with tutors, peers or technical experts.
Validation, iteration and communication	Usability testing; accessibility validation; stakeholder feedback; social relevance; storytelling and final review.	• Testing session with users, experts or stakeholders. • Final prototype and multimedia storytelling. • Final presentation and reflective report on EDI integration, limitations and future development.

Table 4.12. Teaching Framework on Design for EDI (Digital Design, Advanced Module).

Expected Learning Outcomes and Assessment

By the end of the advanced module, students should be able to develop a mature EDI-driven digital or hybrid project. They should demonstrate advanced capacity to frame complex inclusion challenges, conduct research with attention to ethical and social implications, translate insights into design criteria, prototype interactive systems and validate them through feedback. Students should also be able to reflect critically on the role of the designer, the limitations of their proposal and the possible future development of the project.

Assessment should combine formative and summative methods. Formative assessment may include weekly reviews, peer-to-peer critique, reflective discussions, interim presentations, prototype demonstrations and stakeholder feedback. Summative assessment may include a final prototype, UX and interaction documentation, testing report, visual and multimedia storytelling, final presentation and individual or group reflective report. Evaluation criteria should consider research depth, EDI integration, accessibility and usability strategies, technical and interaction quality, collaborative process, responsiveness to feedback, social impact, communication clarity and ethical awareness.

At this level, students should be encouraged to understand Digital Design as a practice of responsible innovation. The expected outcome is not only the production of a functional artefact, but the development of a design process able to make inclusion visible, discussable, testable and transferable.

4.6 Teaching Framework on Design for EDI in the Field of Architecture and Urban Design

Zuzana Čerešňová

4.6.1 Philosophy, Topics, Best Practices and Teaching and Learning Outcomes

Philosophy

The EDI approach in the field of Architecture and Urban Design is interpreted as a human-centred approach to create an inclusive built environment including social sustainability, respect for human rights, diversity, and public interest. The aim is to provide all people with equal opportunities in the built environment and full participation in society.

Teaching of EDI modules should be in accordance with the inclusive learning methodologies (e.g. Universal Design for Learning). These methods take into account various learning and communication styles, abilities and needs of students by using multisensory ways of presentation, expression, and active engagement of students (CAST, 2024; Meyer, Rose & Gordon, 2014). The methodology of teaching EDI should use interactive teaching tools to engage students in the creative and educational process, as well as in research activities. Possibility to select the type of task and the form of processing (individually or in groups), as well as the form of final elaboration and presentation (written, audio-visual, graphical, etc.) provides students with the opportunity to actively express their interests and preferred learning style, leading to more effective teaching and learning. At the same time, it is necessary to increase the attractiveness of assignments by connecting to the real needs and requirements of various users of the built environment. The outputs of semester work, which are of practical significance, can help students respond to problems occurring in practice. Student assignments should be linked to current research projects and collaborations with municipalities or stakeholders.

The EDI modules should be implemented in study programmes on Architecture and Urban Design at the beginning of the bachelor's studies, because EDI is essential for the architectural and urban design and planning. The proposed Teaching Framework on Design for EDI in the field of Architecture and Urban Design comprises three modules, specifically designed to provide students introductory, intermediate, and advanced contents focused on EDI. The set of modules can be integrated into the curricula of study programmes in architecture, interior design, urban design and landscape planning. The framework includes introductory lessons on EDI in the architectural and urban environment, EDI-based concepts for the design of accessible built environments, and advanced EDI-oriented methodologies to create inclusive environments for all people using human-centred approaches, such as Universal Design/Design for All.

Topics

The main topics addressed by the Framework reflect the different dimensions through which EDI can be integrated into Architecture and Urban Design, from human diversity and human-centred methods to accessibility, multisensory environments, and regulatory requirements. An overview is provided in Table 4.13.

Topics on EDI	Description
Diversity of people	Understanding and supporting the diversity of people and their different needs and requirements to create an inclusive environment.
Human-centred methods	Basic terminology and methodology of Human-Centred Design, Inclusive Design, Design for All, Universal Design (7 principles), Age-Friendly Design, People-Friendly Design, etc.
Legal regulations and policies	UN Convention on the Rights of Persons with Disabilities, accessibility standards and regulations, EU policy documents, etc.
Residential buildings and care facilities	Adaptable and accessible housing, independent living, age-friendly residential environment, community/family type care facilities, assistive technologies etc.
Public spaces and buildings	EDI principles in several types of public buildings (educational, cultural, sports, workspaces, shops, and services etc.) and public spaces (streets, squares, parks, pedestrian crossings, transport facilities, etc.)
Multisensory environment	How to design the built environment to support different sensory preferences and the positive impact of the environment on people.
Cognitive accessibility, of environment	How to support intuitive use of the built environment, good orientation and information systems in buildings and public spaces.

Table 4.13. Overview of topics on Design for EDI in Architecture and Urban Design.

Best practices

An important part of the EDI modules in Architecture and Urban Design are empathic exercises, to simulate the movement and wayfinding of people with various disabilities or limitations. All students can try to move in a wheelchair or navigate themselves with dark glasses in the built environment to better understand the diversity of people and their requirements in connection with the environment.

It is important to actively involve students in on-site surveys, for example by assessing accessibility of the built environment, including also cognitive accessibility (wayfinding, accessible information, etc.).

Great emphasis should be placed on participatory processes with users, e.g. students can use questionnaires or interviews with the users to better assess their real needs. Students can use new technological tools to record human responses as people experience their surroundings, as well as to monitor effectiveness of the wayfinding system.

Teaching and Learning Outcomes

The EDI modules equip students with the knowledge and skills to create inclusive environments for people with diverse abilities, including those with physical, sensory, intellectual and other impairments. To deepen student understanding, students analyse human interaction with space, drawing on knowledge from interdisciplinary areas. Students become capable of preparing better projects for realisation, because they gain better understanding and empathy towards people's needs.

The students' competencies within EDI education focus on developing empathy and a sensitive understanding of the social dimension of architecture. Instead of emphasising technical skills, the courses foster an awareness of the importance of human-centred architecture. As determinants of the quality of education, it is important to develop empathic thinking, analytical skills and competences of students, to enable students to be proactive, to support and implement innovative outputs that can improve the quality of the built environment for diverse user groups.

4.6.2 Teaching Framework on Design for EDI for Introductory Modules

Study level

This teaching framework is recommended for undergraduate (UG/Bachelor) study level, in the first or second year of study, or as introductory lessons in other EDI-related courses. The module covers basic issues about EDI. The lectures and activities of this module can be implemented into several theoretical and practical courses, as well as in the form of introductory lessons for advanced courses on Design for EDI in study programmes focusing on architecture and urban design.

Learning Objectives

1. Understand human diversity and perception, and the contexts of the environment – physical, social, and cultural.
2. Develop basic knowledge about the impact of the environment on people and vice versa.
3. Explain the basic principles of architectural and urban design in accordance with sustainable development strategies, including basic EDI concepts in the built environment.
4. Develop critical thinking, perception of contexts, and a more complex view of architectural and urban design.
5. Identify the underlying issues and barriers in the built environment related to EDI topics.

Lessons	Topics / Lectures	Activities / Assignments
Human beings and the built environment	• COMPLEXITY OF HUMAN BEINGS, their way of perceiving the environment, and their differences. • DIVERSITY OF PEOPLE – diverse physical, psychological, cognitive, cultural and other differences.	• Discussion and provocative questions about human diversity in the built environment reveal the complexity of human beings, their way of perceiving the environment and their differences.
Sensory perception	• SENSORY PERCEPTION of space with an emphasis on multisensory perception as emphasised in new philosophical concepts in the creation of architectural works or urban spaces.	• Multisensory experience – workshop based on personal experiences, observations and sensitivities in the built environment. • Documentation and description of the experience, memories, impressions. • Evaluation of multisensory experience from an architect's perspective.
Impact of the built environment on people	• THE IMPACT OF THE BUILT ENVIRONMENT ON PEOPLE and their health and sense of well-being (basic knowledge from social, psychological and neuroscience disciplines). • Different levels of HUMAN FUNCTIONING IN SOCIETY: exclusion, segregation, integration, inclusion.	• CASE STUDIES related to EDI in the built environment, examples of inclusion/ exclusion. • Short analyses of selected examples (pictures, videos) to identify positive or negative impact of the built environment on people.
Human diversity and the basic EDI concepts	• Diversity of users, their needs and requirements in the built environment. • BASIC EDI CONCEPTS in the built environment (accessibility, usability, visitability, adaptability, etc.). • HUMAN-CENTRED METHODS (Design for All, Universal Design, Inclusive Design, Age-Friendly Design etc.).	• Empathic exercises (simulation of diversity of users, role-play activities, on-site observations and interviews). • On-site survey and experience with barriers (physical and cognitive) in public spaces and public buildings. • Short analyses of selected public spaces/buildings (based on on-site survey) to identify barriers in the built environment.

Table 4.14. Teaching Framework on Design for EDI (Architecture and Urban Design, Introductory Module).

Expected Learning Outcomes and Assessment

By the end of the introductory module, students should be able to understand how individuals perceive and interact with the built environment. They should be able to analyse the relationship between humans and their environment, and the contexts of the environment – physical, social, and cultural. Students should be able to explain a multisensory approach to improve buildings and urban spaces that support our social, cognitive, and emotional development. They should be able to identify and explain the positive or negative impact of the built environment on people. Students should be able to identify different levels of human functioning in the built environment and society: exclusion, segregation, integration, inclusion. Students should be able to identify barriers in the built environment from the position of diverse users and show growing awareness and understanding of basic EDI concepts in the built environment (accessibility, usability, adaptability, etc.).

The assessment during the module is based on the active involvement of students in the empathic exercises, on-site surveys, discussions and identification of barriers. It is important to provide evaluation throughout the whole course/module, for example by using quizzes, student presentations, and discussions. The assessment at the end of the module focuses on conceptual understanding and critical thinking of students based on short essays, reports, discussions or presentations.

4.6.3 Teaching Framework on Design for EDI for Intermediate Modules

Study level

This teaching framework is recommended for intermediate modules on Design for EDI in undergraduate (UG/Bachelor) or postgraduate (PG/Master) study levels, each semester gradually increasing demands on the complexity of the solution, in different scales and sizes of buildings, and their surroundings. The module covers selected EDI issues, most student works include elements concerning EDI issues, and a cooperation with an external partner in the area of EDI is carried out. The lectures and activities of this module can be implemented into theoretical or practical courses (Design Studio) in study programmes focusing on architecture and urban design.

Learning Objectives

1. Understand the importance of all inputs, including EDI principles, into the architectural and urban design process in different scales and sizes of buildings and their surroundings, or urban spaces.
2. Include EDI principles and accessibility standards as design quality criteria of the built environment.
3. Cooperate with relevant stakeholders and diverse users in real-world tasks using participatory and co-design processes.
4. Implement EDI principles in real-world tasks in the built environment (e.g., accessibility, usability, adaptability, etc.).
5. Clearly demonstrate the application of EDI principles, accessibility and usability for diverse users in architectural and urban design projects.

Lessons	Topics / Lectures	Activities / Assignments
Introduction to real-world tasks and EDI concepts	• INTRODUCING THE REAL-WORLD TASKS (location and site plan, building site program, municipalities / external partners and users). • EDI CONCEPTS in the built environment (accessibility, usability, etc.). • Case studies and analysis from the user perspective.	• Overview of real-world tasks – analyses of requirements of users and potential investor / developer (e.g. municipalities, external partners, etc.). • Presentations of EDI concepts, case studies and related standards and legislative requirements. • Creation of the project brief and gathering relevant information.
Analyses of existing conditions and users requirements	• Analyses of the selected location and all inputs based on on-site or virtual tour and existing documentation. • Importance of all inputs – analyses of existing conditions of the surrounding area, building limits and regulations, transport, greenery, user needs and requirements.	• On-site visit or virtual tour and documentation of the site and surrounding area to observe real-world conditions and context. • Gathering relevant information, photos of the site and location, taking notes, and measurements. • Hands-on workshops, critical assessment of the environment and existing conditions.
Application of EDI principles to architectural and urban projects	• Real-world tasks and participatory processes addressing social inclusion and equal rights in the built environment. • Development of architectural form and spaces, basic construction principles and materials. • EDI PRINCIPLES and accessibility standards as design quality criteria of the built environment.	• Designing architectural and urban projects with/for different communities and municipalities: co-design and participatory processes. • Accessibility and usability evaluation; discussion with diverse users of the built environment and revision of student projects based on the users' feedback.
Presentations of EDI principles in architectural and urban projects	• Presentations and reviews of student projects in accordance with architectural, social and environmental requirements. • Demonstration of the application of EDI principles, accessibility and usability for diverse users in architectural and urban design projects.	• Public presentations of student projects in physical or digital (online) form. • Defence and reviews of student projects with feedback from committee with external partners, stakeholders and diverse users.

Table 4.15. Teaching Framework on Design for EDI (Architecture and Urban Design, Intermediate Module).

Expected Learning Outcomes and Assessment

By the end of the intermediate module, students should be able to analyse and understand various inputs related to architectural and urban design and the contexts of the environment – physical, social, and cultural. They should be able to develop a conceptually robust, context-sensitive, and technically feasible design proposal. Students should be able to apply EDI principles (equality, diversity, inclusion) with the goal of improving the quality of life and social inclusion of all users. Students should be able to consider flexibility and adaptability for accommodating the evolving needs of diverse users. They should be able to cooperate with relevant stakeholders and diverse users in real-world tasks using participatory and co-design processes. Students should be able to clearly demonstrate the application of EDI principles, accessibility and usability for diverse users in their projects.

The assessment during the module is based on the critiques and reviews of student projects with feedback from external partners/stakeholders. During the semester it is recommended that students will be provided with an assessment in at least two public reviews (critiques) in cooperation with external partners/stakeholders and various users. The assessment at the end of the module is based on the final presentations of student projects in front of a committee with relevant stakeholders and users. The assessment considers achievement of social and ecological sustainability of the student project, reflecting contextual sensitivity, responsiveness to real-world challenges and EDI principles, as well as technical feasibility.

4.6.4 Teaching Framework on Design for EDI for Advanced Modules

Study level

This teaching framework is recommended for advanced modules on Design for EDI in undergraduate (UG/Bachelor) study programmes in Architecture and Urban Design, as well as in other EDI-related study programmes in postgraduate level (PG/Master). This module is specifically focused on EDI issues, but it is highly recommended to integrate some lessons of this module into other courses so that EDI modules are not just standalone courses without connections to other subjects.

Learning Objectives

1. Understand and respond to diverse needs and requirements of people in the built environment.
2. Explain fundamental human rights and relevant legislative regulations and standards in the built environment related to EDI issues.
3. Analyse and evaluate the impact of the built environment on people (exclusion, segregation, integration, inclusion).
4. Implement the EDI principles to create an inclusive environment for all people.
5. Apply multisensory elements when creating the built environment and wayfinding systems to ensure cognitive accessibility of the built environment.

Lessons	Topics / Lectures	Activities / Assignments
EDI concepts in architecture and urban design	• DIVERSITY OF PEOPLE – physical, sensory, cognitive, cultural and other differences. • HUMAN FUNCTIONING IN SOCIETY: exclusion, segregation, integration, inclusion. • HUMAN RIGHTS principles and correct terminology (person/ people first).	Discussion and provocative questions about human diversity: • How can the built environment include or exclude different user groups? • Guided discussion of case studies (inclusive vs non-inclusive examples).
Human-Centred Design and inclusive built environment	• Methodology of Human-Centred Design, Inclusive Design, Design for All, Universal Design, People-Friendly Design, etc. • DESIGNING FOR HUMAN WELL-BEING (basic knowledge from social, psychological and neuroscience disciplines). • Legislative regulations for creating an accessible and inclusive built environment.	• Discussion about the impact of the built environment on people and their health and sense of well-being. • CASE STUDIES related to EDI in the built environment, examples of how the built environment affects people. • Short analyses of selected examples (pictures, videos) to identify positive or negative impact of the built environment on people.
Understanding and application of EDI methods	• EMPATHY-BASED ACTIVITIES to better understand user diversity, needs and requirements in the built environment. • Exploration of EDI related to physical and cognitive accessibility, usability, visitability, adaptability and personal versus social space.	• Empathic exercises (simulation of diversity of users, role-play activities, on-site observations and interviews). • On-site survey and mapping of barriers (physical and cognitive). • Basic recommendations on how to remove barriers and to create inclusive solutions.
Inclusive public spaces	• Principles of inclusive design of public spaces – independent and safe mobility • Accessible transport, services and activities. • Inclusive cities – parks, gardens, playgrounds and tourist attractions, cultural heritage for all visitors.	Assignments on various topics (for example): • How to design accessible and safe pedestrian zones, including the placement of street furniture. • How to overcome height differences (proper design of ramps, lifts, etc.). • How to design inclusive playgrounds and parks.
Inclusive public buildings	• Implementation of EDI principles (Universal Design, Design for All) in design of public buildings (accessibility, adaptability, flexibility, safety, intuitive use, perceptible information, comfort, etc.). • Human-centred characteristics of the built environment (healthy, stimulating, adaptable, flexible, personal vs. social, neuroinclusive environment).	Assignments on various topics (for example): • Healthy space – physical and mental well-being and social inclusion. • Stimulating space – variety of multisensory experiences. • Combining individual spaces (a sense of privacy) and spaces for socialisation. • Adaptable and flexible spaces.

Residential buildings and social care facilities	• Adaptable and accessible housing, independent living, assistive and intelligent technologies. • Age-friendly residential environment (emphasise autonomy and well-being). • New types of social care facilities – family and community types. (independence, dignity).	Assignments on various topics (for example): • Adaptability of the living environment, which reflects life changes and ageing processes. • Examples of adaptable/accessible housing.
Multisensory environment and wayfinding in the built environment	• Principles of multisensory information and wayfinding systems in the built environment. • Cognitive perception in the built environment, strategies for intuitive circulation system design, the articulation of entry points, and the creation of multisensory spaces.	Assignments on various topics (for example): • How spatial clarity and sensory cues contribute to understandable and accessible environments. • Interactive quiz to identify building typologies, highlighting the intuitive architectural legibility.

Table 4.16. Teaching Framework on Design for EDI (Architecture and Urban Design, Advanced Module).

Expected Learning Outcomes and Assessment

By the end of the advanced module, students should be able to understand the diversity of people and impact of the built environment on people. Students should be able to explain basic human rights and legislative regulations related to the built environment. Students should be able to understand and apply EDI concepts and human-centred methods in the built environment (Design for All, Universal Design, accessibility, usability, visitability, adaptability, etc.).

The assessment during the module is based on active involvement of students in the empathic exercises, on-site surveys, discussions and identification of barriers. It is important to provide evaluation throughout the whole course/module, for example by using quizzes, student presentations, and discussions. The assessment at the end of the module focuses on the knowledge and implementation of EDI principles and Human-Centred Design of the built environment for diverse users. The examination of students is based on short essays, reports, and workshops during the module and written test at the end of the module.

4.7 A Cross-Disciplinary Perspective on the Teaching Framework

Emilio Rossi

Across the five disciplinary fields, the European Teaching Framework combines a common pedagogical architecture with different interpretations of EDI according to the specific methods, scales and objects of design. The progression from introductory to intermediate and advanced levels supports the gradual development of awareness, methodological competence, critical reflection, collaboration and responsibility, while allowing each discipline to define appropriate topics, activities, forms of stakeholder engagement and assessment strategies. Rather than standardising design education, the Framework

therefore provides a shared structure through which EDI principles can be embedded, adapted and progressively developed in different educational contexts.

The comparison across System Design, Industrial Design, Product Design, Digital Design and Architecture and Urban Design shows that EDI can enter the design process through different disciplinary perspectives. System Design foregrounds relationships between actors, services, infrastructures and governance; Industrial Design focuses strongly on users, products, prototyping and the consequences of material and production choices; Product Design extends this perspective towards structural inequalities, intersectionality, care and the social meanings embedded in designed artefacts; Digital Design addresses accessibility, interaction, representation and participation across digital and hybrid systems; while Architecture and Urban Design emphasises the relationship between human diversity, spatial experience, accessibility, multisensory perception and the built environment. These differences do not weaken the coherence of the Framework. On the contrary, they demonstrate that a common orientation towards EDI can be translated through different design cultures without reducing their disciplinary specificity.

A particularly significant cross-disciplinary finding concerns the progression between the three educational levels. Progression is not understood simply as an accumulation of increasingly specialised content, but as a gradual transformation in the way students engage with EDI and in the type of responsibility they assume within the design process. At introductory levels, students are primarily asked to recognise exclusion, question assumptions about the "average user", understand human diversity and identify barriers embedded in existing products, services, environments and interactions. At intermediate levels, this awareness is translated into more explicit design criteria through research, stakeholder analysis, accessibility considerations, prototyping, testing and iterative development. At advanced levels, students are increasingly expected to address complex and systemic forms of exclusion, engage directly with communities and stakeholders and consider the ethical, social and longer-term implications of their proposals. The three-level structure therefore provides a pedagogical pathway from awareness to application and, ultimately, to greater autonomy and responsibility.

This progression also makes EDI increasingly observable within the learning process. Across the five disciplinary frameworks, students are not expected only to declare inclusive intentions, but to demonstrate how these intentions influence problem framing, research choices, design criteria, concepts, prototypes, interactions and final decisions. Evidence may take different forms according to the discipline, including audits, maps, scenarios, research documentation, prototypes, accessibility evaluations, stakeholder feedback, testing reports or reflective materials. What remains common is the need to establish a traceable relationship between evidence and design action. Assessment consequently extends beyond the quality of the final outcome to include the process through which decisions are made, tested, revised, documented and justified. In this sense, the Framework contributes to making EDI a design competence that can be progressively learned, practised and assessed rather than remaining an implicit ethical aspiration.

Another recurring element is the transformation of the roles traditionally assigned to educators, students and external participants. Educators increasingly act as facilitators of inquiry, experimentation and critical reflection rather than simply as providers of predefined solutions. Students progressively move from receiving knowledge about EDI to actively investigating exclusion, negotiating design decisions and assuming responsibility for the consequences of their proposals. Users, communities, municipalities, organisations, experts and other stakeholders can in turn move from being sources of information

to becoming contributors to research, validation and, where appropriate, co-design processes. This transition from "designing for" towards more collaborative forms of "designing with" connects methodological innovation with questions of agency, representation and decision-making power.

At the same time, the Framework does not imply that every module must use the same degree of participation, the same methods or the same forms of assessment. The teaching experimentations discussed in **Chapter 3** showed that educational contexts differ in terms of curricular level, duration, student numbers, disciplinary traditions, available resources and opportunities for direct stakeholder involvement. The purpose of the Framework is therefore not to remove such differences, but to provide educators with a common pedagogical reference through which they can make deliberate choices about how EDI is introduced and developed. What can be transferred across contexts is not necessarily a particular exercise or teaching tool, but a pedagogical logic connecting learning objectives, appropriate methods, evidence, reflection and assessment.

This also has implications for the position of EDI within curricula. The five disciplinary frameworks suggest that isolated modules can provide valuable entry points, particularly where EDI is being introduced for the first time, but the longer-term educational ambition is broader. EDI can progressively become a transversal criterion through which students learn to interpret design problems, identify whose perspectives are represented or overlooked, select appropriate research and design methods and evaluate the consequences of their decisions. Curricular integration does not mean that disciplinary differences disappear, but that questions of access, participation, diversity, representation and responsibility become part of the criteria through which design quality is discussed and assessed.

The European Teaching Framework should therefore be understood as a flexible pedagogical reference rather than as a fixed curriculum or a prescriptive sequence of activities. Its value lies in the balance between coherence and adaptability: a shared progression, common educational principles and comparable forms of evidence make transfer and further development possible, while disciplinary, institutional and contextual variation remains essential for meaningful implementation. The five disciplinary frameworks consequently represent different pathways within a common educational logic, offering educators points of entry that can be selected, combined or progressively integrated according to their programmes, students and learning objectives.

In this perspective, the Framework represents an important transition within the EDIDesK process. The mapping and comparative analysis developed in **Chapter 2** identified existing teaching approaches, methodologies, tools and competences; the parallel experimentations presented in **Chapter 3** tested how EDI principles could operate within real educational settings; and the present chapter translates these findings into a structured European pedagogical reference. **Chapter 5** examines the digital teaching and learning platform and the infrastructure developed to support access to and sharing of Design for EDI resources, while **Chapter 6** critically reviews the broader implications of the project results, including the conditions required for transferability, assessment and future implementation. The Framework should thus be read not as the endpoint of the process, but as a shared foundation from which Design for EDI education can continue to be tested, adapted and developed across disciplines and institutional contexts.

General note on Chapter 4

This chapter draws primarily on EDIDesK Deliverable D3.4.1, *European Framework on Design Education for EDI*, developed within Work Package 3 (WP3).
The deliverable presents the European Teaching Framework on Design for EDI, structured across five disciplinary fields and three progressive educational levels: introductory, intermediate and advanced. The Framework builds on the research, teaching experimentations and assessment activities developed throughout WP3 and translates the evidence collected across the partner institutions into a shared and adaptable pedagogical structure for integrating Equality, Diversity and Inclusion into design education.
D3.4.1 was published in English, Italian, Polish, Slovak and Spanish, supporting its dissemination and potential adaptation across different European educational and disciplinary contexts.

The complete documentation can be accessed through both the project website and the dedicated repository. Available at:

- ↗ EDIDesK project website – www.edideskproject.com
- ↗ Book repository – https://drive.google.com/drive/folders/14cizQvxRAHK4iRiII26i4I1pOMGmDUDF











On this page: EDIDesK Conference “Design for Equality, Diversity and Inclusion”, organised by AccessibleEU and the Faculty of Architecture and Design STU, Bratislava, Slovakia, 19 February 2026.







On this page: highlights from the EDIDesK project meeting and platform validation workshop at the Slovak University of Technology in Bratislava, Slovakia, 20 February 2026.

05

Digital Teaching and Learning Platform for EDI

Edited by Massimo Menichinelli

With contributions by
Alessia Brischetto, Julia Carrasco Parodi, Sarah Jane Cipressi, Michal Kacej, Patrycja Rudnicka, Marta Więckowska

5.1 Digital Education, Systemic Intelligence and the Benefit of Open Contents

Patrycja Rudnicka, Marta Więckowska

Digital media and technologies can be used broadly to shape and support educational experiences. Digital education is often discussed within the umbrella term of Open, Distance, and Digital Education (ODDE). ODDE includes varied and nontraditional teaching practices mediated by various media and technologies; therefore, apart from e-learning, it also encompasses blended learning, flipped learning, and other distance teaching and learning practices. It not only presents and delivers educational content but also supports and facilitates the whole set of interactions, communication, collaboration, as well as assessment and evaluation in the pedagogical process (Zawacki-Richter & Jung, 2023, p. 6). Digital education is present at all education levels. Due to the flexibility offered by digital technologies, it is easier to provide lifelong learning to wide and varied groups previously excluded because of limitations of time or distance. Open digital education can also help overcome socio-economic barriers, contributing to the growth of knowledge regardless of privilege.

Recently, due to the COVID-19 pandemic, digital education became an overnight saviour and subsequently entered the mainstream. However, its history is much longer and tightly tied to technological and societal changes of the late century. Tracing back to the beginnings of digital education, computers became natural successors to postal-based services and traditional media like print, radio, and television starting in the late 1950s and 1960s. Then the development of modern memory technologies for floppy discs and CDs made digital education even easier and more portable, as many distance-education institutions switched to them to deliver educational content. Starting in the 1990s, internet-based services began to take the stage. The most important technological advancement was the emergence and evolution of Learning Management Systems (LMSs) such as Moodle and other commercial systems (Weller, 2023). Entering the twenty-first century, technological developments have brought Web 2.0 tools and online environments. They changed the philosophy of the educational process through connectivity, personalisation, multimedia, and the transformation of the teacher's role from a mentor to a coach. Also, multi-user virtual worlds, including the most famous, Second Life, attracted many institutions and individual providers. Simultaneously, mobile technologies began to rise and shape the landscape of app-based and social-media-rich informal educational ecosystems (Rudnicka, 2011). It is also necessary to mention MOOCs (Massive Open Online Courses), which originated at the University of Manitoba in 2008 and were popularised with the MIT OpenCourseWare project and Stanford University's offering. MOOCs proved to be a disruptive innovation, praised by the media, which declared 2012 the year of MOOCs. They were the first e-learning approach to enter the mainstream, facilitated virtual mobility, and subsequently accelerated the commercialisation of distance education. MOOCs, due to their popularity, also highlighted the challenges of distance teaching and learning (Weller, 2020).

However, it is worth noting that the history of digital education is nuanced, and the distribution of innovation has always been uneven, with niche examples of technology-based education existing long before they became widely available. As Xiao (2023) mentioned, for many years, ODDE has been marginalised and stigmatised as an alternative to traditional education despite growing demand and popularity in varied environments from big corporations to remote or economically deprived regions. The COVID-19

pandemic accelerated the adoption of digital education, and while it fits our times, it also placed new demands on teachers, institutions, and students. Furthermore, digital education is an established field of academic research, with journals, associations, and conferences. The wide variety of topics spans from digital pedagogy and instructional design to critical studies of equality and accessibility.

Today's landscape of digital education embraces a broad spectrum of technologies, pedagogical approaches, and learning environments. The traditional ecosystem of universities, schools, educational companies, non-profit organisations, professional associations, and governmental agencies is now complemented by individual content creators on social media who deliver educational content. Those stakeholders offer educational opportunities, both formal and non-formal, which differ in scope, quality, and accessibility. With a variety of tools ranging from learning management systems and MOOCs to virtual and augmented reality, mobile applications, digital platforms supporting the self-publishing of courses and other materials, social media, and AI-based solutions, it is very easy to become an educator. Simultaneously, digital education becomes more open, and the EDI platform is an excellent example of how it might work, and more closed, as for many institutional and commercial players, digitalisation just offered easier ways of limiting and monetising access to knowledge. Such dynamics create and force a market-oriented approach and commoditisation of knowledge and education, bringing their own challenges. However, as this chapter focuses on open education, the discussion will be limited to challenges that arise across different educational models, regardless of how learning is financed or delivered. Among them, the issues of quality, reliability, and accountability are most often discussed in the context of gatekeeping institutions no longer controlling the industry. This creates a new role for educational institutions: they should become curators of knowledge. Then, platform capitalism – relying on commercial partners to deliver tools and services – is increasingly scrutinised because of the value disconnect between open education and the threats to sovereignty and privacy that platforms pose. Also, the digital divide is still a challenge in many deprived regions, limiting access to resources. Finally, the challenges associated with education taking place outside the social context of the physical classroom, and the resulting effects on interaction, motivation, soft skills and well-being, are also important. Despite those challenges, digital and open education still offers unique opportunities to realise humanistic values and democratise teaching and learning, thereby making knowledge and information universally accessible across borders, demographics, and cultural and economic divides.

Systemic intelligence conceptualises the capacity of learners, educators, and institutions to understand and act effectively within complex educational systems. Recognising that modern e-learning is in fact a socio-technological system composed of two independent yet interacting elements – technology, which facilitates tasks and processes, and human elements, which shape content, relations and results – open content often catalyses such synergistic activities. While digital technologies enable the delivery and execution of teaching and learning, it is important to recognise institutional and human input as key to conscious, quality-based education that reflects the values of openness, equity, and accessibility. Among many approaches, the use of open, curated sources and tools that support equality and inclusive access enhances effectiveness and justice in education.

Open content describes all work that is published using any medium, digital or otherwise, under licenses that allow anyone to freely retain, reuse, revise, remix, and/or redistribute (5R) the material without needing explicit permission. This includes both public

domain materials and those on no-cost and open licenses that allow for all or some of the aforementioned 5R activities (Wiley, 2023). Open educational resources (OER) are often distributed as internet-based digital content materials available for academic purposes to instructors, students, and researchers (Adil *et al.*, 2024). There are a variety of technologies and types of materials delivered as OERs, and the goal is to facilitate universal access to information for everyone, everywhere (UNESCO, 2024). OERs allow us to overcome inequalities in access to education regardless of economic, cultural, social, environmental, or heritage barriers. It promotes affordability and, due to its digital nature, is increasingly easy to access and use. However, the realization of social inclusion and equitable access to education through OERs must be supported by several strategies identified by Lourenço, Oliveira, and Tymoshchuk (2024): recognising students' needs, developing materials that are context-sensitive and/or adaptable to meet the diverse needs, securing access, adaptability, and connectivity as OERs are distributed digitally, training and supporting teaching professionals and OERs creators in considerate use and creation of equitable materials.

Researchers have explored the benefits of open educational content. Adil *et al.* (2022) divide benefits into four categories: expanded access to learning, lifelong learning support, pedagogical benefits, and enhanced student outcomes. This last category has been systematically supported by research. A large synthesis by Hilton (2020) covering more than 100 thousands students and faculty found that students achieved the same or better learning outcomes while saving substantial money, and a 2024 meta-analysis of 26 studies found higher course grades and higher completion rates in OER courses (Cho & Permzadian, 2024). The Cho and Permzadian (2024) study also investigated the efficacy of OER-based courses on student achievement compared to those that did not use OER. They found a higher completion rate for OER courses and that these courses were associated with higher course grades. The other meta-analysis by Adil *et al.* (2024) additionally focused on quality assurance for OERs, copyright issues, and challenges in finding suitable resources.

In education on Equality, Diversity and Inclusion (EDI), curated open-content platforms address several of the aforementioned challenges, as the process of identifying high-quality sources and materials is carried out by professionals and experts in the field. The platform design also plays an important role in supporting equality and inclusion by guiding users and enabling them to reuse, remix, and adapt materials to different cultural contexts, teaching goals, and students' educational needs. This is also consistent with Clinton-Lisell *et al.* (2021), who emphasise the flexibility of OERs: their benefits are not limited to cost, as OERs support remixing and adaptation; they offer unique pedagogical gains in terms of cultural responsiveness, alignment with learning objectives and better inclusion of diverse students' needs. Therefore, they became not only pedagogical tools but also tools that promote social justice in higher education.

5.2 Digital Platforms and Digital Learning Environments in Design Studies

Alessia Brischetto

Digital platforms have become increasingly relevant in design education, not only as repositories of teaching materials but as environments that shape how knowledge is accessed, organised, shared and reused. In Design for Equality, Diversity and Inclusion (EDI), this role becomes particularly significant. Digital learning environments do not

simply distribute content; they mediate the conditions through which learners encounter concepts, methods, case studies and tools related to inclusive design practice. For this reason, the platform should be understood as part of the pedagogical infrastructure of Design for EDI, rather than as a neutral technical container.

In this sense, digital platforms in design education can be interpreted as socio-technical infrastructures: they do not merely host educational materials, but organise relations between users, contents, rules, interfaces and forms of participation. Their pedagogical value depends on how technical architecture and educational intentions are aligned. In Design for EDI, this is particularly relevant because inclusion is also a matter of access, orientation, visibility, recognition and governance. A platform can enable learning when it makes resources discoverable, supports different levels of expertise and creates conditions for responsible contribution. Conversely, it can reproduce exclusion when its structures, language, metadata or navigation assume a standard user and overlook diversity in abilities, cultures, languages and learning needs (Selwyn, 2016; Star & Ruhleder, 1996).

This perspective is coherent with the methodological analysis developed in **Chapter 2**, where digital tools and digital learning environments were considered alongside analog and hybrid methodologies. Digital resources emerged as enabling conditions for accessibility, personalisation, collaboration, documentation and reuse. Their relevance lies in extending the design studio beyond a single classroom, course or institution, while preserving the situated and iterative nature of design learning. A digital platform can support students and educators before, during and after project-based activities: it can introduce frameworks, provide accessible materials, organise learning pathways, document processes and make resources available for future adaptation.

In Design Studies, the value of a digital environment depends on the quality of its pedagogical design. A platform dedicated to EDI should not be conceived only as an archive of files, but as a curated learning ecosystem able to connect user profiles, content formats, levels of expertise and modes of participation. This requires a service design perspective, in which access flows, user roles, content architecture and interface choices are aligned with educational aims.

From this point of view, the EDIDesK platform can be read as a strategic attempt to translate the principles of Design for EDI into the structure of a digital learning environment. Its open-access orientation responds to the need to make educational resources available beyond individual institutions. Its multilingual ambition recognises that EDI-related knowledge circulates across different cultural and linguistic contexts. Its focus on accessibility and inclusive user experience reflects the idea that a platform devoted to inclusion must enact inclusion through its own modes of access, navigation and content use.

A first strategic dimension concerns users and participation. Digital platforms for design education usually involve heterogeneous actors: students looking for introductory guidance, educators searching for teaching resources, researchers wishing to translate academic knowledge into usable materials, and organisations or communities interested in sharing practice-based experiences. These actors may browse, learn, upload, review, curate, update or disseminate content. Defining user roles is therefore not only an administrative task, but a pedagogical and governance issue: it clarifies how responsibility is distributed across the platform ecosystem.

A second dimension concerns the organisation of content. For Design for EDI, content diversity is essential. Students and educators need access to theoretical texts, case studies, toolkits, methods, videos, podcasts, templates, diagrams and external resources. This plurality supports different learning preferences and teaching situations,

in line with Universal Design for Learning and with recent European guidelines on digital education content, which stress the importance of pedagogical relevance, accessibility and inclusion, reliability, technical compatibility, legal compliance and sustainability when selecting, creating, adapting and evaluating digital learning resources (CAST, 2024; European Commission, 2025; Meyer *et al.*, 2014). At the same time, diversity of formats can become difficult to navigate if it is not supported by clear metadata, tags and descriptions. Metadata are therefore not merely technical fields; they are educational mediators. Information such as title, author, language, source, licence, abstract, EDI-related tags and accessibility notes helps users understand the relevance, reliability and usability of each resource.

A third dimension concerns learning pathways. In an open repository, users may feel disoriented when the topic is broad, interdisciplinary or conceptually complex. For this reason, curated itineraries can play a key pedagogical role. They transform a collection of resources into a progressive learning experience, organising materials according to themes, levels, learning objectives and possible uses in teaching. Itineraries can move from introductory concepts to more advanced perspectives; they can combine formats and support different degrees of autonomy. In this sense, they bridge the repository logic with the logic of curriculum design.

From this perspective, curation becomes a pedagogical act. Selecting, describing, sequencing and updating resources are not neutral operations: they influence how learners enter a topic, which connections they are able to recognise and how they progressively build critical understanding. Metadata, tags, itineraries and glossary entries therefore function as educational mediators. They transform an open repository into a navigable learning environment, reducing disorientation and supporting different degrees of autonomy. This is especially important in EDI-related fields, where concepts are often interdisciplinary, context-dependent and ethically sensitive.

The glossary has a similar strategic value. EDI-related concepts are often contested, context-dependent and interpreted differently across disciplines and communities. A glossary can support shared understanding without reducing complexity: it helps learners and contributors navigate terminology, recognise different perspectives and connect concepts to design practice. Terms such as accessibility, inclusion, intersectionality, co-design, learner variability or Universal Design for Learning can be used in different ways. A glossary can therefore become an instrument of conceptual orientation and critical literacy.

Accessibility represents a transversal requirement. In an inclusive digital learning environment, accessibility cannot be postponed to the end of the design process or treated as an optional compliance layer. It must be embedded in content creation, upload procedures, interface design and review workflows. Documents should be machine-readable and structured through headings and lists; images and diagrams should include meaningful textual alternatives; videos should include captions or subtitles; audio and video materials should provide transcripts whenever feasible. These requirements are consistent with broader accessibility frameworks, including WCAG and European accessibility standards (European Telecommunications Standards Institute, CEN, & CENELEC, 2021; World Wide Web Consortium, 2023). They also support a broader pedagogical principle: materials should be usable by people with different sensory, cognitive, linguistic and technological conditions.

Quality assurance and ethical responsibility are equally important. Openness does not mean absence of review. Open educational platforms require clear criteria to ensure that resources are relevant, properly attributed, legally shareable and respectful of individuals

and communities. This is especially relevant in EDI-related fields, where materials may address sensitive issues such as disability, gender, marginalisation, cultural representation, bias or unequal participation. Review workflows, licensing checks, attribution rules, moderation procedures and reporting mechanisms are therefore part of the educational design of the platform. They help maintain trust and protect the coherence between the platform's values and its operational practices.

These dimensions are synthesised in Fig. 5.1, which represents the platform as an ecosystem connecting users, the repository, itineraries, the glossary, accessibility requirements and governance mechanisms. Its aim would be to show that digital learning environments for EDI operate through the interaction between pedagogical, technical and ethical conditions.

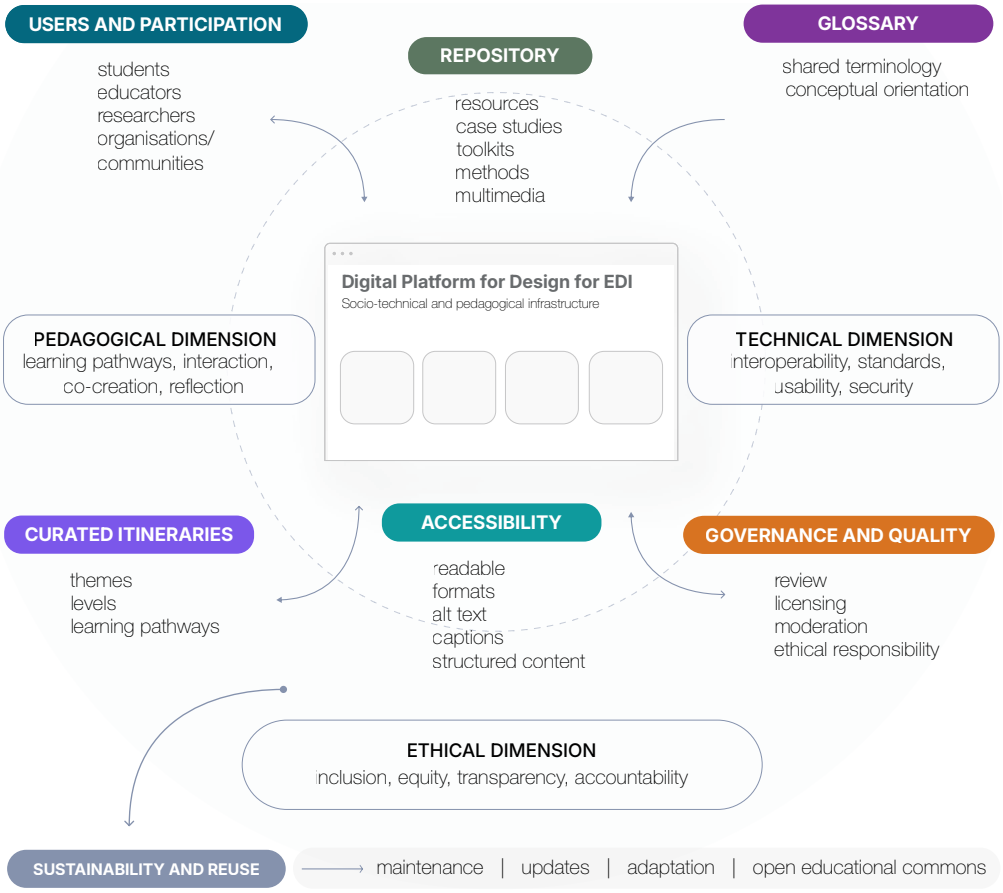


Figure 5.1. The digital platform as a pedagogical infrastructure for Design for EDI.

A further issue concerns sustainability. Digital learning environments risk becoming static archives if they are not maintained, updated and connected to a community of users. Sustainability therefore depends on content governance, version control, contributor engagement and the possibility of adapting resources over time. In this sense, the platform can be understood not only as a repository, but as an open educational commons: a shared infrastructure whose value depends on access, contribution, review,

maintenance and collective responsibility (Wiley & Hilton, 2018). This living character is particularly important for EDI, because terminology, legal frameworks, accessibility standards and social debates evolve over time.

Nevertheless, digital platforms also present limitations. They can reproduce exclusion if access to devices, connectivity, language skills or digital literacy is uneven. They can create cognitive overload if navigation is unclear or if too many resources are presented without orientation. They can flatten complex issues if automated translation, tagging or recommendation systems are used without critical review. For these reasons, digital learning environments should be integrated with studio-based and collaborative activities rather than replacing them. Their role is to support, extend and document learning, not to substitute the relational and situated dimensions of design education.

In synthesis, digital platforms and digital learning environments can play a strategic role in Design Studies when they are conceived as pedagogical infrastructures. They can make Design for EDI more accessible, transferable and sustainable by supporting open access, multilingual navigation, curated pathways, shared terminology, quality review and ethical governance. Their contribution, however, depends on intentional design. A platform becomes educationally meaningful when its technical architecture, content rules and user experience are aligned with inclusive pedagogical objectives. In this sense, the EDIDesK platform does not only collect resources on Design for EDI; it provides a model for thinking about how digital learning environments can embody EDI principles through their own structure, governance and modes of participation.

5.3 Design and Development of the first Digital Learning Platform for Design for EDI

Julia Carrasco Parodi, Massimo Menichinelli

The design and development of the EDIDesK digital learning platform emerged through an iterative and participatory process aimed at creating an accessible and collaborative learning environment dedicated to EDI in design (Laitano, 2017). The methodology adopted combined participatory design approaches, platform analysis, and user testing. Rather than being conceived as a linear process and fixed technological product from the outset, the platform evolved progressively through cycles of co-design, testing, feedback, and redesign, ensuring alignment between pedagogical ambitions, users' needs, and technical feasibility (see General note on Chapter 5).

The initial stage of the process consisted of a co-design workshop organised at the Università degli Studi di Firenze (UNIFI) during the EDIDesK Halfway Meeting. Representatives from all partner institutions participated in the workshop, which, through brainstorming activities and mapping exercises, was conceived as a collaborative space to collectively define the foundational dimensions of the future platform. Participants explored the potential users of the platform, the type of content to be included, and the core functionalities required to support teaching and learning related to EDI in design, establishing the basis for the platform's general structure.

The collaborative discussions enabled the identification of key priorities and design criteria that would guide subsequent development phases. Importantly, the workshop also reinforced the centrality of EDI principles within the platform itself. Beyond content-related concerns, accessibility and inclusivity were given particular consideration throughout the design process, with the aim of creating a space where every student, regardless of their abilities and background, has the opportunity to learn (Baroni & Lazzari, 2022).



Figure 5.2. Workshop in Florence. Photo: EDIDesK project team.

Inclusivity also informed the diversification of learning methods. Users can choose different levels of autonomy when navigating the platform and access a variety of materials, from articles to videos and podcasts, to support different learning styles.

Following the workshop, the inputs generated by participants were systematised and analysed by the team responsible for the design and technical implementation of the website. This phase focused on evaluating the feasibility of the proposed ideas within the technical and organisational constraints of the project. Special attention was dedicated to identifying which functionalities and structures could realistically be implemented during the following stages of development. The outcomes of this first analysis were subsequently shared with project partners in order to foster further discussion and collective reflection. Through this iterative dialogue, a more refined vision of the platform emerged, including a preliminary definition of its architecture, content organisation, and modes of use. The development process therefore remained highly collaborative, with decisions continuously negotiated between pedagogical aspirations and technical possibilities.

In order to further refine the platform's structure, the development team conducted a comparative analysis of existing open-access and collaborative digital platforms. Several reference platforms informed this analysis in different ways, that contributed on shaping the governance framework and the organisational logic of the EDIDesK Platform:

- Wikipedia (1) was examined for its open contribution model, role differentiation, transparent revision histories, and conflict-resolution mechanisms.
- The Internet Archive (2) served as a reference for open-access strategies, metadata organisation, and rights transparency across multiple media formats.
- Institut d'Humanitats de Barcelona (3) was considered particularly relevant for its curatorial approach to educational content and its ability to mediate between academic rigour and public accessibility.

This benchmarking phase sought to identify both best practices and potential risks associated with open contribution models and collaborative educational environments, such as misrepresentation and the reinforcement of dominant voices, a common issue that can arise unless it is actively addressed (Yun *et al.*, 2019). Also, studies highlighted challenges related to quality assurance, moderation and intellectual property (OECD, 2007; Sclater, 2007; Staley, 2009). These insights informed EDIDesK's governance framework, which combines open participation with structured curation, explicit equity goals, and clear review and moderation mechanisms to mitigate the risks observed in existing platforms while drawing on their best practices.

At the same time, the technical development team explored different solutions for the creation of an accessible and multi-format repository. This included testing and evaluating WordPress plugins that offer advanced functionalities for organizing digital collections through metadata systems, filtering mechanisms, and user-friendly search tools. The objective was to ensure that the platform would support diverse forms of educational content while remaining intuitive and accessible for users with different levels of digital literacy and diverse sensory or cognitive needs.

The entire development process was characterised by close integration between the conceptual design and the technical implementation. Rather than defining the platform architecture in isolation from technological constraints, the structure, functionalities and user roles were developed in parallel with the technical capabilities available to the project team. This iterative methodology enabled the platform's requirements, rules and interaction systems to evolve progressively through continuous testing and feedback. Rather than being considered as 'fixed' guidelines, they were conceived as living, adaptable ones that would be reviewed and reshaped throughout the entire construction and implementation process. This created the idea of the website as a never-ending prototype that would have to adapt to the needs and uses of all those involved in building, maintaining and using it.

Based on the results of the comparative analysis and the technical evaluations, a first prototype of the platform was developed. This prototype was then shared with project partners during a second co-design workshop, where particular attention was dedicated to the usability of the platform, the clarity of its collaborative structure, and the effectiveness of its pedagogical approach to EDI in design. The workshop highlighted the importance of ensuring that users could easily understand both the organisational logic of the website and the collaborative opportunities it offered. Feedback collected during this phase resulted in significant modifications to the platform architecture and user experience.

Following these revisions, the prototype was presented to external participants, including academics and professionals who could potentially act as future contributors and learners within the platform ecosystem. Their feedback provided valuable insights regarding accessibility, usability, and the clarity of the contribution and learning processes. Additional redesign phases were subsequently carried out in response to this feedback. A further stage of testing was then conducted with students, who represented one of the platform's primary target audiences. This phase focused particularly on evaluating the usability of the platform, the comprehensibility of its structure, and the effectiveness of its learning pathways. The feedback collected during student testing informed a final redesign process aimed at improving navigation, accessibility, and the overall user experience.

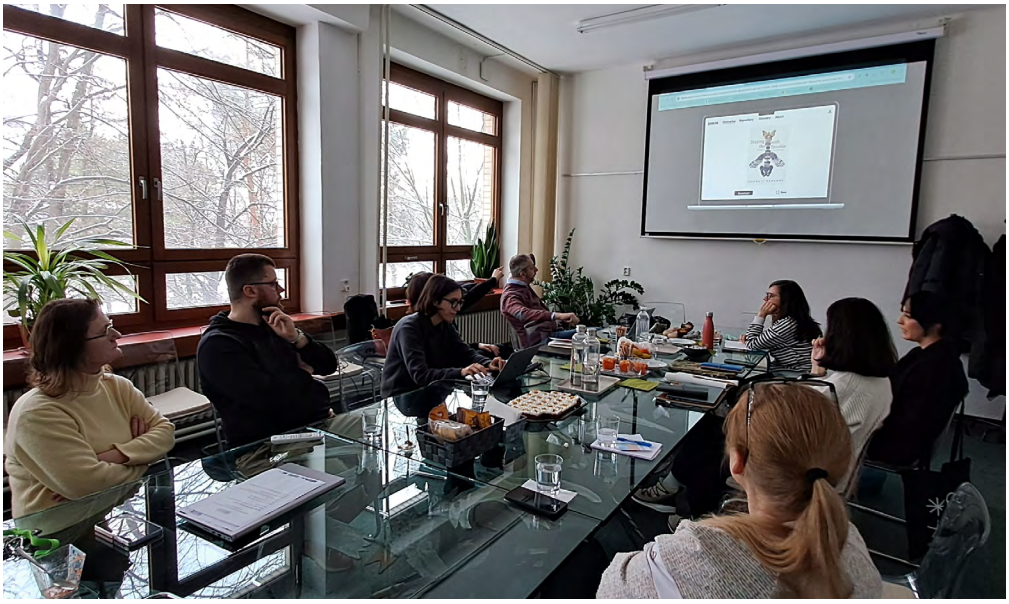


Figure 5.3. Workshop in Bratislava. Photo: EDIDesK project team.

Throughout all stages of development, the platform remained strongly informed by the principles of Universal Design for Learning (CAST, 2024), particularly through the provision of multiple means of engagement, representation, and action and expression. This approach sought to ensure flexible access and participation for users with diverse learning needs and backgrounds. Given the sensitive and often complex nature of EDI-related topics, considerable attention was also devoted to the establishment of clear review mechanisms, ethical guidelines, and quality assurance processes capable of supporting respectful, reliable, and academically rigorous content.

5.4 Architecture of the EDIDesK Digital Teaching Platform and User Profiles

Julia Carrasco Parodi, Massimo Menichinelli

The EDIDesK platform has been conceived as an open-access digital teaching and learning environment dedicated to supporting EDI within design education and practice. Addressed to students, educators, researchers, and practitioners, the platform seeks to facilitate the integration of EDI principles into design learning through accessible, collaborative, and continuously expandable resources. Rather than functioning solely as a digital repository of information, it is conceived as an active learning ecosystem in which knowledge is collected, organised, contextualised, and continuously enriched through community participation. The platform architecture combines pedagogical structure with collaborative participation, allowing users to access knowledge and contribute to its development and dissemination. This approach reflects the understanding that EDI-related knowledge is constantly evolving and benefits from multiple perspectives, experiences, and disciplinary backgrounds.

The platform is structured around three interconnected components: the repository (archive), the itineraries (learning paths) and the glossary (shared vocabularies). Together, they create a rich ecosystem that allows users to navigate the platform in diverse ways,

removing barriers to learning through different methods of engagement and expression and therefore facilitating equitable access to the platform (Baroni & Lazzari, 2022; Kumar & Wideman, 2014). These elements are supported by different user profiles (learners, contributors, reviewers, and platform coordinator), each associated with specific responsibilities and permissions that ensure both openness and quality control within the platform (see Fig. 5.4).

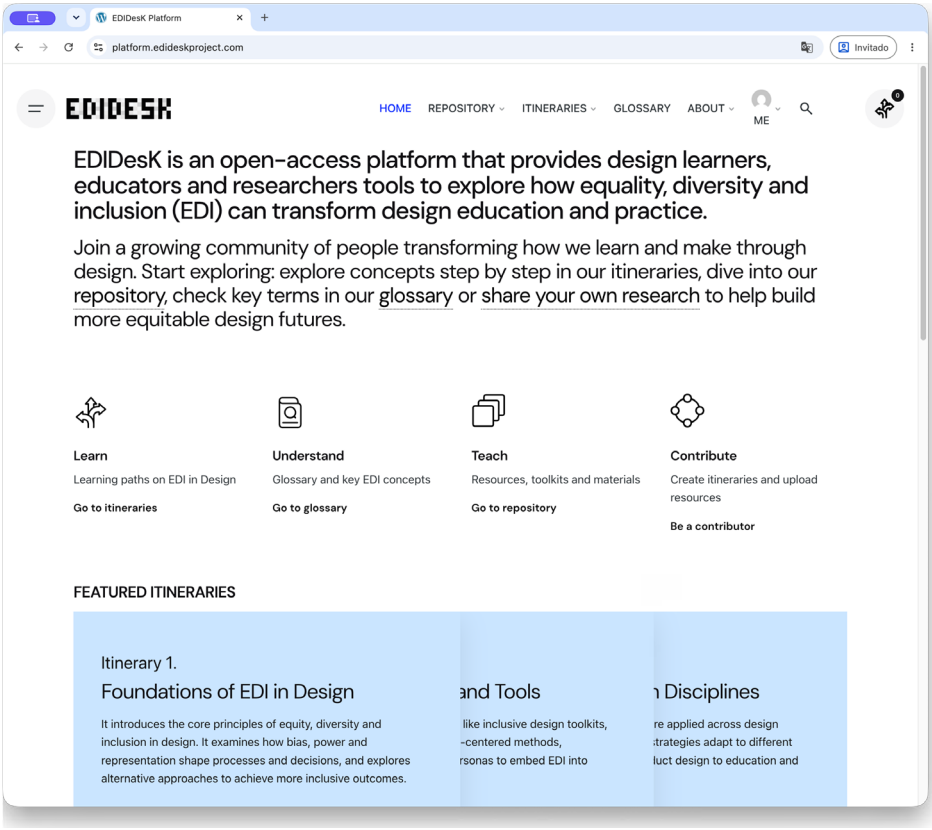


Figure 5.4. EDIDesK platform's "Home" page. Photography by the authors. © EDIDesK project, platform.edideskproject.com.

At the centre of the platform architecture lies the repository, which functions as the primary infrastructure for the collection and organisation of educational resources related to EDI in design. As the core archive of the platform, the repository embodies the principles of accessibility and collaboration that underpin EDIDesK. It hosts a wide range of materials intended to support diverse learning preferences, educational contexts, and levels of expertise, including: academic publications such as journal articles, conference papers and book chapters, alongside non-academic materials including presentations, position papers, and ad hoc reports, multimedia and practice-oriented resources such as videos, podcasts, case studies, methodologies, toolkits, templates for content development, images, diagrams, flowcharts, and relevant external links. This diversity of formats aims to acknowledge and adapt to a diversity in learning objectives and preferences (see Fig. 5.5A).

All repository materials must comply with a set of minimum requirements to ensure quality, discoverability, accessibility, and ethical responsibility. Contributors are required to provide relevant metadata, including title, authorship, publication year, language, source information, licensing information, description, thematic tags, and accessibility notes. These elements support the organisation and retrieval of resources while ensuring transparency regarding authorship, provenance, and conditions of use. They also help users understand the relevance and conditions of use of each resource (see Fig. 5.5B).

Building upon the repository, the itineraries constitute the pedagogical core of the platform. These itineraries are conceived as curated learning pathways that organise selected materials into coherent thematic sequences related to specific EDI topics in design. Rather than functioning as simple collections of resources, itineraries are designed to guide users progressively through learning processes that move from introductory concepts toward more advanced, critical, or reflective perspectives.

To ensure pedagogical coherence and educational value, itineraries are developed according to a number of content requirements. Each itinerary has to include a minimum of five resources in order to provide sufficient depth and progression, and materials have to be arranged in a clear and logical sequence. Furthermore, itineraries are required to integrate at least two different content formats – for example combining academic texts with videos or podcasts – to accommodate diverse learning preferences and accessibility needs. Also, given the evolving nature of EDI and Design discourse and practice (Prendeville & Koria, 2022), itineraries are encouraged to incorporate recent and up-to-date resources whenever possible. Where older materials are retained due to their historical or theoretical significance, contributors are expected to provide contextual notes explaining their continued relevance. This approach supports critical engagement with knowledge while recognising that foundational concepts may require interpretation according to contemporary contexts (see Fig. 5.6).

Complementing the repository and itineraries, the glossary serves as a shared conceptual reference framework that supports a common understanding of terminology related to EDI in design. The glossary is intended to facilitate accessibility and inclusivity by clarifying theoretical, methodological, and pedagogical concepts that recur throughout the platform. In this sense, it functions as a reference and educational component that supports learners who may be unfamiliar with EDI discourse or design-specific terminology.

The glossary encompasses a broad range of terms associated with EDI in design: from foundational concepts such as “Equality” or “Gender” to methodologies and pedagogical concepts, such as “Universal Design for Learning”. Each glossary entry is structured to maximise clarity and educational value, combining an accessible definition with an explanation of the concept’s relevance to EDI in design and a list of credible academic or community-based references underpinning the definition.

However, as language is always situated in its historical and cultural context (Wardhaugh, 2006) and concepts are understood not as fixed but as complex – that is, always incomplete and often contradictory – glossary terms are expected to change over time and across contexts (Prendeville & Koria, 2022; Sum *et al.*, 2025). Therefore, glossary terms should be open to change and even divergences within the same text to reflect diverse worldviews. This openness allows the glossary to function as an evolving pedagogical resource rather than as a fixed taxonomic system. It can therefore support comparison, critical reflection and discussion across different learning contexts and disciplinary perspectives.

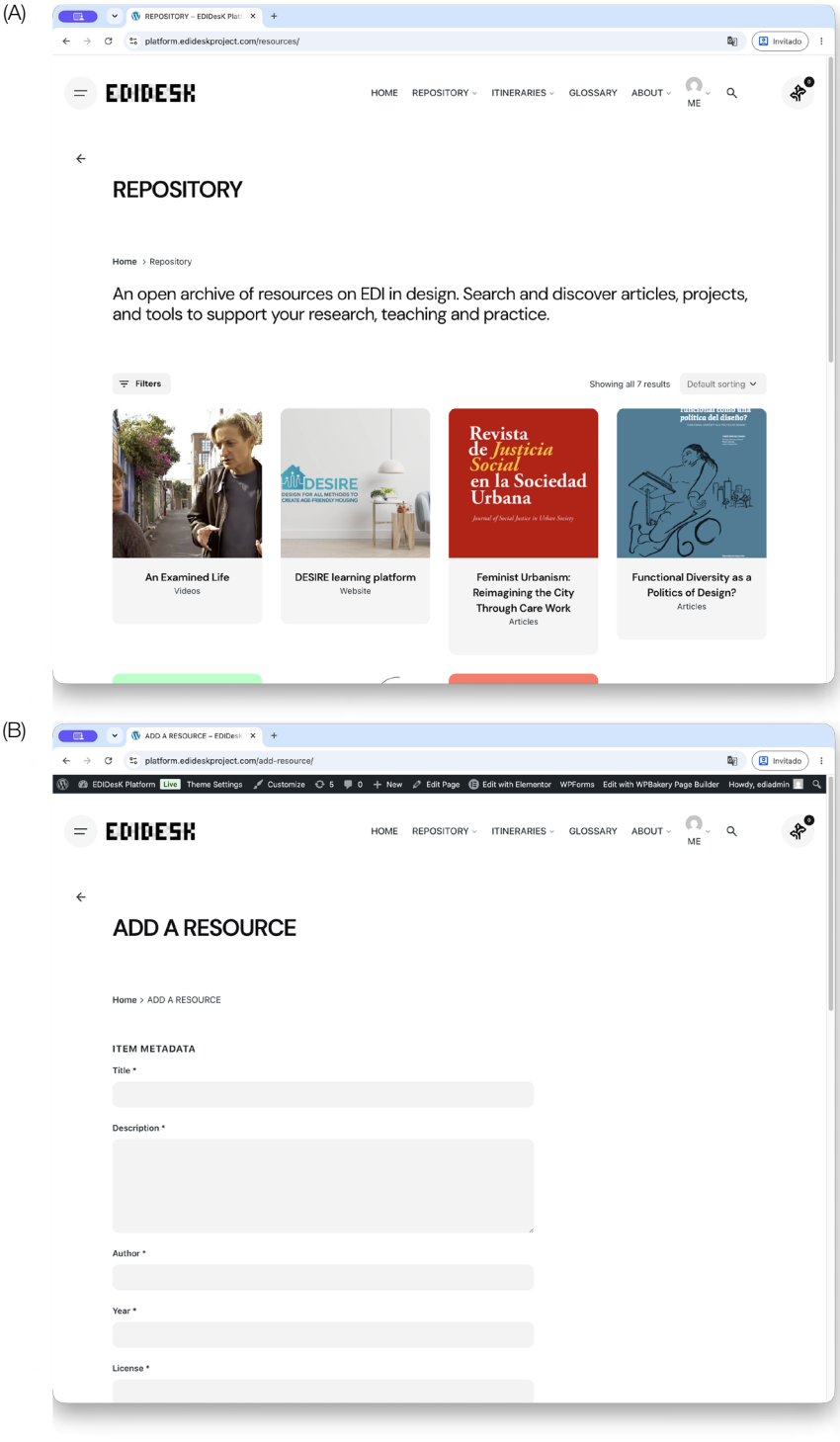


Figure 5.5. EDIDesK platform: (A) “Repository” page; (B) “Add a resource” page. © EDIDesK project, platform.edideskproject.com.

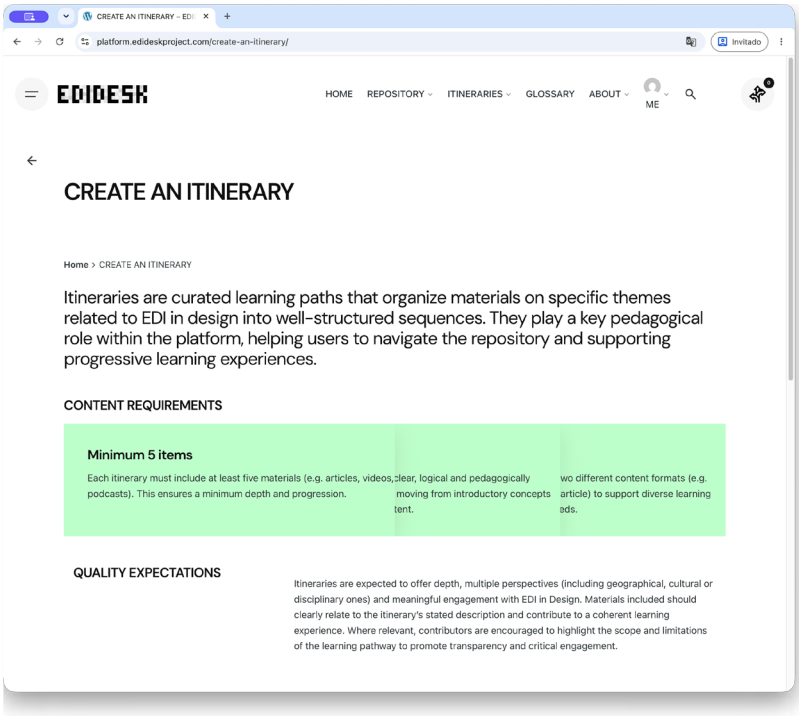


Figure 5.6. EDIDesK platform's "How to create an itinerary" page. © EDIDesK project.

Within this architecture, learners represent the primary audience engaging with EDIDesK resources. As the main beneficiaries of the platform, learners interact with materials according to their own interests, educational needs and learning pathways. The platform follows Universal Design for Learning (UDL) principles by providing flexibility in how users access, engage with and navigate educational content (Houston, 2018; Zaballos *et al.*, 2023). Learners are able to browse and download repository materials, consult itineraries and access glossary entries according to their own learning objectives. Additionally, the platform allows learners to create private collections of resources for personal use, enabling them to organise materials according to individual trajectories and areas of interest. These collections remain private and cannot be shared with other users, supporting autonomous and personalised learning experiences.

The development and maintenance of the content (in the repository, itineraries and glossary) is primarily undertaken by contributors, who are responsible for uploading and updating educational materials within the platform. Contributors may include educators, researchers, practitioners, or community members with demonstrated experience or engagement in EDI and design. In order to ensure alignment with the platform's pedagogical, ethical and accessibility standards, contributor status is granted following a review process. Applicants are required to demonstrate relevant expertise, verify their identity through institutional or professional affiliations, and agree to the platform's policies regarding content quality, accessibility, ethics and licensing. The collaborative nature of the repository therefore remains balanced with mechanisms designed to preserve the reliability and integrity of the platform. Contributors maintain responsibility for ensuring that uploaded materials are appropriately credited, legally shareable, and respectful of

individuals, communities and contexts represented. Materials that do not meet minimum requirements regarding licensing, attribution, accessibility, or relevance to EDI in design are subject to revision or exclusion from publication.

Page	Description
Repository	Space for collecting and organising educational resources related to EDI in design.
Itineraries	Guided learning paths lead learners through key EDI themes in design. These paths combine curated readings, case studies and multimedia resources to help learners explore concepts step by step and apply them to their own projects or teaching.
Glossary	A shared space for understanding key concepts of EDI and design that acknowledges the complexity and evolving nature of language.

Table 5.1. Overview of the architecture of the EDIDesK platform.

To ensure academic quality and the ethical appropriateness of the content, the platform also has reviewers and a Platform Coordinator. Reviewers' roles include approving new itineraries and glossary entries, evaluating proposed modifications, overseeing quality assurance procedures and managing potential conflicts related to content or platform use. The Platform Coordinator is responsible for the long-term management, development and strategic direction of EDIDesK. This role involves supervising quality assurance processes, supporting conflict resolution, promoting the platform and ensuring its continued implementation and sustainability over time. The Platform Coordinator also plays an important role in identifying opportunities for future content development and ensuring that the platform remains responsive to emerging debates and practices within EDI and design education. Through this structure, the platform seeks to maintain a balance between collaborative participation and academic rigour.

Role	Actions	Responsibilities
Contributors	Upload materials to the repository; create new itineraries and glossary entries; propose modifications to existing itineraries or glossary entries.	Ensure the content uploaded complies with the platform's standards; respond to review requests; collaborate with reviewers and other contributors to improve content quality.
Learners	Browse and download repository materials; view itineraries and the glossary; create private collections.	Respect platform terms of use and intellectual property rights.
Reviewers	Appoint new contributors; oversee quality and conflicts; approve publication of new itineraries or glossary entries; approve modifications to existing itineraries or glossary entries.	Oversee the quality, ethical standards, and accessibility of all uploaded content; manage conflicts related to content or contributor conduct; provide feedback on content submissions and proposed modifications.
Platform Coordinator	Strategic review and promotion of the platform; oversee quality and conflicts; implement the platform over time once the EDIDesK project will be completed.	Providing strategic directions on overseeing quality and conflicts, ethical standards, and future development trajectories.

Table 5.2. Overview of the roles of the EDIDesK platform.

5.5 Itineraries as a Means for Inclusive Active Learning and Innovative Content Sharing

Michal Kacej

Within the architecture of the EDIDesK platform, the itineraries occupy a distinctive position. As outlined in the preceding sections, they organise selected resources into coherent thematic pathways that guide users through a progression of contents. Their significance, however, is not only organisational but pedagogical. Where the repository makes materials available and the glossary supports a shared understanding of terminology, the itineraries determine how learners actually move through knowledge: what they encounter first, how concepts are sequenced, and which connections they are invited to construct. In this sense, the itinerary is the component through which the platform translates a collection of resources into a learning experience. Understood in these terms, curation becomes a pedagogical act, and the design of learning pathways can be regarded as a form of learning design in its own right (Laurillard, 2012). This section considers the itineraries from this pedagogical standpoint, examining how they can support inclusive and active forms of learning while enabling innovative modes of content sharing.

A first dimension concerns active learning. Learning pathways are not intended to be consumed passively, in the manner of a static list of readings. By sequencing heterogeneous materials and inviting learners to progress through, compare and relate them, itineraries encourage an active engagement with content rather than its mere reception. This orientation is consistent with a well-established understanding of active learning as an approach in which students are involved in doing things and in thinking about what they are doing, rather than passively receiving transmitted information (Bonwell & Eison, 1991). A substantial body of research in higher education has associated active and student-centred approaches with improved engagement, retention and learning outcomes (Prince, 2004; Freeman *et al.*, 2014). Within the platform, the itinerary provides the structure through which such engagement can be organised: it establishes a direction and a sense of progression, while leaving learners free to navigate, deepen or revisit individual resources according to their own trajectories.

This active orientation is particularly relevant for Design for EDI, where learning cannot be reduced to the acquisition of information. Engaging with equality, diversity and inclusion involves not only conceptual knowledge but also the development of awareness, sensitivity and critical reflection on one's own assumptions and position. For this reason, the itineraries draw implicitly on the experiential and transformative traditions of learning, in which knowledge is constructed through experience and through the critical revision of previously held frames of reference (Kolb, 1984; Mezirow, 1997). This is also coherent with the reflective character of design education, in which professional knowledge develops through action and reflection rather than through transmission alone (Schön, 1983). By combining conceptual materials with case studies, methods and practice-oriented resources, itineraries can support a movement from understanding towards experiencing, in line with the principle of pedagogical transformation "from teaching to experiencing" articulated by the European EDIDesK Framework.

Alongside their active dimension, the itineraries are conceived as instruments of inclusive learning. This inclusivity operates at the level of the learning experience itself, and not only at the level of the topics addressed. The platform is used by learners with different backgrounds, levels of expertise, languages and learning preferences, and the

itineraries are designed to accommodate this variability rather than to assume a single, standard user. Such an orientation is consistent with the principles of Universal Design for Learning, which treats learner variability as the norm and advocates the provision of multiple means of engagement, representation, and action and expression (CAST, 2024; Meyer *et al.*, 2014; Fovet, 2021). The requirement that each itinerary integrate different content formats – combining, for example, academic texts with videos, podcasts or practice-based materials – directly reflects this principle, offering learners several routes into the same body of knowledge and reducing the barriers that reliance on a single format would inevitably create.

Inclusivity also concerns the way in which itineraries structure progression. By moving from introductory concepts towards more advanced or critical perspectives, learning pathways provide a form of scaffolding that supports learners as they encounter unfamiliar or complex material, enabling them to build upon prior understanding rather than being confronted with excessive complexity from the outset (Vygotsky, 1978). Within EDIDesK, this progressive logic is further articulated through the association of contents with different potential levels of engagement, ranging from the development of awareness and empathy to the capacity to address complex design challenges in collaboration with external partners and communities. This structure allows different learners to enter and traverse the same itinerary at different depths, supporting newcomers and more experienced users alike. In this respect, the itineraries embody a coherence between form and content that is central to the project: a platform devoted to inclusion is expected to enact inclusion through its own modes of learning, and not merely to describe it.

The second contribution of the itineraries concerns content sharing. Here their innovative character lies less in the resources themselves – many of which are open and already available – than in the way these resources are selected, sequenced and made shareable as structured pathways. The open-access orientation of the platform situates the itineraries within the broader movement of open educational resources, whose materials can be retained, reused, revised, remixed and redistributed (Wiley & Hilton, 2018). The itineraries, however, extend beyond the provision of open contents towards what has been described as open pedagogy, or open educational practice: an approach in which openness is understood not only as a property of materials but as a mode of teaching and learning oriented towards participation, contribution and the collaborative construction of knowledge (Cronin, 2017; DeRosa & Robison, 2017; Weller, 2014). Within this framework, an itinerary is not a closed product but an artefact that can itself be reused, adapted and reinterpreted across different educational contexts.

This understanding reframes content sharing as a collaborative and generative process rather than a simple act of distribution. Constructing an itinerary requires contributors to make explicit the reasoning that connects individual resources – a form of pedagogical knowledge that often remains tacit – and to render it available to others. In this sense, itineraries operate as shareable expressions of curatorial and pedagogical expertise, produced through the participation of educators, researchers and practitioners from different disciplinary and cultural backgrounds. This collaborative logic resonates with established traditions of co-creation in design and with pedagogical approaches that engage learners and educators as partners rather than as passive recipients (Sanders & Stappers, 2008; Cook-Sather *et al.*, 2014). It also reflects the character of the platform as a living and continuously evolving environment – a never-ending prototype whose value grows through use, contribution and revision – in which itineraries can be updated as EDI discourse, practices and resources continue to develop.

Considered together, these dimensions position the itineraries as the pedagogical core of the EDIDesK platform, the point at which its educational values become operational. As devices for active learning, they transform open resources into structured and engaging experiences; as inclusive structures, they accommodate the diversity of learners and enact the very principles they address; and as innovative modes of content sharing, they turn curation into a collaborative and reusable form of knowledge production. The following section illustrates how these principles have informed the first set of itineraries developed for the platform, describing the contents and thematic pathways through which Design for EDI is made accessible to a plurality of learners.

5.6 The First Set of Unbiased Open-Access Contents on Design for EDI

Sarah Jane Cipressi

The first set of contents developed for EDIDesK represents the outcome of the research, experimentation and validation activities carried out in the previous Work Packages of the project (D2.3.1, D2.4.1 and D3.3.1). The materials included in the platform derive from a process aimed at identifying concepts, methodologies and tools considered relevant for Design for EDI education, connecting theoretical knowledge with design practice. The selection of contents was developed through a collaborative process involving partners from different disciplinary, educational and cultural contexts, including STU, UNICH, ASP, ELISAVA, UNIFI and EIDD. The comparison of teaching experiences, methodologies and approaches contributed to the construction of a shared knowledge base intended to support multiple interpretations of EDI rather than a single disciplinary perspective. This process led to the identification of key areas of knowledge based on the pillars of Human-Centred Design, Ethical Design and pedagogical transformation. From these foundations, four learning itineraries were developed to organise the content of the platform: Foundations of Design for EDI, Design Methods and Tools, EDI Across Design Disciplines and Education and Pedagogy of EDI in Design Curricula.

The first itinerary, Foundations of Design for EDI, brings together content dedicated to the theoretical foundations of Equality, Diversity and Inclusion and provides the conceptual basis needed to understand the contemporary debate on inclusive design. In line with the European Framework developed within EDIDesK, the itinerary is built around the principles of Human-Centred Design and Ethical Design, considered as cross-cutting references for the integration of EDI into design processes. The selection of content responds to the need to build a shared language and a common understanding of the main concepts that characterise the field, including approaches such as Universal Design (Story *et al.*, 1998), Design for All (EIDD, 2004) and Inclusive Design (Clarkson & Coleman, 2015). These perspectives are presented as different interpretations of the relationship between design, diversity and accessibility, highlighting their convergences, specific characteristics and areas of application. The itinerary also includes contributions dedicated to intersectionality (Crenshaw, 1989), structural inequalities, Human Factors and the social role of the designer, to broaden the understanding of the conditions that can generate inclusion or exclusion. In this way, the itinerary contributes to building a common theoretical foundation capable of supporting different perspectives and promoting a plural understanding of EDI-related issues within design processes.

The second itinerary, Design Methods and Tools, brings together methodologies, processes and tools aimed at translating EDI principles into design practice. The se-

lection of content reflects the intention to provide methodologies and tools capable of supporting the application of EDI principles within design processes. In line with the Framework, the itinerary includes participatory and human-centred approaches, such as Human-Centred Design, Co-design, Community-Centred Design and Scenario-Based Design (Sanders & Stappers, 2008; Simonsen & Robertson, 2013). In particular, co-design plays a central role as it promotes the active involvement of users and stakeholders throughout the different stages of the design process. The itinerary also includes activities aimed at encouraging reflection on the positionality of the designer and on the role that individual perspectives, experiences and assumptions can play in shaping design solutions. Alongside these methodologies, the itinerary includes operational tools such as personas, empathy maps, accessibility assessment tools and usability testing protocols. Their inclusion responds to the objective of providing practical support for needs analysis, the identification of potential barriers and the evaluation of user experience. Rather than presenting isolated tools, the itinerary highlights the role that these resources can play in supporting design processes that are more aware of the different needs of users and contexts of application. In this sense, the itinerary contributes to transforming EDI principles into concrete design practices and decisions.

The third itinerary, EDI Across Design Disciplines, brings together content dedicated to the application of EDI principles across different areas of design and connects disciplines that operate at different scales, contexts and design domains. The contributions, developed in line with the European EDIDesK Framework, are organised around five sectors: System Design, Industrial Design, Product Design, Digital Design, and Architecture and Urban Design. The selection of these areas reflects the intention to show how EDI principles can be applied in different design contexts while maintaining a shared focus on inclusion, accessibility and participation (Buchanan, 1992). The contents show how themes such as accessibility, participation, usability and Human Factors take different forms depending on the scale and context of application, while maintaining a common attention to the conditions that support or limit users' participation in designed systems. The objective of the itinerary is to highlight how similar issues take different forms in different design contexts. While Architecture and Urban Design address these issues through the design of built environments, Digital Design focuses on interactions and interface accessibility; Product and Industrial Design explore the relationship between users, artefacts and modes of use, while System Design extends the discussion to the relationships between products, services, actors and infrastructures (Manzini, 2015; Van der Bijl-Brouwer & Malcolm, 2020). The itinerary, therefore, shows how EDI can be interpreted and applied in different ways, fostering an understanding of the connections that cut across disciplines traditionally considered separate.

The fourth itinerary, Education and Pedagogy of EDI in Design Curricula, is dedicated to the educational dimension of Design for EDI and reflects the choice to consider education itself as a design process. In line with the European EDIDesK Framework, the contents collected highlight the shift from predominantly transmissive teaching models to approaches based on experience, active participation and critical reflection (Kolb, 1984; Mezirow, 1997; Morris, 2020). The selection of content responds to the need to support educators and institutions in integrating EDI into design curricula through methodological guidance, facilitation strategies and tools for the design and assessment of learning activities. The itinerary also includes content dedicated to the use of digital technologies and artificial intelligence in educational contexts, considering both their opportunities and their ethical implications. Particular attention is given to the principles of Universal

Design for Learning (CAST, 2018; Fovet, 2021), considered a reference for the design of more accessible and inclusive learning environments. Taken together, these contents show that the integration of EDI into design curricula depends not only on the topics addressed, but also on the ways in which learning is designed, facilitated and assessed, as well as on the criteria used to observe the development of EDI competences. From this perspective, educators contribute to the creation of learning environments that encourage participation, critical reflection and awareness of the social implications of design.

The contents collected for the EDIDesK platform address the topic of inclusion through theoretical, operational and pedagogical dimensions. The selection of materials, which includes contributions dedicated to curriculum design, the development of transversal competences and the critical use of digital tools, reflects a view of education as a design process. From this perspective, contents, learning environments and modes of interaction jointly contribute to the creation of inclusive learning experiences, in line with the principle of pedagogical transformation "from teaching to experiencing" defined by the European Framework. Considered as a whole, the four itineraries describe Design for EDI as a multidimensional field in which the understanding of complex issues requires a continuous dialogue between theoretical foundations, operational tools, disciplinary applications and educational practices.

This approach is reflected in the cross-cutting nature of the contents, which can be integrated into different itineraries while taking on different meanings according to the learning path. For example, a co-design method may contribute to the understanding of a specific discipline (Itinerary 3) or support methodological and pedagogical reflections (Itinerary 4). The presence of shared contents responds to the need to build connections between different disciplinary perspectives and to highlight the relationships between design, the social dimension and technological development. In this way, Design for EDI is presented as a field that requires the ability to interpret complex problems through complementary perspectives.

The structure of the itineraries has also been designed to support different ways of accessing knowledge, adapting to learners with different backgrounds and levels of experience. Through the combination of content associated with the five EDI potential levels, the platform makes it possible to build progressive and flexible learning paths. The progression moves from the development of awareness and empathy (Levels 1-2) to addressing complex design challenges in collaboration with external partners and marginalised communities (Levels 4-5). From this perspective, the itineraries represent not only a tool for navigating the contents but also a structure that supports different learning pathways while maintaining a common knowledge base and allowing different levels of depth and exploration.

Alongside the contents included in the itineraries, the platform integrates a glossary composed of 70 main entries and a complementary list of 35 additional terms dedicated to more specific topics. The glossary contributes to the construction of a shared terminological basis, supporting the understanding of concepts that cut across the different contents of the platform. In a context involving partners from different countries and disciplinary traditions, the availability of common terminological references facilitates dialogue between different perspectives and reduces potential interpretative ambiguities.

The selection of entries reflects the multidimensional nature of the project, including concepts related to the foundations of EDI, design methodologies and educational processes. Alongside widely established terms, the glossary also includes concepts that belong to different theoretical traditions or that are the subject of debate within the

contemporary literature. In this sense, its contribution does not lie in defining a single interpretation of inclusion, but in creating a shared reference space capable of making explicit the plurality of perspectives that characterise Design for EDI. The glossary, therefore, supports the consultation of the materials available on the platform and contributes to maintaining an open dialogue between different approaches, disciplines and contexts.

(1)

www.platform.ededeskproject.com



On this page: the first prototype of the EDIDesK digital teaching and learning platform (1), providing open-access itineraries, resources and shared EDI concepts for design education. © EDIDesK project.

General note on Chapter 5

This chapter draws on EDIDesK deliverables documenting the development of the digital learning platform and the contents integrated within it. In particular, it refers to D2.3.1, *Qualitative and Quantitative Analyses of Best Practices*; D2.4.1, *Virtuous Contents and Methodologies for Promising Replications into Digital Environments*; D3.3.1, *Assessment of Results Produced During Tests with Students*; D4.1.1, *Design of the Digital Learning Platform: Service Design and User Experience*; and D4.2.1, *Rules for Content Creation and Sharing*.

These deliverables provide further documentation on the research, validated contents, platform design, user experience and rules for creating, reviewing and sharing educational resources for Design for EDI.

The complete documentation can be accessed through both the project website and the dedicated repository. Available at:

- ↗ EDIDesK project website – www.edideskproject.com
- ↗ Book repository – https://drive.google.com/drive/folders/14cizQvxRAHK4iRiIl26i4l1pOMGmDUDF
- ↗ EDIDesK platform – www.platform.edideskproject.com

06

Implications and Recommendations across the EDIDesK Project Results

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6.1 Critical Review of the Teaching Landscape

Patrycja Rudnicka, Marta Więckowska

Building on the comparative analyses presented in **Chapter 2**, this section reviews the teaching landscape that emerged from the EDIDesK research phase and translates its main findings into implications for the Teaching Framework. Equality, diversity and inclusion in design education function as a broad field of values, sensitivities, and practices that are developed through different teaching traditions, design methods and project contexts. Rather than forming one universal model, EDI is shaped through the ways students learn to recognise barriers, understand diverse users, question assumptions and translate this awareness into design decisions. The analysis of teaching models in Italy, Poland, Slovakia and Spain reveals a wide spectrum of approaches through which EDI is introduced and developed in design education. This diversity shows that EDI cannot be reduced to one fixed definition, but should be understood as a pluralistic and context-dependent design orientation (see General note on Chapter 6).

The Italian analysis shows that EDI is rooted in a strong disciplinary culture of design, ergonomics, Design for All, and social responsibility, where design is understood as a practice that can influence quality of life, everyday environments and communities. In education the presence of EDI is not an external theme, however in many of the analysed design programmes is not the result of formal regulatory requirements. Rather, it emerges from design culture itself and from the research interests, experience and commitment of individual teachers. In practice, teachers translate EDI principles into concrete learning activities, such as introductory lectures on frameworks, user research, iterative concept development, rapid prototyping, co-design workshops and collaborations with companies or organisations. These activities help students develop greater awareness of user diversity and of the social responsibility of design. At the same time, the analysis shows that in Italy, EDI is explicit and central in some courses, while in others it remains implicit and is conveyed through related disciplines or design approaches. This finding points to the need to transform this inclusive orientation into clearer criteria, methods, teaching tools and verifiable practices.

A similar tension appears in the Polish case. The analysis shows that EDI is not explicitly named in the Polish Qualifications Framework and is therefore not primarily driven by national regulation. Instead, it is embedded in the tradition of socially responsible design, the autonomy of art academies and the initiatives of individual educators. In practice, some educators include EDI directly in syllabi and learning outcomes, while others treat it as an inherent part of responsible design practice. Across programmes, EDI often appears not as a separate mandatory subject, but as a way of framing project work in studios, design laboratories and diploma projects. This makes Polish EDI education strongly practice-oriented and connected with real design processes: students define problems, work with users, test solutions and reflect on the social consequences of their design decisions. However, the Polish case also shows the fragility of such a model when valuable practices depend on individual educators rather than institutional strategies.

The Slovak case offers a different perspective, showing stronger curricular continuity and institutional embedding. While EDI education was initially associated mainly with accessibility in the built environment and the design of products for specific user groups, especially people with disabilities, this perspective has gradually broadened. Human-Centred Design has shifted the focus from accessibility alone towards social

inclusion, understood as supporting active participation in society and as an important dimension of social sustainability. The analysed modules reflect this shift by systematically applying human-centred, collaborative and participatory design methods. At the Faculty of Architecture and Design, Slovak University of Technology in Bratislava, students learn EDI principles continuously from the first year of bachelor studies, and Universal Design is maintained as a compulsory component of the programme. The Centre of Design for All further demonstrates the role of institutional structures that connect teaching, research and practice. However, the analysis also shows that EDI still needs to be integrated more systematically across design and architecture programmes, moving from strong local examples towards broader curricular consistency.

The Spanish example reveals another important lesson: a favourable policy and legislative context does not automatically translate into curriculum change. Spain has a strong tradition of inclusive urban policy, participatory governance, accessibility legislation and gender equality frameworks. The analysis shows also that academic teachers use a diverse range of methods and tools to introduce EDI into design education, moving from qualitative and interpretative approaches (e.g. ethnography, autoethnography, personas, customer journey mapping and participatory research) to more structured analytical techniques (e.g: statistical analysis, A+D Matrix). This variety of methods allows students to explore EDI both as a reflective and user-centred process, and as a field that can be supported by structured analysis and evidence-based design decisions. Nevertheless, the analysis still shows gaps between institutional commitments and educational practice. EDI-related content remains limited, fragmented and often optional, and the overall integration of EDI within Spanish design education is still low compared with the country's achievements in inclusive policy and urban practice. This gap shows that policy frameworks need to be accompanied by pedagogical strategies, institutional investment, teacher preparation and mechanisms for curriculum implementation.

Taken together, the national analyses presented in **Chapter 2** show that the critical issue is not the absence of EDI in design education, but the fact that it often remains implicit, dispersed, or dependent on individual teachers, temporary collaborations and local traditions. This creates a rich and diverse teaching landscape, but also makes EDI-related practices difficult to assess, transfer and develop systematically. The Teaching Framework should respond to this condition by making EDI more explicit, structured, and continuous across undergraduate and postgraduate education, while still respecting the diversity of national contexts, institutional traditions, and design cultures.

The identified features, strengths and challenges in the national analyses include: the importance of real-world and practice-oriented teaching, the need for planned competency development, the role of tools and methodologies, the importance of continuous assessment, the value of meaningful partnerships and the necessity of institutional capacity-building.

Real-world and practice-oriented teaching is meaningful because it helps students discover the relevance of EDI through practical activities such as observation, field research, working with users, prototyping, testing, reflection and revision of their initial assumptions. This emphasis on practice has direct implications for the Teaching Framework. EDI cannot be taught only as a theoretical topic or as a set of abstract values. It needs to be translated into design activities, tools, criteria, feedback structures and assessment methods. **Chapter 2** shows that design learning is situated, iterative and collaborative: students observe contexts, interpret needs, identify barriers, formulate hypotheses, develop solutions and evaluate their effects. For this reason, EDI should

function as a criterion that shapes the design of the learning experience itself, including briefs, user representation, accessibility of materials, collaborative work and the criteria through which outcomes are discussed and assessed.

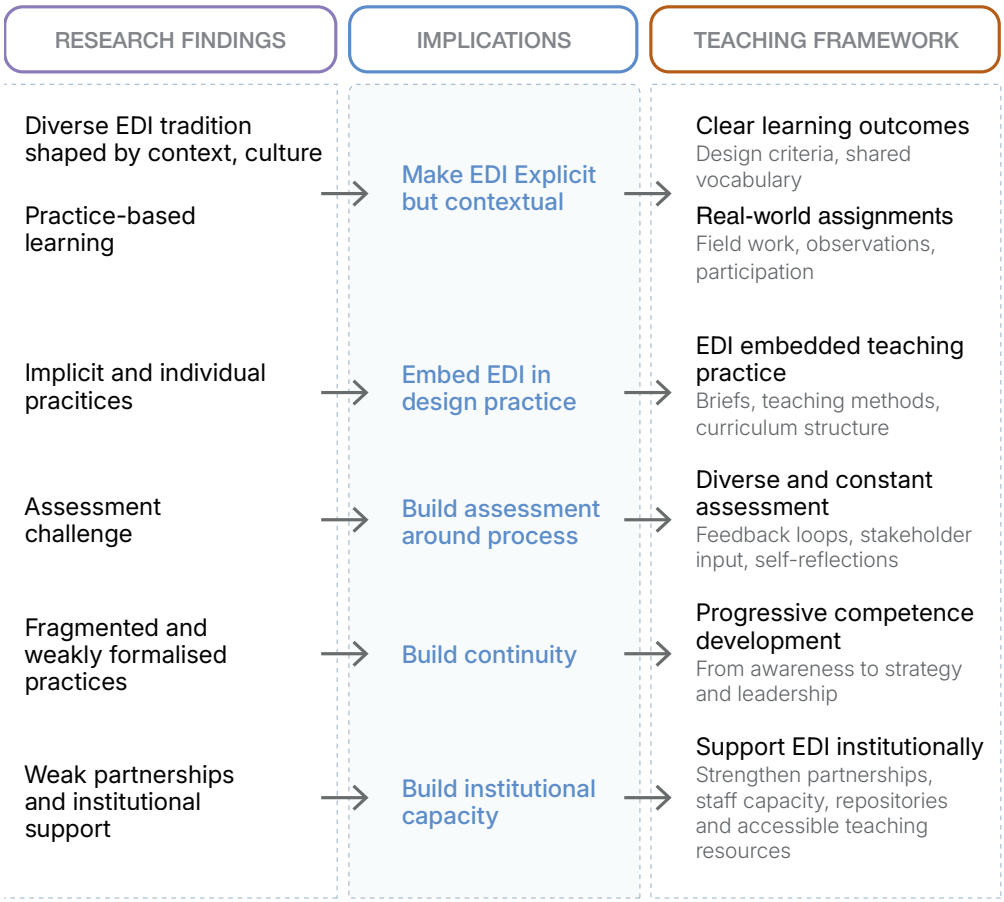


Figure 6.1. Key Implications for Design EDI Education. Source: Author's own elaboration based on research findings.

The analysis of available tools presented in Section 2.3 reveals a broad and diverse landscape of resources, methods and approaches that can support the teaching of Design for EDI. It identifies three main families of resources: toolkits, methodologies and design tools for EDI; guidelines and educational resources for inclusive teaching; and digital tools and environments. However, the key issue emerging from the analysis is not only the variety or richness of these tools, but the way they are implemented within the teaching practice. Such tools can support Design for EDI education only when they are meaningfully embedded in the learning process. Students need to understand why a specific tool is used, what kind of knowledge it produces, how it guides design decisions and how it helps assess inclusion, accessibility, participation or exclusion. For this reason, they require pedagogical interpretation, adaptation and connection with explicit learning objectives, stages of the design process, forms of collaboration and assessment criteria. Educators therefore need more than access to tools themselves. They

also need clear guidance, examples of application, criteria for adaptation and theoretical references that allow these resources to be used across different courses, educational levels and disciplinary contexts.

Assessment is one of the most urgent challenges identified in **Chapter 2**. Several national analyses show that it is difficult to assess EDI-related competences, especially in group work, participatory projects and studio-based modules. The Italian analysis points to the difficulty of measuring individual competences and evaluating the inclusive quality of the design process through univocal criteria. Polish analysis shows that assessment often concerns not only the final outcome, but also the process, depth of research, social impact, implementation potential and responsiveness to feedback. This suggests that the Teaching Framework should include assessment criteria that address both process and outcome. In this perspective, assessment should not be limited to the final product. It should also consider how students identify exclusion, formulate research questions, engage users ethically, translate findings into design criteria, prototype and test ideas, respond to feedback, communicate decisions and reflect on their own assumptions.

At more advanced levels, assessment should also include the quality of stakeholder engagement, the ability to negotiate between different needs and perspectives, the connection between EDI and sustainability and the capacity to situate design decisions within broader social, ethical and institutional contexts. Such an approach would make EDI more visible as a competency rather than only as a declared value.

The continuity of competency development across undergraduate and postgraduate education, analysed in **Chapter 2**, reveals a gradual progression in the way EDI is introduced, developed and applied. At the undergraduate level, it often appears as basic design literacy, focused on user diversity, accessibility, usability and early sensitivity to exclusion. At the postgraduate level, it becomes more complex and strategic, involving co-design, inclusive strategies, prototyping, social impact assessment and stakeholder collaboration. Different types of competences are therefore developed at different levels. While undergraduate education often focuses on basic design skills, awareness-building, communication and the recognition of exclusion, postgraduate education can expand these competences towards leadership, advocacy, strategic thinking and the ability to manage complex processes. This progression should be reflected in the Teaching Framework through differentiated levels of competence: introductory, intermediate and advanced. Such continuity is essential because EDI education cannot rely on one isolated course or one specialised module.

Partnerships are another key condition for effective EDI education. **Chapter 2** repeatedly shows that collaboration with users, communities, NGOs, public institutions, companies, experts and other external stakeholders is essential for moving from abstract assumptions to real design challenges. However, the analyses also show that partnerships are difficult to build and maintain. If they depend only on individual teachers, they remain fragile and temporary. For this reason, partnerships should be understood as part of institutional capacity-building. Institutions need structures that support fieldwork, partner communication, ethical protocols, accessibility arrangements, long-term cooperation and the documentation of learning outcomes.

Institutional capacity-building is one of the most important conclusions emerging from the national analyses. The next step is not only to collect good practices, but to make them more visible, shareable and sustainable. This includes common terminology, shared teaching resources, staff training, repositories of examples, support for accessible materials, guidelines for working with external partners and rubrics for assessing

EDI-related learning outcomes. The Polish analysis points to the need for more systematic knowledge exchange between institutions. The Italian perspective adds that EDI, despite being already strongly present in education, needs to be translated into clearer learning objectives, expected competences and teaching criteria. The Spanish case highlights the need for stronger investment in design research and EDI methodologies, while the Slovak case shows the importance of structural embedding in the curriculum. The national analyses therefore reveal a rich teaching landscape, but also a significant risk of fragmentation, especially when EDI depends more on the sensitivity, experience and networks of individual teachers than on a shared institutional strategy. The Teaching Framework should address this risk by supporting a more coherent, transferable and institutionally grounded approach to Design for EDI education.

The critical review of the teaching landscape therefore leads to a clear conclusion: valuable EDI practices already exist, but they are not yet sufficiently connected. They appear across countries, levels and design domains, but often remain local, implicit, dependent on individual educators or limited to specific modules and partnerships. The Teaching Framework described in **Chapter 4** responds to this condition by offering a progressive, transferable and adaptable structure that supports curriculum design across UG and PG levels. Its purpose is not to impose a single definition of EDI or eliminate national and disciplinary diversity, but to organise this diversity into a coherent educational pathway. In this sense, the Teaching Framework acts as a bridge between research findings and curriculum implementation. It can help institutions move from fragmented EDI-related activities toward a structured learning pathway based on clear levels, learning outcomes, teaching methods, practical assignments, tools, partnerships and assessment criteria. At the same time, it preserves the pluralistic nature of EDI, allowing it to develop through different design cultures, contexts and project types. The role of the framework is therefore both pedagogical and institutional: it supports students in developing EDI competences, and it supports universities in building the conditions that make these competences teachable, observable, assessable, transferable and sustainable.

6.2 Critical Review of Teaching Methods and Methodologies

Alessia Brischetto

Building on the critical review of the teaching landscape, this section focuses on how teaching methods, methodologies and tools can support the integration of Equality, Diversity and Inclusion into design education. The analysis developed in the previous chapters shows that Design for EDI cannot be approached as a self-contained teaching topic nor as a fixed set of predefined techniques. Rather, it emerges as a methodological orientation that reshapes the way design education frames problems, represents users, organises participation, supports collaboration and evaluates outcomes. In this sense, the educational integration of EDI is not limited to the inclusion of specific contents in a syllabus. It concerns the design of learning experiences themselves: the construction of briefs, the choice of tools, the accessibility of materials, the organisation of studio work, the facilitation of discussion and the criteria through which projects are assessed.

This perspective is consistent with the methodological framework presented in **Chapter 2**, where teaching methods were analysed through a broad constellation of resources: toolkits, cards, canvases, guidelines, open educational resources, digital environments and collaborative platforms. Such a landscape confirms that Design for EDI

is supported by multiple design cultures, including Inclusive Design, Universal Design, Design for All, Human-Centred Design, accessibility, usability, co-design and participatory approaches. These traditions do not coincide completely with EDI, but they offer concepts and operational resources through which equality, diversity and inclusion can become observable and actionable within design learning (Buchanan, 1992; Clarkson *et al.*, 2007; Norman, 2013; Sanders & Stappers, 2008).

A first critical issue concerns the plurality of terms and frameworks. From an educational point of view, this plurality can be productive because it allows educators to draw on different disciplinary traditions and to adapt methods to specific contexts, levels and learning objectives. At the same time, it may generate ambiguity. Inclusion, accessibility, diversity, equality, empathy, usability, participation, learner variability and social justice are often used as related concepts, but they do not refer to the same theoretical or operational field. If these distinctions remain implicit, there is a risk that EDI becomes a general value statement rather than a structured pedagogical criterion. The challenge, therefore, is not to reduce this plurality to a single definition, but to make its educational use more explicit.

A second issue concerns the relationship between tools and methodologies. Many resources identified in the mapping are operationally accessible and can be easily introduced in design studios, workshops or hybrid learning environments. Cards, personas, templates, checklists, audits, collaborative boards and digital platforms can support awareness, discussion, documentation and evaluation. However, a tool does not become a methodology by itself. Its educational value depends on the way it is embedded in a learning pathway, connected to theoretical framing, adapted to the teaching context and discussed through explicit assessment criteria. Without this mediation, even well-designed resources risk remaining isolated exercises: useful for stimulating attention but insufficient for transforming design reasoning or project decisions.

This distinction is particularly important in project-based design education. Design learning is iterative, situated and relational. Students do not only acquire knowledge; they progressively construct interpretations of contexts, users, needs, barriers and possible futures. For this reason, methodologies for Design for EDI should be understood as mediating devices between values and practice. They help translate broad principles into questions, activities, representations and forms of evidence. A persona can support the representation of user diversity, but it can also reproduce stereotypes if it is not critically framed. A co-design toolkit can enable participation, but it can also become extractive if roles, expectations and access conditions are not carefully considered. An accessibility checklist can guide evaluation, but it cannot replace a broader reflection on use, meaning and context.

Pedagogical mediation is therefore central. Teaching Design for EDI involves issues that are not only technical but also social, cultural and ethical: exclusion, vulnerability, disability, bias, stereotypes, power relations and unequal access to participation. These topics require careful facilitation and the construction of learning environments in which discussion can be critical, respectful and productive. The educator has the responsibility to make the purpose of each method explicit, to define the conditions of use, to support reflection and to ensure that students understand how a tool affects the design process. In this perspective, methodology is not only a sequence of steps but a structured educational condition that links knowledge, action and responsibility.

A third critical dimension concerns assessment. If EDI is treated as a transversal quality of design education, it cannot be evaluated only through the final artefact or service.

It must also be assessed through the process that leads to the outcome. This includes how students analyse contexts, identify barriers, involve stakeholders, represent diversity, document decisions, test assumptions and revise proposals. Assessment should therefore consider both products and learning trajectories. Criteria such as accessibility, participation, usability, ethical awareness, representation of diversity and reflexivity need to be introduced from the beginning of the design brief and revisited throughout the project. Otherwise, EDI risks being evaluated retrospectively, as an additional requirement rather than as a criterion embedded in the design process.

A further dimension concerns student reflexivity. Design for EDI requires students not only to apply methods but also to examine the assumptions through which they interpret users, contexts and problems. In design education, methods often guide students through observation, ideation and evaluation. However, Design for EDI also requires students to question how users and contexts are represented, which barriers remain invisible and whose perspectives are included or excluded from the design process. This reflexive dimension is central because EDI-oriented design is not only a matter of technical adequacy but also of responsibility. It asks students to recognise how design decisions may reproduce or reduce barriers, how representations may reinforce stereotypes and how participation may either redistribute or concentrate agency. In this sense, methods and tools should support not only project development but also reflective practice: the ability to make design assumptions visible, discuss them critically and revise them throughout the process (Schön, 1983; Costanza-Chock, 2020).

A related methodological aspect concerns the role of collaborative game-based activities when they are explicitly designed as reflective training environments for participation. In Design for EDI, collaboration cannot be assumed as a spontaneous competence: it needs to be structured, practised, observed and discussed. Game-based and gamified activities can help students recognise how inclusion or exclusion emerges within collective processes, including who participates, who is heard, how roles are negotiated, how conflicts are managed and how access conditions affect interaction. Their pedagogical value therefore does not lie in making EDI "playful" in a superficial way, but in making relational dynamics visible and discussable before or alongside project work. To avoid reducing these activities to generic active-learning practices, they should be connected to explicit design objectives, documentation and assessment criteria. As with other methodologies, they require careful attention to accessibility, language, timing, facilitation and debriefing; otherwise, they may reproduce the same barriers they intend to question (Deterding *et al.*, 2011; Gee, 2003; Johnson & Johnson, 2009; Qian & Clark, 2016).

The distinction between analog, hybrid and digital methodologies further reinforces this critical reading. Analog and hybrid tools are particularly effective in studio-based learning because they support situated interaction, manipulation, discussion and collective sense-making. Cards, canvases and checklists can make abstract principles visible, negotiable and documentable. They can help students externalise assumptions, compare perspectives and trace design decisions. At the same time, their physical or hybrid format does not automatically make them inclusive. Materials, languages, timing, spatial arrangements, facilitation rules and group dynamics may themselves become barriers. A tool designed to address inclusion must therefore be evaluated also in terms of its own accessibility and usability.

Digital environments introduce a different set of opportunities and risks. They can expand access to content, support remote or distributed collaboration, enable documentation of the design process and facilitate the reuse of educational resources. They are

particularly relevant in relation to Universal Design for Learning, learner variability, open educational resources and accessible digital interfaces (CAST, 2024; Meyer *et al.*, 2014; Rose *et al.*, 2006; Treviranus, 2018). However, digital availability should not be confused with inclusiveness. Platforms and online tools can generate new barriers related to cognitive overload, inaccessible interfaces, unstable access to devices or connections, limited compatibility with assistive technologies and unclear navigation. For this reason, digital tools should be selected and evaluated through the same critical criteria applied to other teaching methodologies: accessibility, usability, pedagogical coherence, adaptability, sustainability and assessment relevance.

The question of transferability is equally important. Many methods and tools identified in the methodological landscape were developed in professional, organisational or research contexts. Their adoption in higher education requires adaptation. A resource that works in a professional workshop may not be immediately suitable for students; a toolkit developed for public engagement may need simplification; a digital platform may require technical support; a set of guidelines may need to be translated into studio activities, design briefs and assessment criteria. Transferability, therefore, should not be understood as direct replication. It is a process of pedagogical interpretation. Educators need to select, modify, sequence and contextualise resources according to course objectives, student profiles, available time, assessment formats and institutional constraints.

Fig. 6.2. synthesises the transition from the availability of tools, methods and digital resources to their pedagogical value. It highlights five critical conditions for teaching Design for EDI: theoretical framing, pedagogical mediation, contextual adaptation, process documentation and assessment criteria.

This critical transition can be described as a movement from resource availability to educational value. The existence of toolkits, guidelines or platforms is only the starting point. Their contribution to Design for EDI depends on five interrelated conditions. The first is theoretical framing: students need to understand why a method is used and which idea of inclusion, accessibility or participation it supports. The second is pedagogical mediation: educators must guide the use of tools and create opportunities for reflection. The third is contextual adaptation: resources must be adjusted to specific learning contexts, design challenges and student needs. The fourth is process documentation: inclusive design decisions should be traceable and discussable. The fifth is assessment: criteria for evaluating EDI-related learning outcomes should be explicit, transparent and connected to the whole project process.

From this perspective, the role of the educator becomes strategic. Educators are not only curators of contents or facilitators of activities; they are designers of learning conditions. They define how EDI enters the brief, how students encounter users and stakeholders, how differences are represented, how barriers are identified, how collaboration is organised and how outcomes are evaluated. This requires methodological awareness but also institutional support. The consolidation of Design for EDI in higher education cannot rely only on individual teaching initiatives. It requires shared frameworks, accessible resources, updated repositories, staff development, interdisciplinary collaboration and forms of assessment that recognise process quality as part of design quality.

In synthesis, the critical review of teaching methods and methodologies shows that the main challenge is not the absence of resources. On the contrary, the methodological landscape is broad, diverse and promising. The challenge lies in transforming this landscape into coherent, transferable and assessable learning experiences. Design for EDI becomes educationally meaningful when methods and tools help students move from

awareness to interpretation, from interpretation to design action and from design action to critical evaluation. In this sense, design education can play a strategic role: not simply by teaching inclusion as a topic, but by making inclusion a visible, discussable and assessable dimension of the design process.

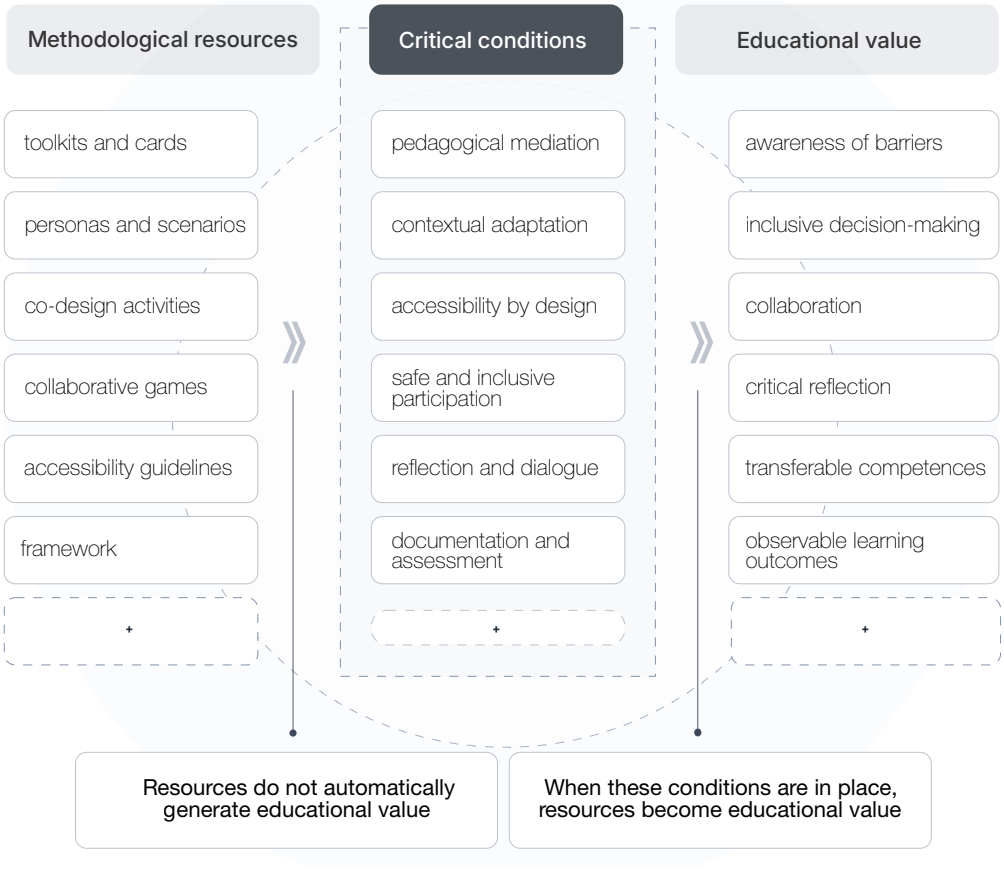


Figure 6.2. From methodological resources to educational value: critical conditions for teaching Design for EDI.

6.3 Critical Review of Student-Facing Teaching Practices

Klára Macháčová

Building on the teaching experimentations presented in **Chapter 3**, this section critically reviews the student-facing teaching practices that emerged across the EDIDesK testing phase. Although the tested modules differed in disciplinary focus, educational level, and design context, they shared a common emphasis on active student participation, workshops, collaborative learning, iterative feedback, presentations, and reflective discussion. The analysis of student work, peer reviews, and teaching experiences provides an opportunity to relate these project findings to broader research on student-centred learning and to identify teaching practices that effectively support the development of EDI competences in design education.

The current generation of university teachers was largely educated in traditional, lecture-based environments, where learning was predominantly teacher-directed. Even in creative disciplines such as architecture and design, they were often strongly shaped by their teachers' personalities, following their style and their school of thought. In contrast, today's students enter a rapidly changing professional landscape shaped by technological innovation, artificial intelligence, evolving social values, and growing economic, environmental, and client demands. Students require not only disciplinary knowledge but also transferable competencies, including critical thinking, communication, collaboration, and lifelong learning. Accordingly, curricula must evolve to address changing societal and professional demands and must become more student-centred (Čerešňová & Rollová, 2015; Czafík, Puškár & Vráblová, 2021).

As Morrison notes, the teacher is "no longer a sage on the stage" but a "guide on the side" reflecting the shift toward student-centred learning (Morrison, 2014). This role requires greater flexibility in selecting teaching strategies and effectively using learning resources and technologies.

Student-facing teaching practices refer to methods that learners experience directly during instruction. They focus on interaction, engagement, and relationship-building with students. When implemented effectively, they transform lecture-dominated instruction into dynamic, student-centred learning environments (Strauss *et. al*, 2022; Frommert, 2023). Examples of student-centred teaching practices include:

- clearly communicating course or lesson objectives at the outset;
- replacing one-way lectures with questioning, discussion, and dialogue, while positioning the teacher as a coach, mentor, or facilitator;
- providing continuous feedback;
- encouraging collaborative rather than individual work;
- emphasising problem-solving instead of memorisation;
- promoting active rather than passive learning;
- incorporating reflection and clearly defined assessment criteria.

Active learning is central to this approach. Commonly used methods include brainstorming, concept mapping, discussions, simulations, field trips, empathy exercises, and educational games.

Empathy exercises are particularly valuable when introducing students to EDI topics. Students briefly experience various limitations, such as wheelchair use, white cane navigation, low vision, restricted hand mobility or simulations of increased body weight (see Fig. 6.3). These activities help participants better understand the experiences of people with disabilities and older adults, encouraging greater attentiveness and sensitivity when designing products, buildings, or environments. Nevertheless, such exercises should be viewed primarily as awareness-raising and motivational tools. Experiencing a limitation does not equate to fully understanding it, nor can it substitute for direct engagement with users, stakeholders, or people with lived experience. Their greatest value lies in fostering empathy, stimulating reflection, and encouraging students to seek a deeper understanding through participatory design, user research, and collaboration with diverse communities.

Within active learning, educational gaming has become an increasingly discussed topic. Although often perceived as a contemporary innovation, the educational value of play was already emphasised by Jan Amos Comenius (1592–1670) in Schola Ludus (School by Play). As Ackerman (2011) notes, play is one of the brain's preferred mechanisms for learning. Its educational value is rooted in its biological and evolutionary functions. People

of all ages are naturally motivated by play, making games a powerful learning tool. Our experience confirms that educational games foster problem-solving, adaptability, collaboration, and creativity while reducing stress and fear of failure (Prensky, 2001).



Figure 6.3. Empathy exercise during an EDI workshop. Photo: Z. Čerešňová.

In architecture and design education, they stimulate key dimensions of creative thinking, including fluency (generating multiple ideas), flexibility (changing perspectives and approaches), originality, redefinition, sensitivity to problems, and elaboration. It can also improve long-term retention of knowledge. To maximise these benefits, educators must cultivate a creative climate characterised by support, inspiration, safety, and openness (Jurčová, 2003).

Benefits of student-facing teaching practices are notable. Research consistently associates student-facing practices with higher engagement, deeper understanding, and a stronger sense of belonging within the academic community (Yusuf *et.al*, 2023). Their principal strengths include:

- Greater engagement – students actively participate in learning and are more deeply immersed in the subject matter;
- Improved learning outcomes – active engagement leads to better understanding and longer-term retention, better transfer of knowledge from one subject to another, and the practical application of acquired knowledge;
- Immediate (two-way) feedback – the teacher can quickly determine what students understand and what they do not, whether they are paying attention or getting bored, and can adapt the lesson and flexibly focus on the necessary topics or change the type of activity. Students also feel more confident, assured that they are understanding the material correctly;

- Development of soft skills – collaboration strengthens communication, critical thinking, and presentation skills;
- Greater individualisation – students are no longer anonymous; the teacher can respond to the different needs of individual students.

Risks of Student-Facing Teaching Practices: despite their advantages, student-facing teaching practices also present several challenges:

- Teacher competence – the effectiveness of student-centred learning depends heavily on the teacher's expertise, preparation, and communication skills;
- Time and organisation – active learning requires more preparation, classroom time, and organisation, particularly in large groups.
- Student diversity – different personalities, cultural backgrounds, and learning preferences require flexible teaching approaches;
- Assessment – meaningful learning may not always be visible through classroom activity alone, and the impact of individual teaching practices is often difficult to evaluate.

No single teaching method is universally effective. Course design should combine all different approaches – according to intended learning outcomes, available time, and the characteristics of both the subject and the students.

These general pedagogical observations are consistent with the findings of the EDIDesK testing phase presented in **Chapter 3**. Across the experimental modules implemented in different design disciplines, the most effective learning environments combined concise theoretical input with active, student-centred methods such as workshops, collaborative problem-solving, reflection, stakeholder engagement, and iterative feedback. Although individual teaching approaches varied according to disciplinary context, the testing consistently showed that active participation and authentic design tasks supported deeper understanding of EDI principles and their application in practice.

Teacher-centred instruction remains valuable for introducing theoretical concepts and efficiently delivering large amounts of information, particularly in large classes. A more student-centred alternative is the flipped classroom, in which students study core content independently (for example online), and use class time for discussion, problem-solving, and application.

It is essential to take a critical look at the entire course development process. Student-facing teaching practices alone cannot guarantee high-quality education. Their effectiveness depends on thoughtful course design, appropriate assessment methods, high-quality learning materials, and student motivation. Contemporary educational research therefore increasingly examines not only classroom practices but also their alignment with learning objectives, assessment strategies, institutional support, and the broader learning environment.

This broader perspective explains why identical teaching methods may produce excellent results in one educational context while proving considerably less effective in another.

The most straightforward indicator of success is students' academic performance. However, in architecture and design education, an equally important measure is the transfer of theoretical knowledge into studio practice (Görner, Macháčová & Radinger, 2019). Such transfer is neither automatic nor uniform; students differ considerably in their ability to apply theoretical concepts in creative work. Consequently, theoretical principles should be revisited throughout studio teaching, where instructors gradually reinforce understanding through continuous guidance and feedback.

The principles of student-centred learning are particularly relevant to EDI education, where the aim extends beyond the acquisition of theoretical knowledge to the development of empathy, critical reflection, and the ability to apply inclusive design principles in practice. Because EDI involves complex social, ethical, and professional challenges, students benefit most from learning environments that encourage active participation, collaboration, reflection, and engagement with authentic design problems. Effective EDI education therefore requires a combination of complementary teaching methods rather than reliance on a single approach. A typical sequence includes a concise introductory lecture, supplementary reading, and a short game or other motivational activity to stimulate curiosity and engagement. The core of the learning process is an active workshop or assignment with clearly defined objectives. Small-group work encourages discussion, peer learning, constructive feedback, and the development of communication and teamwork skills, while tasks based on students' own experiences foster empathy and deeper learning.

Throughout the process, the teacher acts primarily as a facilitator, guiding discussion rather than providing immediate solutions. Presentations followed by peer and instructor feedback promote reflection, critical evaluation, and argumentation, while the final assessment should consider both the quality of the outcome and the learning process, including creativity, collaboration, and communication.

The EDIDesK testing phase presented in Chapter 3 provides several examples of how these principles can be implemented in design education. One illustrative case is the Architecture and Environment course, in which traditional lectures on EDI were replaced by a brief introductory lecture, supplementary reading materials, and a workshop based on students' personal experiences. Students completed the assignment independently before presenting their work and receiving feedback from both classmates and the instructor. This redesign improved learning outcomes: the proportion of incorrect answers to EDI-related questions in the final assessment decreased from 18% to 4%, accompanied by an overall improvement in course performance. There is no universal formula for determining the optimal balance between teaching methods. Appropriate combinations depend on curriculum structure, discipline, different levels of study, available teaching time, and students' previous knowledge of EDI (see Fig. 6.4).



Figure 6.4. Example of EDI-oriented course flow.

In introductory courses, lectures remain important for establishing fundamental concepts. Games, empathy exercises, and relatively simple studio assignments help reduce anxiety, stimulate curiosity, and build confidence while introducing students to EDI principles.

At intermediate and advanced levels, greater emphasis can be placed on independent study, critical thinking, research, experimentation, and stakeholder participation throughout the design process. Our analysis of the relationship between curriculum structure and studio outcomes (Čerešňová *et al.*, 2023) indicates a clear progression toward more complex projects, stronger integration of EDI principles from concept to detail, and greater use of research and evidence in design decisions. At this stage, students increasingly perceive EDI not as a constraint but as a source of design innovation. Real-world projects and design competitions are particularly effective learning environments.

Independent learning also becomes increasingly important. Students assume greater responsibility for setting learning goals, selecting educational resources, and monitoring their own progress, while the teacher's role gradually shifts from instructor to mentor.

An important issue observed in diploma projects and design competitions concerns the evaluation of EDI. When external professionals or members of the public participate in assessment, some students tend to prioritise visually impressive concepts over rigorous implementation of EDI principles. Although such projects often claim to address inclusion, accessibility, or sustainability, these objectives are not always meaningfully reflected in the final design.

Equally concerning is that evaluation may focus predominantly on aesthetics, overlooking functionality and inclusiveness. This creates a risk of superficial compliance – or academic "greenwashing" – in which EDI is presented rhetorically rather than genuinely integrated into the design process.

Educators therefore have a responsibility to assess projects comprehensively, evaluating not only their visual quality but also how effectively they serve diverse users. This approach reflects the principles of the New European Bauhaus, which advocates the integration of aesthetics, sustainability, and inclusion as inseparable dimensions of design quality.

In conclusion, we can state that designing high-quality, student-centred courses requires more than increasing student participation. It also demands highly engaged, well-prepared, and continually developing educators. Professional development for university teachers, together with greater awareness among practicing professionals and wider dissemination of successful educational approaches, is essential for improving the quality of EDI education. EDI education requires a balanced combination of teaching methods, adapted to learning objectives, disciplinary context and students' developmental needs.

6.4 Critical Review of Framework Standardisation

Sarah Jane Cipressi

The development of a European framework for Design Education for EDI requires the establishment of shared guidelines for teaching Equality, Diversity and Inclusion in the field of design. The Framework developed within the EDIDesK project (D3.4.1) aims to support the integration of EDI into university programmes through a common structure of competencies, learning outcomes, methodologies and assessment criteria. This objective must be considered in relation to different disciplines, educational contexts and

design traditions, which interpret and apply EDI principles from different perspectives. The challenge lies in the attempt to identify shared references able to support different educational pathways while maintaining the plurality of approaches that characterise the field of design. In this sense, the Framework offers an opportunity to reflect on the relationship between standardisation and adaptability, a tension that runs throughout the construction of the proposed educational model.

A relevant aspect concerns the process through which these shared guidelines were developed within the Framework. The definition of common pillars, competencies and assessment criteria provides a useful basis for comparing different educational approaches and fostering dialogue among institutions, disciplines and cultural contexts. This need is particularly relevant, as international collaboration among universities is becoming increasingly frequent, both through European research and innovation programmes and through mobility and exchange activities involving students and academic staff. The availability of a common basis facilitates mutual understanding among partners from different educational systems and contributes to the development of more comparable and transferable educational pathways.

The Framework is the result of a process of exchange among partners from different European educational contexts, each contributing its disciplinary and national perspective. The collection and comparison of teaching practices, methodologies and assessment strategies made it possible to identify recurring elements that were subsequently translated into common strategic pillars. Within the EDIDesK Framework, standardisation emerged through synthesis and negotiation among these approaches, providing a shared structure for comparison, transferability and critical adaptation across different contexts. The definition of common pillars inevitably entails the selection of certain theoretical and methodological references, shaping the visibility accorded to different interpretations of inclusion. These choices contribute to legitimising specific theoretical perspectives, design practices and ways of interpreting inclusion, influencing how these issues are subsequently taught and assessed within educational pathways.

The construction of a common basis must, however, be considered in relation to the dynamic nature of Design for EDI. Over recent years, the field has progressively expanded its scope, moving from a predominantly human-centred perspective towards interpretations that include broader community, systemic and social dimensions (Manzini, 2015; Tunstall, 2013). This evolution makes the definition of stable references particularly challenging, as Design for EDI continues to redefine its objectives, the actors involved and its modes of intervention. The shift in focus from the individual user to the relationships among users, communities, institutions and designed systems leads to an interpretation of inclusion as the ability to recognise the social, material and cultural conditions that can produce access, exclusion or marginalisation. In this context, the contemporary debate challenges the idea of a universal user and highlights the need for more situated, participatory and responsible design processes (Costanza-Chock, 2020; Escobar, 2018; Sanders & Stappers, 2008).

A significant part of the literature highlights how inclusion, participation and social justice assume different meanings depending on the contexts in which they are applied. Approaches such as Design Justice (Costanza-Chock, 2020), Pluriversal Design (Escobar, 2018), and numerous experiences of co-design and participatory design show how the understanding of needs, forms of exclusion and modes of participation emerge through engagement with specific communities, territories and social groups. From this perspective, standardisation consists of the construction of shared conditions that make

it possible to compare different interpretations of EDI. Consequently, the transferability of the Framework depends less on the uniform reproduction of content and more on the ability to adapt shared principles to different educational, cultural and design contexts.

A further element concerns the attempt to apply a common structure to disciplines that operate across different scales, contexts and design objects. System Design, Industrial Design, Product Design, Architecture and Urban Design, and Digital Design address different problems, users and modes of practice, confirming the plural nature of design as a field capable of intervening in different orders of design problems (Buchanan, 1992). The Framework relates these differences through shared competences and principles, suggesting an interpretation of EDI as a cross-cutting perspective capable of spanning different design practices and operating across multiple scales, from interaction with a product or interface to the design of complex systems and environments. The decision to build transversal competences assumes that issues related to inclusion can be recognised across different design scales, even though they may manifest themselves in different forms.

The different disciplinary pathways share a common attention to the ways in which inclusion and exclusion are produced through design choices. In Digital Design, these issues emerge through the accessibility of interfaces and interactions; in Product Design and Industrial Design, they concern the relationship between artefacts, users and modes of use, highlighting how the characteristics of a product can enable, facilitate or limit specific actions (Norman, 1988); in Architecture and Urban Design, they involve the use and experience of built environments and the interaction with them; in System Design, they concern the relationships among actors, services, products and infrastructures. Although operating at different scales, these disciplines share an interest in the conditions that enable or hinder the participation of different subjects within designed systems (Costanza-Chock, 2020).

The central issue, therefore, does not concern the application of the same content across all disciplines, but the construction of a framework capable of interpreting different problems through shared principles. Rather than standardising disciplinary practices or content, the Framework appears to standardise the way EDI-related issues are observed and interpreted: identifying barriers, recognising forms of exclusion, engaging individuals and communities, assessing the impact of design decisions, and considering the plurality of perspectives involved in design processes. Disciplines maintain different tools, languages and objects of intervention, but are connected through a shared attention to the conditions that make a project accessible, usable and inclusive. This approach appears consistent with perspectives that interpret design problems as complex and multidimensional phenomena, whose understanding requires engagement with different viewpoints and the ability to recognise the relationships through which they emerge (Van Der Bijl-Brouwer & Malcolm, 2020).

A second issue concerns the five levels of EDI potential. The progression proposed by the Framework provides teachers and institutions with a reference for describing and comparing the degree of EDI integration across modules, courses and curricula. The levels can also support the identification of areas requiring further development and guide the progressive integration of EDI within educational pathways. Their application must nevertheless take into account the situated nature of the learning processes that the Framework seeks to promote. The development of abilities such as empathy, contextual awareness, critical thinking and design responsibility depends on experiences, relationships and processes of reflection whose trajectories may vary across educational

contexts (Mezirow, 1997). The scale therefore offers an operational reference for guiding educational development, while its capacity to represent the complexity of situated learning processes remains necessarily partial.

The tension between standardisation and adaptability emerges particularly clearly in the assessment of EDI competences. The Framework proposes learning outcomes, activities and assessment criteria that make it possible to observe how the principles of inclusion are integrated into projects and educational pathways. However, many of the competences considered central to Design for EDI – such as empathy, listening skills, reflexivity, contextual awareness and collaboration – have a strong qualitative and situated dimension. Unlike many technical competences traditionally included in design curricula, their development depends on direct experiences, relationships and processes of critical reflection that draw on both theories of transformative learning (Mezirow, 1997) and experiential learning (Kolb, 1984).

This attention to the relational and reflective dimensions of learning is reflected in the overall pedagogical approach of the Framework. Particularly evident is the shift from a conception of teaching primarily centred on the transmission of knowledge to an approach based on direct experience and the active involvement of students. The proposed pathways assign a central role to collaborative activities, engagement with external stakeholders, simulations, case studies and projects developed in relation to real-world issues (Kolb, 1984; Sanders & Stappers, 2008). From this perspective, EDI learning is conceived as a process of progressively building awareness through interaction with different individuals, contexts and situations. The emphasis on experiential activities suggests that the Framework does not simply define content and competences but also proposes specific ways through which they can be developed. At the same time, this approach raises a number of open questions. The implementation of experience-based pathways requires the availability of external partners, access to real contexts, adequate time for participatory activities and specific teaching competences on the part of educators. The possibility of applying such approaches may therefore vary considerably across institutions, degree programmes and national contexts. In this sense, the standardisation proposed by the Framework concerns not only the definition of shared learning objectives, but also the need to adapt methodologies and educational practices to operational conditions that are often very different from one another.

The difficulty of standardising competences such as empathy, contextual awareness, reflexivity and collaboration ultimately points to a broader issue that runs through the contemporary debate on Design for EDI. Through the definition of competences, learning outcomes and educational activities, the Framework does not only contribute to structuring educational pathways oriented towards inclusion, but also proposes a specific interpretation of the role of the designer. The attention given to the ethical, relational and social dimensions of design suggests a professional figure required to engage with the complexity of the contexts in which they operate and with the plurality of actors involved in design processes. From this perspective, Design for EDI is not presented as a specialisation or an additional thematic area, but as an orientation that contributes to redefining the relationship between design, society and professional responsibility (Manzini, 2015). The standardisation proposed by the Framework therefore concerns not only competences, methods and learning outcomes, but also contributes to outlining a shared vision of the designer's professional responsibility. In this sense, the Framework reinforces the idea of professional responsibility as an integral and transversal dimension of contemporary design practice.

Fig. 6.5 summarises the relationship between shared references and contextual adaptation, showing how the plurality of disciplinary, educational and cultural contexts informs the construction of the Framework and its implementation across modules, courses and curricula. The return connection highlights the role of critical adaptation in relating these shared references to the specific conditions of each educational context.

The analysis of the Framework shows that the standardisation of Design for EDI education depends on shared references that can be interpreted and adapted across disciplines, educational systems and design cultures. The Framework contributes to this process by establishing common conditions for comparing educational pathways, supporting their implementation and guiding the progressive integration of EDI. Within this shared structure, contents, methods and design practices retain their disciplinary and contextual specificity. Standardisation therefore functions as a guiding tool whose value lies in connecting a common educational orientation with the plurality of perspectives and contexts that characterise Design for EDI.

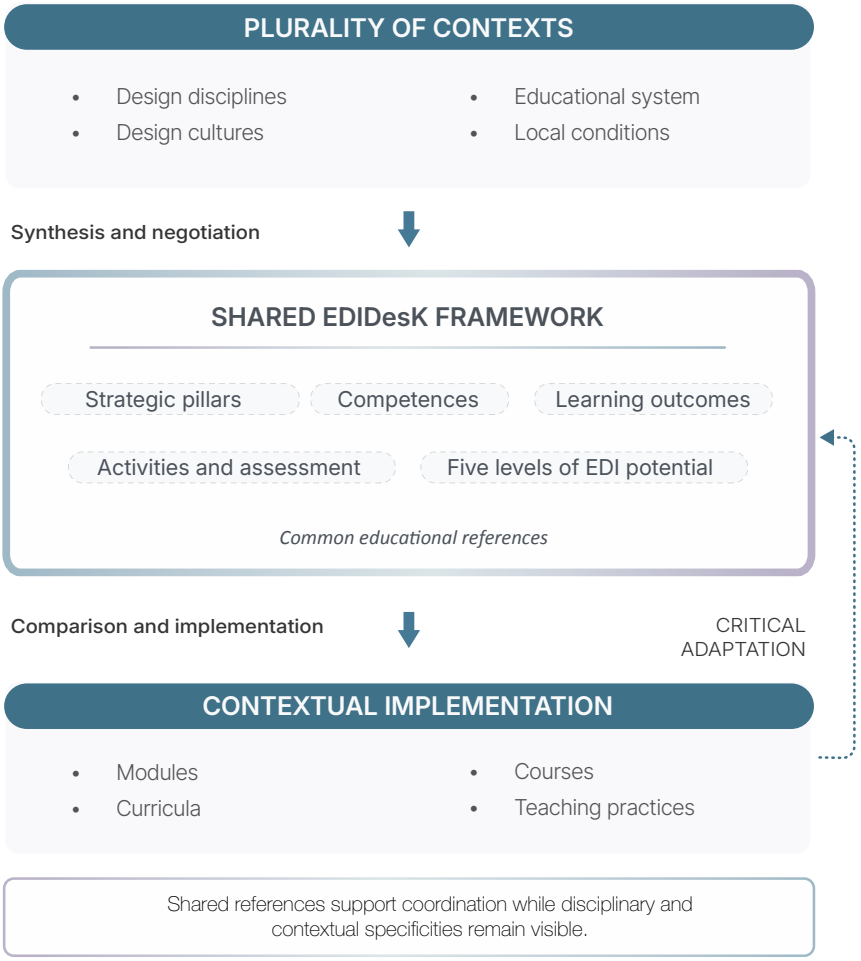


Figure 6.5. Standardisation as a shared and adaptable structure for Design for EDI education.
Source: Author's elaboration based on the EDIDesK Framework (D3.4.1).

6.5 Critical Review of Platform-Based Teaching Modalities

Ainoa Abella, Julia Carrasco Parodi

The digital transformation of education has fostered new modes of teaching and learning based on digital platforms. These tools have evolved from simple content repositories to complex learning ecosystems that integrate open educational resources, communities of practice, co-creation mechanisms and personalisation systems (Zamiri & Esmaeili, 2024; Hajdin *et al.*, 2026). In the field of EDI, digital platforms are key tools, offering opportunities to democratise access to knowledge, promote international collaboration and facilitate the incorporation of multiple cultural and disciplinary perspectives.

However, the literature shows that digital platforms are not neutral technologies. Their design, architecture and governance can reproduce pre-existing models of inequality or generate new forms of exclusion (Selwyn, 2016; Nichols & Dixon-Román, 2024). Therefore, a critical review of platform-based teaching modalities requires analysing not only their pedagogical functionality but also their social, ethical and political implications.

The EDIDesK platform proposal exemplifies an alternative approach to the development of educational platforms, aiming to create a space where knowledge about EDI is transmitted at all levels. As presented in **Chapter 5**, its conception as an open, collaborative platform focused on EDI responds to the need for digital spaces that enable the shared construction of knowledge and the participation of users: students, teaching staff, researchers in training, design, architecture and engineering professionals, professional associations and inclusion experts. This approach goes beyond traditional models of unidirectional knowledge transmission and aligns with the principles of distributed learning communities and open knowledge networks.

One of the relevant aspects of educational platforms is their ability to structure and mediate the learning experience. As shown in Fig. 6.6, the platform is organised into three key elements: Itineraries (guided learning pathways), Repository (open archive of resources) and Glossary (shared vocabulary). The Repository is an open digital archive where users can search for content on specific EDI topics through filters by topic, content format or area of knowledge.

The Repository can therefore make the EDIDesK platform a reference space for uploading or searching for information on EDI in design. However, the literature on digital learning indicates that cognitive overload and disorientation are two main barriers in virtual environments, especially for novice students or those with low levels of digital literacy (Mayer, 2014; Skulmowski & Xu, 2022). The learning pathways proposed by EDIDesK help reduce the inherent complexity of the EDI field and facilitate users' navigation within an interdisciplinary conceptual space. Organising curated content thematically and by level aims to provide quality reference content while also serving as a model for future proposals. Finally, the Glossary aims to be a reference space where a common vocabulary can be created to facilitate understanding of the basic and specific concepts in the materials for users with different levels of knowledge. Given the understanding of language as that which co-constitutes our societies, and which is therefore as diverse as it is unequal (Bidegain, 2019), it is important that the glossary be understood as a mutable and constantly contested space, particularly in relation to the transformation of certain terms to make them more respectful or inclusive towards others. Thus, navigation, search and filtering options reduce these barriers and foster more inclusive and personalised learning experiences (CAST, 2024).

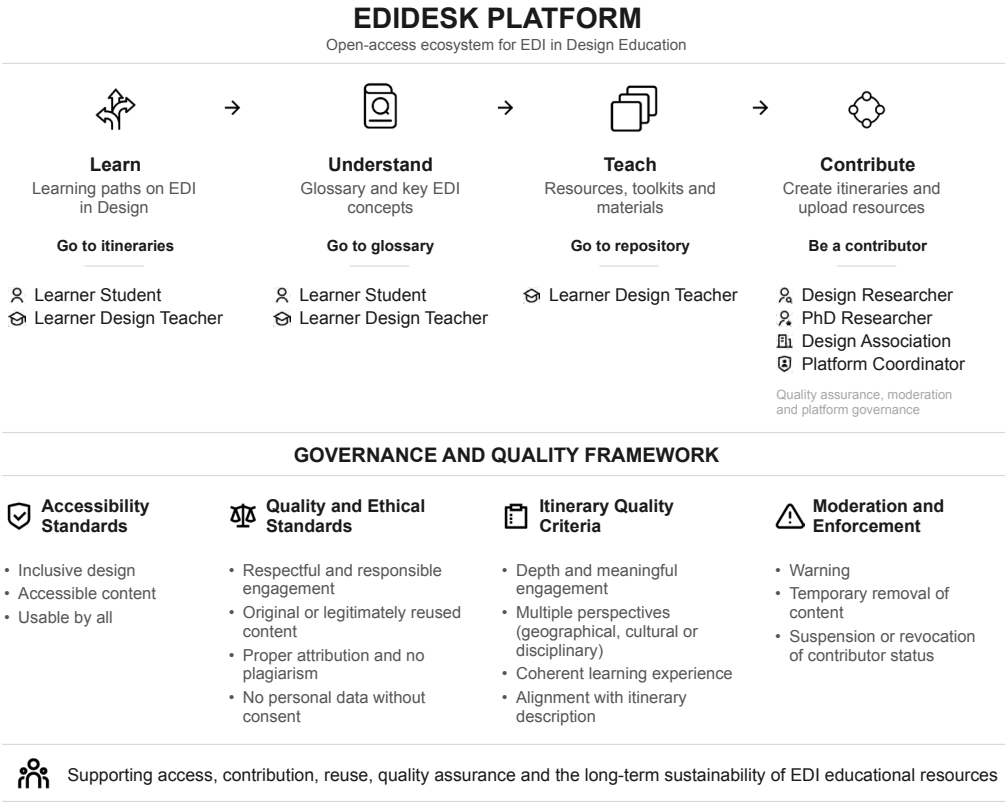


Figure 6.6. Key elements from EDIDesK platform.

However, platforms also present significant limitations. The promise of universal accessibility often conceals the existence of multiple digital divides related to users' technological resources, digital competencies, language skills, or socioeconomic conditions. Consequently, the open availability of content does not in itself guarantee educational equity. From an EDI perspective, it is essential to distinguish between equal access and equity in learning opportunities.

This issue is particularly relevant in the context of design education. The platform's users and contributors have very diverse backgrounds, prior knowledge and needs, which requires flexible and adaptable pedagogical models (Tudor *et al.*, 2025). Digital platforms can facilitate this flexibility through multimodal resources, different levels of content depth and customisable pathways (Xie *et al.*, 2025). EDIDesK incorporates these options as requirements, for example in the Learning Paths by asking for at least two different content formats or indicating the learning level, among others. However, their effectiveness depends on the explicit incorporation of the principles of Universal Design for Learning (UDL), which advocates for the need to offer multiple means of representation, engagement and expression.

Another central element is the collaborative production of knowledge. The EDIDesK contribution model, which allows for the participation of teachers, researchers and organisations, reflects a conception of knowledge about EDI as an open, dynamic and distributed process.

However, for this collaborative knowledge production to be truly inclusive, it is essential to ensure diverse representation of the geographical, cultural, and epistemological contexts that contribute to the construction of knowledge about EDI. Although EDIDesK originates within a European project and represents a significant initiative to consolidate open resources in this field, it is essential to promote the active inclusion of researchers, professionals and contributors from other contexts, especially from regions where they develop critical approaches to design, social justice and inclusion, which often remain underrepresented in Western academic settings. This openness would allow for a greater plurality of perspectives and prevent the reproduction of a Eurocentric view of EDI, fostering a richer knowledge ecosystem that is more representative of the diversity of social realities. Likewise, it is necessary to recognise that platforms driven by the university tend to reproduce the conceptual frameworks, validation dynamics and socioeconomic profiles typical of academic institutions. For this reason, a platform oriented towards equity, diversity and inclusion should encourage the active participation of associations, community organisations (grassroots organisations), and citizen and professional collectives who work daily on processes of inclusion and social transformation. The incorporation of these forms of situated and experiential knowledge helps to enrich the platform's content, reinforces its social relevance and fosters a more democratic and plural conception of knowledge production, in line with the principles of epistemic justice and Design Justice (de Sousa Santos, 2014; Escobar, 2018; Costanza-Chock, 2020; Smith, 2021).

The aforementioned approaches are particularly relevant in a field characterised by its interdisciplinary nature and the continuous evolution of inclusive concepts and practices. However, co-creation processes also present challenges related to quality assurance, the detection of potential biases, expert review, and content governance.

The definition of quality criteria, moderation systems, and feedback mechanisms is therefore a fundamental dimension of educational platforms geared towards EDI and its long-term reliability and sustainability. The presence of ethical standards, authorship policies and review protocols helps to reinforce the credibility of the resources and to prevent the reproduction of discriminatory discourses or of inadequately contextualised content. Similarly, EDIDesK proposes applying a graduated set of measures in cases of non-compliance: warnings, temporary removal of content, and suspension or revocation of contributor status. By establishing shared rules and transparent processes for content validation, the platform will be able to maintain its academic rigour and foster credibility among contributors and learners.

The dimension of accessibility deserves specific consideration. EDIDesK's recommendations regarding the use of accessible texts, subtitling, alternative image descriptions and compatibility with assistive technologies are consistent with international guidelines on digital accessibility, particularly the Web Content Accessibility Guidelines (WCAG) and the European standard EN 301 549 (Filipe *et al.*, 2023). Despite regulatory advances, numerous studies indicate that many learning platforms continue to present significant barriers for people with disabilities (Machado & Santos, 2023). This highlights the need to move from a reactive conception of accessibility to an approach based on accessibility by design. That's why the platform embeds contribution guidelines and content review process through an accessibility checklist that establishes minimum requirements for publication, making accessibility a core governance requirement that will be key for the content's reuse and long-term maintenance.

Beyond functional accessibility, it is also necessary to consider linguistic accessibility as a fundamental dimension in digital platforms. In the case of EDIDesK, the use of Eng-

lish as the main language is intended to facilitate international communication and foster knowledge transfer between European institutions. However, this decision also presents limitations that must be acknowledged from a critical EDI perspective, bearing in mind that some of the content is also available in the official languages of the project partners (Italian, Catalan and Spanish, Polish, Slovak). English continues to function as a lingua franca in scientific production, but its proficiency is uneven and is strongly conditioned by geographical, educational and socioeconomic factors (Soler, 2020). Consequently, access to the content, the ability to actively participate in the platform or to contribute new resources may be restricted for people from non-English-speaking contexts, reproducing forms of exclusion that go beyond technological barriers. In this sense, a possible line of development for the platform is to move towards a genuinely multilingual model that allows for both the consultation and contribution of content in different languages. This strategy would expand the platform's accessibility and facilitate the incorporation of knowledge generated in local contexts that are often under-represented in international academic circles. From a perspective of equity and epistemic justice, multilingualism should not be understood solely as a matter of translation, but as a way of recognising the plurality of knowledge, experiences and cultural contexts.

Finally, EDI-based learning platforms should be understood as infrastructures for social change. Their function is not only to transmit content, but also to create communities of practice, promote critical thinking, and transform design cultures towards more inclusive and socially responsible models. For this reason, it is important that these tools adequately represent diversity across its various dimensions: cultural, linguistic, cognitive and identity-based, among others previously mentioned.

Consequently, a critical review of platform-based teaching modalities suggests that their success should not be evaluated exclusively on the basis of indicators of use, participation or academic performance. It is also necessary to consider their capacity to reduce inequalities, promote the meaningful participation of all users, and generate more equitable, diverse, and inclusive learning ecosystems. In this sense, initiatives such as EDIDesK constitute a relevant example of how digital platforms can become instruments of educational and social transformation when the principles of equity, diversity and inclusion become structural elements of their design, governance and development.

General note on Chapter 6

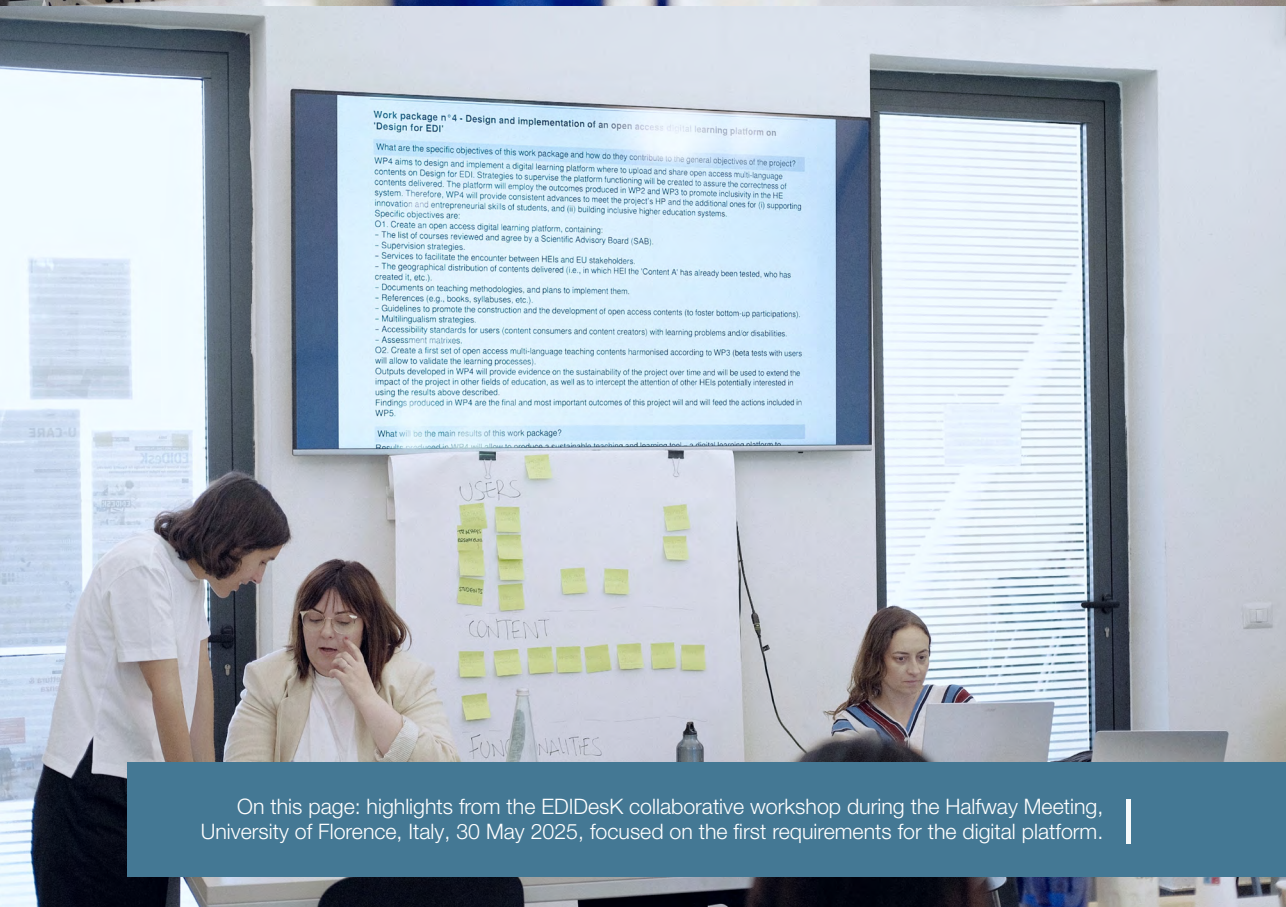
This chapter draws on the EDIDesK deliverables developed across the main research, testing and platform-design phases of the project. It refers in particular to WP2 deliverables: D2.1.1, *Research and Analysis of Teaching Contents on Design and EDI*; D2.2.1, *Digital and Traditional Teaching and Learning Methodologies*; D2.3.1, *Qualitative and Quantitative Analyses of Best Practices*; and D2.4.1, *Virtuous Contents and Methodologies for Promising Replications into Digital Environments*.
It also refers to WP3 deliverables: D3.1.1, *Generalised Teaching Framework on Design for EDI; D3.2.1, Testing the Teaching Framework on Design Modules*; D3.2.2, *Results of Testing Teaching Framework and Modules*; D3.3.1, *Assessment of Results Produced During Tests with Students*; and D3.4.1, *European Framework on Design Education for EDI*. Finally, it refers to WP4 deliverables: D4.1.1, *Design of the Digital Learning Platform: Service Design and User Experience*; and D4.2.1, *Rules for Content Creation and Sharing*.

These deliverables provide further documentation on the research, validated contents, platform design, user experience and rules for creating, reviewing and sharing educational resources for Design for EDI.

The complete documentation can be accessed through both the project website and the dedicated repository. Available at:

- ↗ EDIDesK project website – www.edideskproject.com
- ↗ Book repository – https://drive.google.com/drive/folders/14cizQvxRAHK4iRiII26i4I1pOMGmDUDF
- ↗ EDIDesK platform – www.platform.edideskproject.com





On this page: highlights from the EDIDesK collaborative workshop during the Halfway Meeting, University of Florence, Italy, 30 May 2025, focused on the first requirements for the digital platform.







On this page: selected moments from the EDIDesK workshop “From Roots to Routes” at Cumulus Athens 2026, Athens, Greece, 7 May 2026, including testing and feedback on the EDIDesK platform.

07

Outlines for Academic and Professional Community

Edited by Emilio Rossi

With contributions by
Erminia Attaianese, Elisabetta Carattin, Giuseppe Di Bucchianico, Lorenzo Imbesi, Alexa Mottram, Claudia Porfirione

7.1 Academic Community Perspective

Lorenzo Imbesi

The challenge of Equality, Diversity and Inclusion in design education cannot be addressed through isolated institutional reforms or individual curricular revisions alone. It demands a structural reconfiguration of the way knowledge is produced, shared and validated across the global design community, one that requires universities, research centres and professional networks to function as interconnected nodes within a broader epistemic ecosystem capable of sustaining the long-term cultural transformations that EDI requires. In this context, international academic networks can play an important role in supporting dialogue, comparison and collective learning across different educational traditions. Rather than acting only as platforms for mobility or institutional visibility, such networks can become spaces where design schools negotiate shared values, exchange situated experiences and progressively build common frameworks for action. Cumulus, as a global network of art, design and media universities, offers a relevant example of this process. Since its foundation in 1990, it has connected institutions across different countries and regions, supporting collaboration through conferences, working groups, declarations, student programmes and shared initiatives. This contribution reflects on Cumulus not primarily as an organisation, but as a knowledge ecosystem through which design education can address cultural transformation, EDI and collective responsibility. This reading can be developed through three interconnected perspectives: Cumulus as a distributed space of knowledge production; the Cumulus Design Declaration as an example of participatory governance; and the convergences between the Cumulus agenda and the EDIDesK project.

Three theoretical frameworks, taken together, help to clarify the role that a global educational network can play in this process. The first is Bruno Latour's Actor-Network Theory, developed in *Reassembling the Social* (2005). For Latour, the social must be continuously reassembled through the labour of connecting heterogeneous actors, human and non-human alike: people, institutions, artefacts, documents, digital platforms and shared practices. Knowledge is not a property of individual minds or institutions; it is an emergent effect of networks, produced through the ongoing work of association and translation. Applied to Cumulus, this framework invites us to understand the network not as a container of member institutions, but as a dynamic assemblage: a continuously performed achievement that holds together a diverse range of educational traditions, disciplinary cultures and national contexts through the repeated labour of conference organisation, working group coordination, student exchange, co-publication and shared standard-setting.

The second framework is Pierre Lévy's concept of collective intelligence, elaborated in *L'intelligence collective* (1994). For Lévy, collective intelligence is knowledge distributed across all members of a community, continuously mobilised through participation and sharing rather than centralised expertise. No one knows everything; everyone knows something. The value of a collective resides in its capacity to coordinate diverse forms of partial knowledge into shared understanding that no single member could achieve alone. From this perspective, international design networks do not simply circulate pre-existing knowledge; they create the conditions through which situated forms of expertise, developed in different institutional and cultural contexts, can be brought into productive encounter and transformed into shared resources. The network's Working Groups,

biennial conferences, regional meetings and student programmes can therefore be read as processes through which design education becomes a distributed field of exchange, negotiation and mutual learning.

Lévy's framework also offers a further concept of particular relevance here: the espace du savoir, or knowledge space. Beyond the earth and commerce, Lévy identifies the knowledge space as a distinctive sphere of collective life, one in which identities are constructed through competence, mutual recognition and shared participation rather than through territory or economic exchange. In this space, what one knows and how one contributes to shared knowledge becomes the basis of membership and standing. Cumulus, understood through this lens, is not merely a network of institutions: it is a shared knowledge space in which the professional and institutional identities of design educators across the world are continuously formed, recognised and renewed. EDI, within this framework, is not an external requirement imposed on the network; it is a condition of the knowledge space itself, because the quality and legitimacy of the shared knowledge produced within such a network depends on the breadth, diversity and genuine inclusivity of those who participate in its production.

A significant recent expression of this commitment to inclusive knowledge production is the Cumulus Design Declaration, launched in Nantes on 4 June 2025. Its predecessor, the Kyoto Design Declaration of 2008, articulated the network's collective commitment to design's social and environmental responsibilities. Two decades later, Cumulus initiated a two-year participatory process to renew that foundational document, one that enacts EDI values in its very method: an international online survey, six in-person workshops at major Cumulus conferences, two online workshops, and the progressive involvement of Working Groups and regional networks. More than 250 participants contributed directly, from 400 member institutions across 60 countries.

The outcome marks a significant evolution: a shift from human-centred to planet-centred design, foregrounding the interdependence of human societies and non-human living systems. The Declaration promotes a pluriversal approach, recognising that the global design community encompasses diverse knowledge traditions, from emerging technologies to indigenous wisdom and vernacular practices. Its five core commitments are regenerative design; radical inclusivity rooted in solidarity and social justice; transdisciplinary collaboration; decolonising design; and an ethic of care, empathy and peace. Together, they articulate design's contribution to an equitable, diverse and inclusive society. What is particularly relevant here is not only the content of the Declaration, but also the process through which it was produced. A document elaborated through two years of co-creation across linguistic and institutional boundaries does not merely describe inclusive practices; it performs them.

From this perspective, the EDIDesK project can be understood as a further experiment in networked and distributed knowledge production. It brings together heterogeneous institutions, disciplinary traditions and national contexts into a functioning collective capable of producing knowledge that none could generate alone. The European Teaching Framework developed within EDIDesK provides a structured instrument for embedding EDI within design curricula across diverse institutional settings. At the same time, the open educational resources platform creates an infrastructure for the continuous updating, adaptation and reuse of this knowledge. In this sense, EDIDesK extends the idea of a shared knowledge space into the specific domain of educational practice, translating broad commitments to inclusion into tools, frameworks and resources that can be adopted and adapted by different design communities.

The construction of a genuinely inclusive design culture requires networks of the kind that Cumulus represents: distributed assemblages of heterogeneous actors, sustained through the continuous labour of connection, and capable of generating collective intelligence within a shared knowledge space that exceeds the sum of individual institutional contributions. The Cumulus Design Declaration offers both a substantive vision and a procedural model: a vision of planet-centred, pluriversal, regenerative design grounded in radical inclusivity, and a process demonstrating that such a vision can be built collectively across the diversity of a global network without sacrificing coherence or democratic legitimacy. Projects such as EDIDesK contribute to this longer trajectory by creating the conditions under which universities, professional communities and civil society can engage together in building a design culture capable of responding to the complexity of contemporary societies.

7.2 Design for EDI and Professional Communities: Building the Conditions for Shared Social Transformation

Giuseppe Di Bucchianico

The profound transformations shaping contemporary society (from population ageing and digitalisation to increasing cultural diversity and new forms of social vulnerability) are redefining the role of design. While design has traditionally been expected to respond primarily to functional, productive, or market-driven demands, it is now increasingly called upon to address broader issues concerning rights, participation, and quality of life. Within this context, Equity, Diversity and Inclusion (EDI) should not be regarded as a new specialised field of design practice, but rather as a cultural perspective that invites a fundamental reconsideration of the aims and responsibilities of design.

As Papanek (1985) and, more recently, Manzini (2018) have argued, no design intervention is neutral. Products, services, and environments directly influence people's opportunities to participate in society and contribute to shaping the conditions of collective life. Consequently, inclusion cannot be reduced either to compliance with regulatory requirements or to the removal of physical and digital barriers. Instead, it requires a design approach capable of recognising human diversity as an ordinary condition of human experience and as a source of innovation. Design should therefore be understood not merely as a problem-solving activity, but as a cultural practice through which societies express their understanding of equity, accessibility, and citizenship.

From this perspective, Design for Equity, Diversity and Inclusion should be interpreted as an evolution of the Design for All and Universal Design traditions rather than as a departure from them. A key milestone in this theoretical trajectory is represented by the EIDD Stockholm Declaration (EIDD – Design for All Europe, 2004), which defines Design for All as "design for human diversity, social inclusion and equality". Although formulated more than two decades ago, this definition anticipated many of the principles that are today synthesised within the EDI framework, demonstrating that inclusion had already been conceived as an intrinsic dimension of design quality rather than as a response to specific user groups. While employing a different terminology (equality instead of equity, and with explicit references to human diversity and social inclusion) the Declaration articulated a design vision that places human plurality at the core of the design process.

Today's reference to Design for EDI can therefore be interpreted as the continuation of a broader cultural trajectory to which EIDD – Design for All Europe has made a significant

contribution over the past three decades through research, international conferences, publications, and collaborations with universities, professionals, and public institutions. More broadly, this trajectory has fostered the emergence of an interdisciplinary European community capable of sharing principles, experiences and a common language around inclusive design. This accumulated cultural heritage now represents an important foundation for addressing the challenges posed by Equity, Diversity and Inclusion.

Such a perspective is firmly grounded in the "Capabilities" Approach developed by Sen (1999) and further elaborated by Nussbaum (2011), according to which an inclusive society is one that expands people's real opportunities to choose, act and participate in collective life. Applied to design, this framework suggests that the quality of a project should not be evaluated solely in terms of technical performance, but also in terms of its capacity to create favourable conditions enabling people with different characteristics and abilities to exercise their capabilities autonomously. Design thus becomes an instrument of social enablement, oriented not only towards removing obstacles but also towards creating environments in which every individual can fully develop his or her potential.

This evolution inevitably affects the design professions themselves. Designers are no longer expected merely to master disciplinary methods and technical tools; they are also required to interpret complex social phenomena, engage with stakeholders representing diverse interests, and critically assess the ethical implications of their decisions. As Manzini (2015) argues, contemporary design is increasingly oriented towards the construction of collaborative ecosystems, in which value emerges from interactions among multiple forms of expertise and from the capacity to facilitate shared processes rather than from the isolated action of individual experts.

If the design professions are changing, the educational models through which future professionals are trained must evolve accordingly. Universities continue to play a fundamental role in the production of knowledge, yet they can no longer be regarded as the sole environment in which knowledge is created, validated, and updated. The rapid evolution of technologies, regulations and professional practices calls for continuous learning processes in which research, education and professional practice mutually reinforce one another. From this perspective, the cultural transformation required by Design for EDI appears to depend on the capacity to build communities capable of sharing experiences, producing knowledge, and sustaining its evolution over time.

If learning is not merely the individual acquisition of knowledge but rather a process that develops through participation in communities of practice, where knowledge is continuously negotiated, reinterpreted, and enriched (Wenger, 1998), then, similarly, Hess and Ostrom (2009) argue that the value of knowledge depends on the ability of communities to manage it as a "knowledge commons", ensuring its production, maintenance, and dissemination. The construction of such communities is particularly significant within Design for EDI, where innovation emerges from the interaction between disciplinary expertise, professional experience and the evolving needs of society. In this context, networks such as EIDD do more than disseminate good practices; they function as genuine epistemic communities, contributing to the development of shared languages and to the continuous evolution of design culture. It is within this theoretical framework that the EDIDesK experience can be understood.

Rather than simply being a platform for the production and dissemination of Open Educational Resources, the project represents an attempt to experiment with a different relationship between universities, professional communities and society by fostering a

bidirectional circulation of knowledge between research and design practice. More than producing new educational content, an initiative of this kind seeks to create the conditions through which knowledge can move across different contexts, maintaining an ongoing dialogue between scientific production, education, and professional practice. Consequently, the value of the infrastructure lies less in the mere availability of resources than in its capacity to support processes of knowledge co-production, through which different stakeholders can contribute to the continuous updating, adaptation, and contextualisation of educational content.

The availability of open educational resources, in line with the UNESCO Recommendation on Open Educational Resources (UNESCO, 2019), undoubtedly represents a fundamental component of the project. However, its long-term sustainability depends primarily on the capacity of the community that uses these resources to adapt, integrate, and reinterpret them in response to evolving professional practices and changing societal needs. Within this framework, EDIDesK creates opportunities for sustained dialogue between academic research, educational innovation, and professional practice. The participation of organisations with longstanding experience in inclusive design, including EIDD – Design for All Europe, has contributed to strengthening this exchange, while the project's broader value lies in fostering a continuous circulation of knowledge through which research informs practice and professional experience, in turn, contributes to redefining research priorities, educational content, and methodological approaches.

It would clearly be inappropriate to attribute measurable social transformations to a single research project. Processes of this complexity are shaped by cultural, institutional, and economic dynamics that extend far beyond the scope of any individual initiative. Nevertheless, projects such as EDIDesK may contribute to creating the conditions under which universities, professional communities, and civil society can establish more stable forms of collaboration and knowledge sharing. From this perspective, the project's most significant outcome may lie not so much in the educational resources it has produced, but in the network of relationships it seeks to consolidate and in the collaborative culture it attempts to nurture. Sustainability, therefore, should not be understood as the long-term preservation of a digital platform, but rather as the vitality of the community that continues to use, update, and recognise it as a shared knowledge asset.

Perhaps this is the most significant contribution that EDIDesK offers to the debate on Design for EDI. The construction of a genuinely inclusive design culture cannot be entrusted to individual institutions or isolated projects; rather, it requires communities capable of sharing responsibilities, knowledge and long-term visions. In this sense, the project's most enduring legacy may reside not in the tools it has developed, but in its contribution to strengthening a knowledge ecosystem in which research, education and professional practice can continue to evolve together.

The convergence between Cumulus and EDIDesK therefore lies in their shared understanding of design education as a collective and evolving process. Both emphasise the value of distributed knowledge, participation and exchange across institutional and disciplinary boundaries. In this perspective, academic networks can provide the conditions through which EDI principles are not only discussed, but progressively embedded in educational cultures and practices. They can also help sustain these processes over time by connecting local experiences with broader international debates. In this way, shared frameworks can remain open to adaptation while contributing to a more inclusive design culture.

7.3 External Advisory Board Perspective

7.3.1 The Impact on Design Research: From Sensitivity to Designerly Competence

Claudia Porfirione

EDIDesK arrives at a critical moment for design education. Despite growing attention to Equality, Diversity, and Inclusion across disciplines, design research has yet to develop a shared methodological vocabulary that makes EDI-oriented inquiry comparable, cumulative and transferable. The project's most significant contribution may lie not only in what it teaches, but in how it reframes the conditions under which design research on EDI can be conducted and validated.

From a research perspective, EDIDesK introduces a traceable chain – from conceptual framing to comparative evidence, experimentation, standardisation and open-access infrastructure – that mirrors the rigour expected by the scientific inquiry process. In a field where EDI has often functioned as a declared value rather than an operational criterion, the project demonstrates that inclusion can be made observable in learning outcomes, design briefs, student outputs, and by extension, in research protocols and evaluation frameworks. This shift opens new trajectories. Design researchers working on human-centred and participatory methodologies, on assistive systems, on Ambient Assisted Living (AAL) and care environments, will find in EDIDesK a structural reference and a framework that positions diverse users as constitutive of the design problem itself. The platform's open-access architecture further provides conditions essential for cumulative knowledge-building in a fragmented field, because it enables research reuse and cross-institutional comparison consistent with design justice approaches that treat community-led, situated knowledge as a condition of legitimate design practice (Costanza-Chock, 2020).

The timing is also strategically significant. The European Commission's proposal for Horizon Europe 2028-2034 (FP10) explicitly identifies social cohesion and the integration of Social Sciences, Arts and Humanities across research pillars as structural priorities (European Commission, 2025). EDIDesK, being grounded in evidence-based comparison across five national systems and multiple design fields, is the kind of cooperative infrastructure that such calls are designed to reward and scale. It offers design research a credible entry point into funding streams that demand both methodological rigour and societal impact.

Yet the significance of EDIDesK within the European Commission's landscape extends beyond its strategic positioning. The current Horizon Europe programme (2021–2027) has already embedded EDI as a cross-cutting requirement affecting how research consortia are formed, how projects are evaluated and how impact is defined and measured (European Commission, 2021). Gender equality plans, inclusive design studies and the active involvement of underrepresented communities in co-design processes constitute eligibility and quality project criteria. For the design research community, EDIDesK offers a structural contribution beyond its original educational scope. The volume's comparative diagnosis of teaching modules across Italy, Poland, Slovakia and Spain (**Chapter 2**) reveals that the same fragmentation observed in design curricula (in terms of terminological proliferation, aleatory approaches and absence of shared frameworks) mirrors the fragmentation visible in design research practice more broadly. EDI appears frequently as a declared intent and rarely as a traceable methodological commitment.

The European Teaching Framework developed in **Chapter 4**, with its field-specific structures, level-based progressions and explicit learning outcomes, provides a model of

how EDI criteria can be made operational and assessable. Transposed from a pedagogical to a research register, this logic offers design scholars a template for constructing EDI-literate research designs: ones in which the representation of diverse users is not incidental but constitutive, and in which inclusion is evaluated against explicit and comparable criteria rather than impressionistic judgements.

The open-access platform presented in **Chapter 5** consolidates this argument at the level of research infrastructure and addresses the structural difficulty of accumulating knowledge in design research on inclusion, caused by the inaccessibility of prior work, the incomparability of outputs produced across different institutional, national and disciplinary contexts, and the absence of shared standards for contribution and reuse.

The governance architecture of the EDIDesK platform, which encompasses metadata standards, accessibility compliance, versioning protocols and contribution rules, constitutes a response to these conditions and instantiates the kind of cooperative knowledge infrastructure that Horizon Europe's Open Science mandate increasingly presupposes. As European research funders progressively align publication and data-sharing requirements with FAIR principles (Findability, Accessibility, Interoperability, Reusability) (Wilkinson *et al.*, 2016), the capacity to demonstrate investment in structured, open, and governable knowledge-sharing systems becomes a criterion of methodological credibility. Design research communities that develop such infrastructures early will be substantially better positioned to satisfy these requirements and to contribute to cross-institutional, comparative research programmes at European scale.

Looking ahead to FP10, the emphasis on mission-oriented research, on convergence between technological and social innovation, and on the co-creation of knowledge with communities and end users will further amplify the relevance of frameworks like EDIDesK. Design research, positioned at the intersection of practice, methodology, and societal impact, has historically struggled to articulate its contribution within funding architectures shaped by natural science epistemologies. EDIDesK offers a replicable argumentative structure that shows how design inquiry can generate evidence that is comparable across contexts, grounded in tested practice, and directed toward transferable outcomes. This is a demonstration that design research can operate rigorously at the scale and with the accountability that European research funding increasingly demands.

What EDIDesK ultimately proposes is a change of epistemic posture: from EDI as sensitivity to EDI as a designerly structured, assessable and researchable competence (Holmes, 2018). For scholars committed to inclusive and participatory design, this is an invitation to reposition the research agenda around questions long urgent but rarely operationalised: whose needs define the design brief, how diversity is represented in research methods and what counts as rigorous evidence of inclusion. The project does not resolve these questions, but it builds, for the first time in this field, a shared infrastructure from which such questions can be pursued with the methodological seriousness they deserve.

7.3.2 The Impact on Academic Education

Alexa Mottram

As identified through the EDIDesK project, integration of EDI issues within design education has often been fragmented, inconsistently embedded and treated as an 'add-on' rather than a core design competence. This is particularly significant considering designers do not simply respond to social systems and physical environments, they shape

products, services, systems spaces and digital experiences that can either reduce or exacerbate exclusion (Costanza-Chock, 2020). If EDI remains peripheral to design curricula, then graduates are likely to enter the industry with technical design competence but without the critical capacity necessary to recognise where specific users' needs are being either prioritised or overlooked.

A joined-up approach, developed through a multicultural and international community, creates the conditions for more meaningful change: not only in the teaching of EDI issues within design, and the development of graduates capable of designing inclusively, but also in creating an educational experience that is itself inclusive, diverse and centred on equality.

The mapping of existing teaching practices conducted within EDIDesK provides an evidence base from which to develop EDI teaching in design (see **Chapter 2**).

By identifying valuable practices already taking place, while also exposing gaps, inconsistencies and areas for growth, the project creates a foundation for more cohesive action. This is important because EDI is not absent from design education, but it is often implicit, unevenly distributed or dependent on individual educators rather than structurally embedded across programmes. This mapping approach has been beneficial because it rejects the idea that EDI curriculum development must begin from nothing. Instead the EDIDesK project recognises that effective and worthwhile practice is already taking place but that this practice is often dispersed across modules, disciplines, national contexts and individual educators. In this sense, part of the issue is that absence of coherence, visibility and transferability. Mapping therefore serves as a tool for both diagnosis and development.

The European Framework for Design for EDI provides a shared model for teaching and learning, based on the evaluation of previous practice and ambitious visions for improved and more meaningful work in this field. The framework supports educators to embed EDI in Design curricula through learning outcomes, assessment approaches and adaptable teaching methods. It therefore provides not just a desired destination, but a practical route for implementation. This is important because one of the barriers to embedding EDI is that it can remain at the level of values rather than becoming part of curriculum infrastructure. By articulating learning outcomes, assessment approaches and teaching methods, the framework helps educators develop loose ethical standpoints into concrete pedagogy. It supports the design of briefs, supervision activities, studio practices and assessment criteria in which EDI is authentically practiced and embedded. The potential of this lies in making EDI visible, teachable and assessable across design disciplines. However, this impact will only be realised if institutions commit time and resources to support genuine change.

The true value of EDIDesK lies in the creation of an international community enabled to collaborate on the development and continual growth of EDI practices in design education. If the European Framework for Design is implemented as a live pedagogical tool rather than a compliance framework, educators can operate as designers: testing, iterating and adapting the model in response to students, contexts, communities and social change. The fact that this framework has been tested across 17 design modules in Italy, Poland, Slovakia and Spain demonstrates that Design for EDI can retain a shared pedagogical foundation while being applied and interpreted across different disciplinary and cultural contexts (see **Chapters 3 and 4**).

It is therefore imperative that educators engage with this work not by simply inserting EDI content into curricula, but by contributing to the ongoing discussion about how EDI is taught, assessed and practiced. For design education this is particularly important

because students are learning to shape products, services, systems, spaces and experiences that affect diverse users (Clarkson *et al.*, 2003). Educators have a responsibility to make EDI visible, teachable and assessable, which means naming and discussing exclusion, bias and inequality directly; designing briefs that challenge students to consider and engage with diverse users and contexts; building assessment criteria that value inclusive process as well as final design outputs; and supporting students to think critically about the social impact of their design decisions. In keeping with the core principles of EDI, EDIDesK provides a collective space in which educators can learn together and share knowledge for the purpose of creating design education that prepares students to recognise exclusion, challenge inequity and design more responsibly with and for diverse communities.

This work cannot be undertaken by individual educators. In order to structurally embed EDI, institutions must provide time, staff development, curriculum space and assessment frameworks that support meaningful change. Without this there is a risk that EDI becomes part of institutional language without transforming the deeper practices of design education (Ahmed, 2012). The EDIDesK project positions EDI not as additional curriculum content to be added into design education but as a critical, evolving and collective practice through which educators can cooperatively develop effective ways of teaching this crucial aspect of design.

7.3.3 The Impact on Professional Practice

Elisabetta Carattin

Accessibility and inclusive design consultants have seen a significant cultural shift in how the design profession understands inclusion. Increasingly, clients and project teams recognise that designing for diversity is not simply a matter of compliance or risk management. It is a fundamental aspect of creating places, products and services that respond to the needs of real people. Yet despite this growing awareness, knowledge and confidence in inclusive design remain inconsistent across the design profession.

In many respects, inclusive design today occupies a position similar to that of sustainability twenty years ago. Sustainability was once considered a specialist concern; today it is widely recognised as an essential measure of good design. A similar evolution is needed for inclusion. Designers entering professional practice should be expected to understand the relationship between design decisions and human diversity in the same way they understand environmental, technical or economic performance.

The relevance of this cultural shift is increasingly evident within leading design and engineering practices. At Arup's Accessible and Inclusive Environments team, inclusive design is routinely integrated across projects ranging from higher education and workplaces to transport, cultural and public-sector developments. Inclusion is most effective when considered alongside other project priorities such as sustainability, operational performance, safety and user experience. The growing demand for specialist expertise in this area reflects a broader recognition that accessibility and inclusion are not niche requirements but fundamental indicators of design quality and social value (Arup, 2026).

This shift requires more than awareness. It requires designers to develop confidence in asking better questions, interpreting evidence, engaging with lived experience and understanding the social consequences of design decisions. In practice, inclusive design is often strengthened when it is integrated into early briefing, option appraisal, stakeholder engagement and post-occupancy learning, rather than treated as a technical check at

the end of a project. EDIDesK project can help accelerate this transition by embedding these principles within education and making knowledge openly available to practitioners, educators and decision-makers.

For practitioners, it can become a structured point of reference for continuing professional development, interdisciplinary dialogue and reflective practice. In multidisciplinary organisations, where teams often work across sectors, countries and regulatory systems, shared open-access resources can help create a more consistent baseline of understanding. They can also support conversations with clients by connecting inclusive design to evidence, social value, innovation and long-term resilience, rather than presenting it only as a matter of compliance.

For educators, EDIDesK can make a meaningful contribution to the delivery of inclusive education to the next generation of designers. Rossi and Brischetto's systematic literature review provides an important theoretical foundation for understanding how Equality, Diversity and Inclusion (EDI) can be positioned within design education, not as a discrete topic but as a lens through which design quality, responsibility and social impact can be reconsidered (Rossi & Brischetto, 2024). By developing open-access educational resources, a shared European framework and a collaborative knowledge platform, EDIDesK helps address one of the main barriers facing the design industry as a whole: access to reliable, evidence-based and multidisciplinary knowledge on EDI.

The evidence produced through EDIDesK is particularly valuable because it recognises that EDI in design education is still fragmented and unevenly embedded across programmes, methods and design domains. The European Framework on Design Education for EDI is especially significant in this respect, as it translates the project's research into a more structured output that can support curriculum development, learning objectives and transferable design competences (see EDIDesK WP3). For professional practice, this matters because graduates may enter, for example, architecture, product design or digital design with very different levels of exposure to inclusive design methods, user diversity, participatory approaches and accessibility requirements.

For decision makers, importantly, the project has the potential to create a shared language and common point of reference across disciplines, enabling designers, educators, clients and specialist practitioners to engage more effectively in collective conversations about inclusion and allow informed decisions to be made that are holistic in their approach. A stronger foundation in inclusive design can help project teams and decision makers engage more confidently with specialist practitioners, integrate inclusion earlier in the design process and foster a more collaborative approach to decision-making.

From a professional perspective, the most important long-term impact of EDIDesK is potential to influence a cultural shift in how quality is defined within the design sector. Historically, accessibility and inclusion have often been introduced late in the design process or addressed through minimum regulatory requirements. However, the most successful projects demonstrate that inclusive design is not about designing for a minority group. Rather, it is about understanding and responding to the full spectrum of human diversity, creating environments and experiences that are more usable, equitable and resilient for everyone.

In this sense, EDIDesK's greatest value may lie not only in the knowledge it disseminates, but in its ability to build a shared culture of inclusion, where responsibility is distributed across project teams and supported by meaningful collaboration between educators, designers, clients, users and specialist consultants.

Looking ahead, the success of EDIDesK should not be measured solely by the content hosted on its platform, but by its influence on professional culture. Its greatest leg-

acy may be the creation of a shared knowledge ecosystem that supports better decision-making and encourages collaboration between academia, industry and society. If successful, EDIDesK can help position inclusive design not as an additional consideration, but as a defining characteristic of design excellence. In doing so, it has the potential to contribute to a future in which accessibility, inclusion and Human-Centred Design are recognised as fundamental benchmarks of quality across the design profession.

7.3.4 From Project Outcomes to Systemic Change: Reflections on the Long-Term Institutional and Societal Impact of EDIDesK

Erminia Attaianese

One of EDIDesK's most significant contributions lies in its ability to address a challenge that extends far beyond higher education: the difficulty that contemporary institutions face in translating their commitments to equality, diversity and inclusion into stable organisational practices and meaningful social outcomes. Across Europe, public institutions are increasingly recognising diversity as a structural characteristic of contemporary societies, rather than an exceptional condition requiring ad hoc responses. However, there is still a significant discrepancy between normative aspirations and institutional realities. Policies and strategic commitments often exist alongside organisational cultures, decision-making processes and systems of representation that perpetuate exclusion, whether explicitly or implicitly.

From this perspective, the long-term significance of the EDIDesK project should not be assessed primarily through the quality or longevity of its individual outputs, but rather through its potential to contribute to institutional learning and ultimately institutionalisation. Experience from European cooperation programmes repeatedly shows that innovative tools and frameworks often generate substantial short-term value, but struggle to become embedded within organisational routines and decision-making processes. The central challenge is therefore not dissemination, but institutional uptake. In this regard, EDIDesK raises a crucial question: under what conditions can principles associated with equality, diversity, and inclusion move beyond project-based experimentation and become integrated into the ordinary functioning of institutions?

This question is particularly relevant in a context characterised by growing social complexity, demographic diversification, increasing mobility and new forms of vulnerability. Under these conditions, inclusion can no longer be understood solely as a normative objective or a matter of compliance. Rather, it increasingly represents a test of institutional adaptability, namely the capacity of organisations to recognise changing social realities and revise their inherited assumptions, practices and modes of operation accordingly.

The institutional implications of this perspective are substantial. Contemporary public institutions are evaluated not only in terms of efficiency and performance, but also in relation to their capacity to generate public value, foster participation, and respond fairly to diverse societal needs (Bryson *et al.*, 2017; Moore, 1995). In this evolving landscape, the ability to engage with human diversity is crucial for institutional legitimacy. Those that fail to recognise and respond to changing social realities risk losing their ability to act as representative, trusted and effective entities within democratic societies.

Ultimately, institutional responsiveness is tested through the environments, services, and systems through which people experience everyday life, as well as through policies and governance arrangements. It is at this level that commitments to inclusion are translated into tangible conditions of accessibility, usability, participation and well-being. Inclusion only

becomes meaningful when it affects the quality of everyday interactions between individuals and the physical, digital and organisational environments they encounter.

From the perspective of ergonomics professionals, particularly the European Ergonomist (EurErg), these considerations acquire a particular relevance. Contemporary ergonomics has evolved from being a discipline primarily concerned with optimising human performance to being a discipline that addresses the complex interactions between people, technologies, organisations and environments. Within this broader perspective, diversity is no longer considered a constraint to be accommodated through corrective solutions, but rather a fundamental design consideration that should inform the conception of systems from the outset.

The educational approach promoted by EDIDesK aligns closely with this evolution. Rather than introducing new disciplinary contents, it reinforces competencies that are already becoming central to contemporary ergonomic practice. By fostering awareness of equality, diversity and inclusion as integral components of design processes, the project strengthens competencies that are becoming increasingly important for the professional profile of EurErgs: systems thinking, Human-Centred Design, participatory approaches, accessibility and the ability to address the needs of diverse populations through evidence-based design processes. Consequently, the project contributes not only to design education, but also to the evolution of the professional culture of ergonomics, where diversity is increasingly recognised as a design parameter rather than as a constraint requiring subsequent adaptation.

EDIDesK moves beyond the idea of EDI as a specialised field of intervention, positioning it instead as a dimension of institutional quality in terms of both learning and achievement. In doing so, it reframes inclusion as a systemic principle capable of informing organisational behaviour as a whole, rather than as a compensatory practice directed at specific groups. This approach aligns with modern governance principles, which emphasise that institutional resilience hinges not only on resources and formal structures, but also on the ability to learn from and adapt to societal change.

The societal implications of this perspective are equally significant. Much of the contemporary debate on diversity understandably focuses on rights, representation, and recognition. However, an equally important question concerns societies' capacity to transform diversity into a source of cohesion rather than fragmentation. This issue is becoming increasingly relevant across Europe, where demographic changes, migration patterns, ageing populations and technological advances are rapidly reshaping social relations.

From this perspective, human diversity should be understood not merely as a social characteristic to be recognised, but as a condition that challenges the ways in which environments, services, technologies and institutional systems are conceived and organised. The extent to which societies can accommodate diversity depends on their ability to translate inclusionary principles into the material, spatial, digital and organisational structures that shape everyday experiences. This perspective is consistent with approaches that interpret human development not simply in terms of formal rights or resource distribution, but in relation to the opportunities people effectively have to participate in social life and pursue valued ways of living (Nussbaum, 2011; Sen, 1999).

Therefore, human diversity should not be regarded as a variable to be accommodated after systems have been conceived, but rather recognised as a fundamental condition informing the conception of environments, services and organisational processes from the outset (Persson *et al.*, 2015). In this respect, EDIDesK reflects a broader understanding of social innovation as a process through which communities, organisations

and institutions collaborate to develop new responses to complex societal challenges (Muratovski & Manzini, 2023).

At a time when many European societies are experiencing growing political and cultural polarisation, inclusion takes on a significance that goes beyond questions of fairness or representation. It becomes a prerequisite for maintaining social trust, democratic participation, and the capacity for collective problem solving. The ability of institutions to engage with diverse constituencies, recognise multiple forms of experience and knowledge, and encourage participation across social groups is becoming an increasingly important factor in determining democratic resilience. This requires moving beyond assumptions of standardised users, beneficiaries, or citizens, and recognising the diversity of human conditions, abilities, expectations and patterns of interaction that characterise contemporary societies.

The most enduring impact of EDIDesK may therefore be cultural rather than procedural or organisational. Projects, platforms and frameworks inevitably evolve or become obsolete, but institutional cultures and collective assumptions often persist for much longer, continuing to shape the future direction of change. The project contributes to a gradual shift in perspective, moving from viewing equality, diversity, and inclusion as specialised policy concerns to recognising them as integral dimensions of governance, public value creation, and institutional legitimacy.

Ultimately, EDIDesK suggests a broader cultural transition: from designing systems around an assumed norm to designing institutions, environments, services, and sociotechnical systems around the diversity that characterises contemporary societies. This transition lies at the core of contemporary ergonomics and Human-Centred Design, and it increasingly defines the competencies expected of ergonomists and, more broadly, of all professionals committed to improving human well-being through design.

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ANNEX A

Best Practices and Interpretative Map

A.0 Reading Guide

A.1 Interpretative Map

A.2 Best Practices for Design-oriented EDI Education

A.3 Teaching and Learning Methodologies

A.4 Competency Framework for Students

A.0 Reading Guide

Annex A presents extended analytical materials that complement and support the findings discussed in **Chapter 2**. The content is based on the EDIDesK Deliverables D2.3.1, D2.4.1 and is organised around an interpretative map connecting key principles of EDI education with suitable teaching practices, methodologies, tools, and educational resources.

The interpretative map constitutes the central element of the annex. It demonstrates how various educational approaches can facilitate the implementation of best practices in design-oriented EDI education. The remaining tables provide the conceptual background needed to understand and apply the map. The first complementary table defines the best practices referenced in the interpretative map, explains what they involve, and clarifies why they are important for EDI-oriented design education. To strengthen their connection with the Competency Framework, the best practices are organised according to three competency dimensions: attitudes, knowledge, and skills. The second table describes the teaching and learning methodologies included in the map and explains their relevance to the effective delivery of EDI content.

The annex concludes with a Competency Framework for Students, outlining the attitudes, knowledge, and skills that these teaching practices and methodologies are intended to develop.

Table A.1. Structure and relationships between the Annex A components.

Sequence	Element	Function
A.1	Interpretative Map	Connects EDI Best Practices with Teaching and Learning Methodologies.
A.2	Best Practices for Design-oriented EDI Education	Defines Best Practices organised by Attitudes, Knowledge, and Skills.
A.3	Teaching and Learning Methodologies	Defines the methodologies included in the Interpretative Map.
A.4	Competency Framework for Students	Specifies the Attitudes, Knowledge, and Skills students should develop.

A.1 Interpretative Map

The following table presents the interpretative map linking identified best practices in EDI-oriented design education with teaching and learning methodologies that can support their implementation. Best practices are organised according to the three competency dimensions – Attitudes, Knowledge, and Skills – to align with the Competency Framework presented in this Annex. The table should be read horizontally: each best practice is connected to one or more teaching methodologies that can facilitate its achievement in educational practice.

Table A.2. Interpretative Map of EDI Best Practices and Teaching Methodologies.

Best Practices – ATTITUDES			
Teaching and Learning Methodologies	1. The content of modules should be flexible to accommodate the students' readiness to tackle different levels of EDI issues	2. Modules should create a safe emotional and mental space supporting effective learning processes, to go beyond students' initial expectations on EDI	3. Modules should refer to understanding the role of the designer and its limitations
Design process			
Design management			X
Individual approach toward student	X		
Experiential approach		X	
Case studies	X		X
Workshop methodology		X	
Inclusive learning environment		X	
Learning by doing		X	
Collaborative work among students			

Best Practices – KNOWLEDGE Part 1 of 2			
Teaching and Learning Methodologies	4. Modules should present that EDI is an integral part of the design process	5. Modules should introduce the state of knowledge about the EDI approach as an ongoing process of defining its scope	6. Modules should include assignments that focus on a criti-cal approach to-wards current stand-ards and tools in the EDI area
Design process	X		
Design management			
Individual approach toward student			X
Experiential approach			
Case studies	X	X	
Workshop methodology		X	X
Inclusive learning environment			X
Learning by doing			X
Collaborative work among students			

Best Practices – KNOWLEDGE Part 2 of 2		
Teaching and Learning Methodologies	7. Modules should introduce some (relevant) aspects of knowledge from the social sciences	8. Modules should introduce the design as an intervention in a specific environment, or context (context-based creative practice)
Design process	X	
Design management		

Individual approach toward student			
Experiential approach			
Case studies	X		X
Workshop methodology			X
Inclusive learning environment			
Learning by doing			
Collaborative work among students			

Best Practices – SKILLS Part 1 of 3			
Teaching and Learning Methodologies	9. Modules should present the universal use of methods used in the design (design process), that can address different aspects of the EDI approach	10. The use of various research methods allows to clearly identify problems in the EDI area	11. The module structure should develop, simultaneously, both soft and hard skills into students
Design process	X	X	
Design management			
Individual approach toward student			
Experiential approach	X	X	
Case studies	X		

Workshop methodology			
Inclusive learning environment			X
Learning by doing	X	X	X
Collaborative work among students			X

Best Practices – SKILLS Part 2 of 3		
Teaching and Learning Methodologies	12. Modules should foster the development of project management skills	13. Modules should include working with real stakeholders and providing students with full responsibility for gathering feedback from users and stakeholders
Design process		X
Design management	X	X
Individual approach toward student		
Experiential approach		X
Case studies	X	
Workshop methodology		
Inclusive learning environment		
Learning by doing		
Collaborative work among students		

Best Practices – SKILLS Part 3 of 3		
Teaching and Learning Methodologies	14. Modules should include some control stages where the revision of soft skills in communication with users and stakeholders takes place	15. Promote a complete self-reflection of gained competencies
Design process		
Design management		
Individual approach toward student		
Experiential approach		
Case studies		
Workshop methodology		X
Inclusive learning environment		
Learning by doing	X	
Collaborative work among students	X	

Note: The same nine methodologies are applied across Attitudes, Knowledge and Skills; X indicates an identified correspondence. A.2 Best Practices for Design-oriented EDI Education.

A.2 Best Practices for Design-oriented EDI Education

The following section presents 15 best practices for design-oriented EDI education, organised according to the competency dimensions of Attitudes, Knowledge and Skills. For each best practice, a brief description explains what it means in educational practice and why it is relevant to EDI-oriented design education.

ATTITUDES

01. The content of modules should be flexible to accommodate the students' readiness to tackle different levels of EDI issues

WHAT IT MEANS
The assignments should leave a space for interpretation to envisage various final outcomes. Regarding the graduation projects, students should have the flexibility to choose the topic and the direction of the project development.

WHY IT IS IMPORTANT
Designing social change requires individuals involved in the action to break down certain barriers and patterns, which necessitates a certain amount of civil courage, perseverance in action and mental resilience – a set of qualities that not everyone possesses. That is why it is important to recognise students' predispositions and openness.

02. Modules should create a safe emotional and mental space supporting effective learning processes, to go beyond students' initial expectations on EDI (i.e., preventing biased culture)

WHAT IT MEANS
Contact with and observation of real users to understand their needs and habits, or while testing the solution, helps students go beyond their expectations and paradigms. Teaching staff should supervise this process and prepare students to conduct the observation with consideration of ethical issues. They should also check student readiness, especially when the issues and contexts involve difficult situations for users – such as economic or social justice concerns – that can evoke strong emotional responses.

WHY IT IS IMPORTANT
Students tend to attach great importance to their own experiences and, in EDI projects, it is important that they try to go beyond their own perspective. Students should accept rejections, avoid focusing on themselves when receiving feedback and process it by focusing on the goal and the needs of users.
Nevertheless, the success of the module cannot be measured only by the project itself, but also by how the students' perception of problems has changed and how they have deepened their understanding of them.

03. Modules should refer to understanding the role of the designer and its limitations

WHAT IT MEANS
Teaching staff should introduce examples of designers' roles and explain how, in difficult situations, they can have an influence.

WHY IT IS IMPORTANT
A designer working in the EDI field should be armed with humility; saviour syndrome is extremely common among designers. In EDI design practice, emotional stability and mental resilience are essential. It is crucial to avoid encountering the "barrier of impossibility".

KNOWLEDGE

04. Modules should present that EDI is an integral part of the design process

WHAT IT MEANS
Taking EDI values into account should be an integral part of any designer's profession, and there is no need to separate EDI from the rest of design. The ability to apply such values is a kind of baseline with which one does not discuss (e.g., "operating beyond functional design guidelines").

WHY IT IS IMPORTANT
It is important that students learn to recognise that EDI is an integrated part of the design process rather than being merely one of the approaches to passively apply in their creative practices, perceiving the human dimension of design.

05. Modules should introduce the state of knowledge about the EDI approach as an ongoing process of defining its scope

WHAT IT MEANS
Modules should not only introduce the current state of knowledge regarding the EDI approach, but also emphasise that this understanding is an ongoing process aimed at continually defining and expanding its scope. This entails recognising that EDI is a dynamic and evolving domain, influenced by societal changes, emerging research and novel perspectives on equity and inclusivity. Therefore, students should be encouraged to critically engage with EDI concepts, challenge existing norms and contribute to ongoing dialogues and developments within this important area of study.

WHY IT IS IMPORTANT
There are no specific competences for an EDI specialist (designer) other than designer competences. It rather involves a particular mindset. Students must recognise that "perfect inclusive solutions" do not exist – including one group can inadvertently exclude others. Design solutions are based on norms that may not suit everyone. Moreover, inclusion-led or inclusive solutions can be temporary, as contexts may change and new knowledge or technology may emerge. Consequently, ongoing rethinking and development are essential.

06. Modules should include assignments that focus on a critical approach towards current standards and tools in the EDI area

WHAT IT MEANS
Students evaluate where and how they can use the tool, as well as its effectiveness and credibility (who is the author, what theoretical assumptions the tool addresses, whether it has been scientifically validated, etc.).

WHY IT IS IMPORTANT
When it comes to using EDI tools or frameworks, a critical approach is essential for a deeper understanding of the issues.

07. Modules should introduce design as an intervention in a specific environment or context (context-based creative practice)

WHAT IT MEANS
Students should perceive the solution as changing the environment, the system and the context, not only as an individual product.

WHY IT IS IMPORTANT
In projects dealing with complex issues where needs must be defined, students should be able to choose the most important ones, propose adequate and implementable solutions that suit the context and address the most critical need at that specific moment.

08. Modules should introduce relevant aspects of knowledge from the social sciences

WHAT IT MEANS
Modules should include a thorough understanding of the necessity to include certain aspects of knowledge from the field of social sciences in the design process.

WHY IT IS IMPORTANT
EDI is not only about physical disabilities; relational/social and cognitive dimensions are equally important. Biased knowledge must be avoided. That is why the social aspects of EDI need to be introduced with knowledge from anthropology, sociology, environmental psychology and physiology.

SKILLS

09. Modules should present the universal use of methods used in the design (design process), that can address different aspects of the EDI approach

WHAT IT MEANS
The most important competencies for students should be universal knowledge of problem-solving and the ability to adapt it to different methods, enabling them to address problems and areas they have never encountered before.

WHY IT IS IMPORTANT
Intersectional thinking is needed when designing for EDI. This is not simply designing for disability, but in the broader context of social exclusion and inequality.

10. The use of various research methods allows students to clearly identify problems in the EDI area

WHAT IT MEANS
Modules should strengthen the research aspect and introduce diverse research methods and approaches that allow for the identification of real problems and causes of issues such as exclusion and inequality. Additionally, through thorough research, students can seek appropriate solutions.

WHY IT IS IMPORTANT
A high level of social sensitivity is needed to effectively design solutions in the EDI area. An important outcome of the module should be the competence or predisposition to identify real needs. This is achieved through research, as well as through the ability and sensitivity to recognise them. Through practising different kinds of research, students can gain:

- social awareness;
- capability to identify latent needs;
- objectivity (transcending personal viewpoints);
- ability to distinguish causes from effects.

11. The module structure should simultaneously develop both soft and hard skills in students

WHAT IT MEANS

The module structure should concurrently develop both soft and hard skills in students. Soft skills, such as teamwork, communication and adaptability, are crucial for effective collaboration and problem-solving. On the other hand, hard skills encompass technical abilities and specific knowledge in a particular field, such as proficiency in the use of design software, understanding design principles or mastering manufacturing techniques.

For example, a module might incorporate group projects to enhance teamwork and communication skills, while also including technical workshops to improve software proficiency or teach advanced design methodologies.

This holistic approach ensures that students graduate with a well-rounded skill set that prepares them for diverse professional environments.

WHY IT IS IMPORTANT

Cultural aspects and soft skills are as important as technical ones. It is important to balance both aspects of learning to provide a holistic approach to consistent learning.

12. Modules should foster the development of project management skills

WHAT IT MEANS

Students should effectively manage their project by implementing it according to the plan set at the beginning (i.e., learning objective against assessment method), while at the same time remaining flexible in returning to earlier stages of the project to verify them.

WHY IT IS IMPORTANT

The design process often requires iterative approaches, where initial ideas may need refinement or improvement as work progresses. Being flexible in revisiting earlier stages allows for better adaptation to changing requirements or the discovery of new perspectives, ultimately leading to better final solutions. Balancing adherence to the plan with flexibility in project management enables effective anticipation of and response to changes, resulting in better outcomes.

13. Modules should include working with real stakeholders and provide students with full responsibility for gathering feedback from users and stakeholders

WHAT IT MEANS

Working in the field, with real people and their daily problems, leaves an emotional impact that can change one's understanding of the EDI approach. Presenting projects to potential final users and stakeholders is also crucial to expand the value of projects.

WHY IT IS IMPORTANT

It is important to build awareness among students that the effectiveness of their projects can be verified only by testing them with real users. With consistent feedback from users, students can also perceive their work as more valuable and useful, potentially leading to increased engagement.

14. Modules should include review stages in which students' soft skills in communicating with users and stakeholders can be assessed

WHAT IT MEANS

It is essential to gain deeper knowledge about users, which relates to developing soft skills, including:

- the ability to include users and stakeholders in the process;
- effective communication and treating users as equal partners.

WHY IT IS IMPORTANT
Students should cultivate the habit of treating people with special needs as equal partners in a project during their education.

15. Promote comprehensive self-reflection on acquired competences

WHAT IT MEANS
Verification of achieved competences should be carried out through in-depth student self-reflection, including an analysis of expectations regarding the achieved results: personal goals, methods of communication, work and achieved competences.

WHY IT IS IMPORTANT
Soft skills are usually not so obvious for students. That is why it is important that during the educational process, students will have space for constant self-reflection and deep awareness of their progress – it will make them more self-confident.

A.3 Teaching and Learning Methodologies

The following section presents the teaching and learning methodologies identified as particularly relevant for EDI-oriented design education. For each methodology, a brief description explains what it means in educational practice and the motivation for its use in supporting the effective delivery of EDI content.

01. Design process

WHAT IT MEANS (DETAILS)
Problem-based learning: Students learn by engaging with and solving real-world problems, using design process methodology.

MOTIVATION
This method develops problem-solving skills, self-directed learning, and the application of knowledge.

02. Design management

WHAT IT MEANS (DETAILS)
Project-based learning with fostering management skills involves guiding students through the project's process of development from concept to implementation, though emphasising design principles and management strategies.

MOTIVATION
This method develops an understanding of the commercial context of project implementation.

03. Individual approach toward student

WHAT IT MEANS (DETAILS)
Student-led teaching where students are encouraged to ask questions, conduct investigations, and develop solutions based on their curiosity, interests, and readiness.

MOTIVATION
This method promotes active learning, critical thinking, and independence. It allows for the recognition of students' predispositions, openness, and readiness to tackle different levels of EDI issues.

04. Experiential approach

WHAT IT MEANS (DETAILS)
Learning through experience often involves hands-on activities, simulations, experiments, or fieldwork.

MOTIVATION
Experimenting helps students to better understand human diversities (e.g., simulations and trials led by students that create disabling scenarios to experience) and reduces the gap between theories and practice. In this way, students can experience first-hand difficulties as final users do.

05. Case studies

WHAT IT MEANS (DETAILS)
Using real-world scenarios to facilitate the learning processes. This method encourages students to analyse and discuss complex situations, make decisions, and solve problems as they would do in real-life contexts.

MOTIVATION
By examining specific cases, students develop critical thinking, analytical, and decision-making skills.

06. Workshop methodology

WHAT IT MEANS (DETAILS)
Workshops facilitate intensive engagement through focused tasks within a predefined period. It can include the use of artefacts like frameworks, cards specially designed for EDI education, etc. Workshops involve interactive activities, group discussions, learning from each other and hands-on exercises, allowing participants to actively engage with the material and apply what they learn in a practical context. It can also include teaching through questioning, where the teaching staff poses questions to stimulate critical thinking and draw out ideas and underlying assumptions.

MOTIVATION
Workshops are used to enhance consistent learning, to foster collaboration, and to provide opportunities for discussion as well as to exchange ideas, perspectives, and approaches. This allows students (and teaching staff) to work effectively with interdisciplinary groups of peers and build empathy among participants.
making skills.

07. Inclusive learning environment

WHAT IT MEANS (DETAILS)
This approach empowers students to express themselves according to their interests and learning styles, thus enhancing the effectiveness of teaching and learning. The approach can be delivered through diverse types of presentation methods and by encouraging active participation. Students are engaged in various activities such as empathic simulation exercises, on-site surveys, and discussions. They are also given the autonomy to choose tasks and processing methods, either individually or in groups, and to select their preferred format for final elaboration and presentation, be it written, audio-visual, or graphical.

MOTIVATION
This approach empowers students to express themselves according to their interests and learning styles, thus enhancing the effectiveness of teaching and learning.

08. Learning by doing

WHAT IT MEANS (DETAILS)
Learning by doing emphasises hands-on experience and active participation in the learning process. Rather than passively receiving information, students engage directly in activities, experiments, or real-world tasks.

MOTIVATION
This method helps learners develop practical skills, understand concepts (more deeply), and retain knowledge more effectively by applying what they have learned.

09. Collaborative work among students

WHAT IT MEANS (DETAILS)
Students work together in groups to solve problems, complete tasks, or create projects. This method emphasises teamwork, communication, and peer learning. It also allows for mixing diverse groups of students.

MOTIVATION
Collaborative work enhances the design process for EDI issues by bringing together diverse skills and perspectives:

- diverse perspectives: incorporating varied viewpoints helps identify and address a wider range of EDI issues;
- enhanced creativity and innovation: collaboration fosters creativity, leading to unique and effective solutions;
- improved problem-solving: leveraging collective expertise improves the understanding and resolution of complex EDI challenges;
- empathy and understanding: collaborative efforts increase empathy and awareness of different experiences;
- cross-disciplinary insights: including members from various fields provides a comprehensive approach to EDI issues (if students are from different domains).

A.4 Competency Framework for Students

The table presents the Competency Framework for Students, outlining the key competencies that support EDI-oriented design education. Each competency is accompanied by a brief description and prioritised using the MoSCoW method (Must have, Should have, Could have, Would have) to indicate its relative importance within the curriculum.

Table A.5. Student Competency Framework for Design-oriented EDI Education.

Competencies		Description	MoSCoW
KNOWLEDGE			
01	**Unbiased knowledge on EDI in Design studies, including resources and authors**	It refers to objective and impartial information on EDI within Design Studies. Unbiased knowledge is essential to properly deal with EDI-related issues as well as to set up methodologies and design interventions that fully meet EDI. This also involves providing access to balanced and well-researched resources (e.g., academic articles, books, reports) and recognizing authors who contribute significantly to EDI discourse without bias. The goal is to ensure that the information presented aids in understanding and addressing EDI issues in design, fostering an inclusive environment and informing policy and practice in a fair and equitable manner.	**M**
02	**Knowledge on how to critically engage with EDI themes and users**	This competence involves understanding and analysing EDI issues within a given context and interacting with diverse user groups for different projects. It requires recognizing biases, fostering inclusive dialogue, and applying EDI principles in decision-making processes.	**M**
03	**Knowledge of design-based/design-oriented methods to work with EDI themes and issues**	This competence involves using design cultures and methodologies to address EDI. This includes user-centered design, participatory design, and co-design to engage diverse stakeholders, identify EDI challenges, and develop EDI-oriented solutions. These methods prioritize empathy, collaboration, and iteration, ensuring that diverse perspectives shape the design process and outcomes, promoting fairness and inclusivity.	**M**
04	**Knowledge of specific methods to work with diverse and mixed groups of people**	This competence includes understanding and applying techniques such as inclusive facilitation, cultural competence training, and conflict resolution strategies. These methods emphasize active listening, empathy, and respect for different perspectives. Tools like team-building exercises and structured dialogues help create a collaborative environment, ensuring all voices are heard and valued, leading to more effective and inclusive outcomes.	**M**

05	**Knowledge in the use of suitable digital tools to work with EDI**	This competence involves understanding and utilizing technology to support EDI-oriented efforts. This includes platforms for virtual collaboration, project management, and communication. Tools for accessibility (e.g., screen readers, captioning services) are essential as much as the use of specific digital tools developed by researchers to effectively work with multidimension features of EDI, including users and stakeholders. These tools help facilitate inclusive practices, ensure accessibility, and enable effective monitoring and analysis of EDI initiatives.	**M**
06	**Knowledge of social sciences topics that support the understanding of EDI in design processes**	This competence refers to understanding sociology, psychology, anthropology, and cultural studies to provide insights into human behavior, social dynamics, and cultural contexts, helping designers create more equitable and inclusive solutions by considering diverse user needs and systemic biases.	**S**
07	**Knowledge of multimodal tools to communicate EDI**	The knowledge involves using various methods like visual aids, digital media, storytelling, and interactive platforms to convey EDI concepts into holistic discussions with users and stakeholders. Tools may include infographics, videos, social media, virtual reality, and webinars. These diverse communication modes enhance understanding, engagement, and accessibility, effectively promoting EDI principles across different audiences.	**S**

Competencies		Description	MoSCoW
ABILITY			
08	**Use of experience and knowledge to smartly address EDI-related issues**	This ability is about applying expertise and practical in-sights to identify, understand, and solve problems related to EDI topics at different design scales (e.g., solution, digital, environmental, behavioural, etc.). It involves leveraging past experiences, best practices, and informed strategies to create effective, sustainable solutions that foster EDI in various contexts. It collaterally echoes the ability to engage with users and stakeholders to produce common strategies that maximize the impact of designs.	**M**
09	**Working with diverse and mixed groups of users and stakeholders**	Ability to engage individuals from various backgrounds, including different races, genders, ages, and abilities. It requires inclusive practices, active listening, and collaborative approaches to ensure all perspectives are valued. This fosters innovative solutions and equitable outcomes by leveraging the strengths and insights of a varied group.	**M**

10	**Developing empathy with EDI topics**	The ability focuses on the competence of developing deep understanding and sensitivity towards EDI issues. It involves actively listening to diverse perspectives, acknowledging privilege and biases, and fostering a genuine desire to address systemic inequalities. This empathy drives meaningful engagement and informed decision-making to promote fairness and inclusivity in all aspects of design and interaction.	**M**
11	**Expressing critical reflections on EDI**	Ability to analyse and evaluate EDI issues thoughtfully and objectively, aiming to provoke meaningful dialogue and positive change. It indirectly refers to the knowledge on EDI as well as the use of unbiased information useful to generate a deep culture on EDI.	**M**
12	**Identifying promising case studies and comparing different sources and materials useful extract relevant patterns and best practices to be translated into EDI-oriented design practices**	Analyzing various sources and real projects to extract patterns and best practices for EDI-oriented design. By comparing different materials, designers can translate insights into effective strategies that promote EDI in their work.	**M**
13	**Recognizing and understanding EDI in different design contexts**	Acknowledging how EDI impact influences design processes and outcomes across various industries and applications. It requires sensitivity to cultural, social, and economic factors to ensure inclusive and equitable design solutions. It also involves the capability of designers to identify arrays of EDI-related aspects in different contexts that do not directly show adherence to EDI.	**M**
14	**Communicating EDI with diverse and mixed groups of people**	Ability to use inclusive language, cultural sensitivity, and engaging multimedia tools. It aims to foster understanding, promote dialogue, and empower diverse perspectives in discussions and initiatives related to equity, diversity, and inclusion.	**M**
15	**Identifying the best diverse and mixed groups of people and stakeholders representing the variety of all possible users of a project**	Selecting representatives from varied demographics, including different ages, genders, ethnicities, abilities, and backgrounds. This ensures comprehensive input and consideration of diverse perspectives, enhancing the project's inclusivity and relevance to all potential users.	**M**
16	**Developing hard and soft skills on EDI**	Ability to acquire both technical competencies such as data analysis and policy implementation, as well as inter-personal abilities like empathy, communication, and cultural competence. These skills are essential for effectively addressing EDI issues in diverse settings and promoting meaningful change.	**M**

17	**Embedding EDI into digital design prac-tices**	Integrating EDI principles that prioritize accessibility, inclusivity, and representation. This includes using inclusive design frameworks, conducting user research that em-braces diversity, and implementing ethical guidelines to ensure equitable outcomes in digital products and services. By fostering a culture of diversity and sensitivity to user needs, designers can create more impactful and inclusive experiences for all users.	**S**
18	**Developing share-able knowledge on EDI**	Ability to create accessible resources and insights that can be widely distributed and understood. This involves compiling research, case studies, and best practices in formats such as reports, articles, and workshops. By making this knowledge available, it promotes awareness, education, and actionable strategies for advancing EDI across various sectors and communities.	**S**
19	**Use of abstraction and generalization skills to develop meaningful insights on EDI**	The use of abstraction and generalization skills in exploring EDI involves distilling complex social dynamics into manageable concepts and patterns. It is about recognizing recurring themes across diverse contexts, identifying underlying principles that shape EDI outcomes, and framing solutions applicable across various scenarios. This process integrates different perspectives (i.e., sociology, psychology, economics, etc.) to build a comprehensive understanding of systemic biases, power structures, and inclusive practices. Through abstraction, it is possible to reveal universal truths about discrimination, representation, and cultural competence. Generalization then allows to apply these insights broadly, informing policies, interventions, and organizational strategies that promote fairness, respect, and equality for all individuals. Thus, abstraction and generalization in EDI enable nuanced analysis, innovative problem-solving, and sustainable societal change.	**S**
20	**Development of critical, lateral, and convergent thinking on EDI**	Critical thinking questions biases. Lateral thinking explores novel perspectives. Convergent thinking synthesizes solutions for equitable, diverse, and inclusive outcomes in society.	**S**
21	**Development of management skills to be translated into EDI-oriented / EDI-based projects**	Developing management skills for EDI projects involves fostering inclusive leadership, aligning goals with diversity metrics, and navigating complex social dynamics. It requires strategic planning, resource allocation, stakeholder engagement, and continuous evaluation to ensure equitable outcomes. Integrating EDI into project management enhances organizational resilience, innovation, and societal impact, driving sustainable change towards equality and inclusion.	**S**

22	**Creating design scenarios that promote EDI**	Creating design scenarios for EDI involves envisioning inclusive strategies, environments, products, systems, or services that accommodate diverse needs and perspectives. It requires empathy, research into user demographics, and iterative prototyping to ensure accessibility and cultural sensitivity. Designers integrate feedback from diverse stakeholders to refine solutions that foster EDI, promoting positive social impact through thoughtful and intentional design choices.	**S**
23	**Recognizing the different design dimensions of EDI (social, economic, technical, environmental, etc.)**	Recognizing the different design dimensions of EDI involves addressing social equity, economic access, technical inclusivity, and environmental sustainability. It requires considering how design choices impact diverse communities, economies, technological access, and environmental stewardship to ensure holistic and equitable outcomes in various context.	**S**
24	**Managing multi-faced issues about EDI (social, economic, technical, environmental, etc.) that go beyond preassigned tasks**	Managing multifaceted issues about EDI involves navigating complex interactions between actors, social equity, economic disparities, technical inclusivity, and environmental sustainability. It requires holistic thinking, adaptive strategies, and collaboration across disciplines to address interconnected challenges. Effective management involves continuous learning, stakeholder engagement, and proactive problem-solving to foster inclusive environments and sustainable solutions that transcend predefined tasks and promote comprehensive societal advancement.	**S**
25	**Developing design-led self-awareness on EDI and the methods to work with EDI, including users**	Developing design-led self-awareness on EDI involves introspection on biases, understanding diverse user perspectives, and integrating inclusive design methods. It includes empathy-building, user research, co-design workshops, and iterative prototyping to create solutions that cater to varied needs. Collaboration with diverse stakeholders ensures equitable outcomes, fostering a culture of sensitivity and responsiveness to societal diversity. Effective methods encompass user testing, feed-back loops, and cultural competence training, aiming for designs that promote equality, dignity, and empowerment across all demographics.	**S**
26	**Proposing novel strategies to address EDI (opportunity to setting up forums for discussions among students, staff, and stakeholders)**	Proposing novel strategies for EDI involves creating forums where students, staff, and stakeholders can engage in open discussions. These platforms foster understanding, empathy, and collaboration across diverse perspectives. Strategies include structured dialogues, workshops on unconscious bias, and inclusive policy development, aiming to cultivate a supportive environment. Continuous feedback loops and evaluation ensure effectiveness, promoting a culture of inclusivity and equity within educational and organizational settings.	**S**

27	**Creating collaborative work environments where everyone can feel represented**	Creating collaborative work environments involves fostering inclusivity, respecting diverse perspectives, and ensuring equitable participation for all team members.	**S**
28	**Developing multi-cultural and soft skills on EDI**	Developing multicultural and soft skills in the context of EDI involves cultivating empathy, communication, and cultural competence. It includes learning to navigate diverse perspectives, fostering inclusive environments, and promoting respectful interactions across varied cultural backgrounds and identities. These skills enable effective collaboration, leadership, and advocacy for equitable practices and policies in diverse settings.	**C**
29	**Choosing between 'here and now' interventions and long-term holistic strategy**	Choosing between 'here and now' interventions and long-term holistic strategies in EDI involves balancing immediate impact with sustainable systemic change. Short-term interventions address urgent needs and immediate disparities, offering quick solutions. In contrast, long-term strategies aim for comprehensive transformation, tackling root causes and embedding equity into organizational culture and policies. The choice depends on context, resources, and goals, aiming for both immediate relief and enduring equity advancements in the pursuit of EDI goals.	**C**
30	**Recognizing and propose new perspectives on EDI**	It involves challenging traditional norms, amplifying marginalized voices, and embracing intersectional approaches. It requires openness to evolving societal dynamics, advocating for systemic change, and fostering environments where diversity thrives authentically.	**C**

Competencies		Description	MoSCoW
KNOWLEDGE			
31	**Overcoming own beliefs, cultural assumptions, and unconscious biases**	The attitude of overcoming own beliefs, cultural assumptions, and unconscious biases involves humility, self-reflection, and openness to learning. It requires questioning ingrained perspectives, actively seeking diverse view-points, and committing to continuous personal growth to foster genuine inclusivity and understanding.	**M**
32	**Putting aside individualism and egocentrism**	The attitude of putting aside individualism and egocentrism involves prioritizing collective well-being, empathy, and collaboration. It requires valuing diverse perspectives, listening actively, and fostering a sense of community to promote inclusivity and equity in all interactions and decision-making processes.	**M**

33	**Be curious and open for new design perspectives**	Being curious and open for new design perspectives involves embracing creativity, exploring unconventional ideas, and seeking inspiration from diverse sources. It requires a willingness to challenge assumptions, innovate with empathy, and collaborate across disciplines to create inclusive and impactful designs that address diverse needs and experiences.	**M**
34	**Understanding the role of diverse and mixed groups of users and stakeholders**	Understanding the role of diverse and mixed groups of users and stakeholders involves recognizing their varied perspectives, needs, and contributions. It requires empathy, active listening, and inclusive practices to ensure that designs and decisions reflect the diverse voices and experiences within the community or organization. This understanding fosters collaboration, innovation, and equitable outcomes in designing solutions that cater to a broad range of users and stakeholders.	**M**
35	**Open-mindedness on EDI to go beyond stereotypes and cliches**	The attitude of open-mindedness on EDI involves transcending stereotypes and *clichés* through genuine curiosity and respect for diverse perspectives. It requires challenging assumptions, embracing complexity, and advocating for inclusive practices that recognize and celebrate the richness of individual experiences and identities.	**M**
36	**Putting aside prestructured concepts on EDI so that any new project can start with-out biased assumptions**	Putting aside pre-structured concepts on EDI involves approaching new projects with a fresh perspective, free from biased assumptions. It requires openness to diverse viewpoints, willingness to question established norms, and commitment to creating inclusive environments where all voices are heard and valued. This mindset fosters innovation and ensures that EDI initiatives are responsive and inclusive of the needs and realities of diverse communities.	**S**
37	**Exploring the different features of EDI, and to accept them as elements for new design opportunities**	Exploring the different features of EDI involves understanding their multifaceted aspects and embracing them as catalysts for new design opportunities. It requires creativity, empathy, and a willingness to integrate diverse perspectives into innovative solutions that promote equality and inclusivity across various contexts and initiatives.	**C**
38	**Use of the design practice as a learning process to advance the knowledge on EDI (learning by doing)**	The attitude of using design practice as a learning process to advance knowledge on EDI involves actively engaging in hands-on experiences and iterative learning. It requires experimentation, reflection, and adaptation of inclusive design methods to develop deeper insights and effective strategies for fostering equity and diversity. This approach emphasizes continuous improvement and collaboration to address societal challenges and promote meaningful change through practical application and learning by doing.	**C**

39	**Highlighting positive effects of a project that stimulate constructive patterns**	Highlighting positive effects of a project that stimulate constructive patterns involves emphasizing outcomes that inspire beneficial behaviors, attitudes, and systemic changes. It focuses on showcasing how initiatives foster inclusivity, equity, and mutual understanding, encouraging replicable practices and reinforcing positive impacts within communities or organizations.	**C**
40	**Attitude toward leadership and creating strategies for EDI-related interventions**	The attitude toward leadership in creating strategies for EDI interventions involves proactive guidance, vision, and commitment to fostering inclusive environments. It requires aligning organizational goals with EDI principles, empowering diverse voices, and implementing strategies that promote equity and representation. Effective leadership cultivates a culture of accountability, continuous learning, and collaboration to drive meaningful change and achieve sustainable EDI outcomes.	**W**

General note on Annex A

This annex draws primarily on EDIDesK Deliverables D2.3.1, *Qualitative and Quantitative Analyses of Best Practices*, and D2.2.1, *Digital and Traditional Teaching and Learning Methodologies*, developed within Work Package 2 (WP2).

These deliverables provide the research basis for the identification of EDI-oriented best practices and teaching and learning methodologies presented in this annex. The material has been reorganised into an interpretative map connecting best practices and methodologies, together with a competency framework structured around Attitudes, Knowledge and Skills, to support the integration of Design for EDI into higher education.

The complete documentation can be accessed through both the project website and the dedicated repository. Available at:

- EDIDesK project website – www.edideskproject.com
- Book repository – https://drive.google.com/drive/folders/14cizQvxRAHK4iRiIl26i4I1pOMGmDUDF

Annex B

Tools, Methodologies and Digital Resources for Design for EDI

B.0 Reading Guide

B.1 Toolkits, Methodologies, Approaches and Tools for EDI

B.2 Teaching Methodologies, Guidelines and Educational Resources

B.3 Digital Environments and Digital Tools

B.4 Choosing Resources for Design for EDI

B.0 Reading Guide

Annex B presents the extended benchmarking resources supporting the methodological analysis developed in Chapter 2. It provides a curated overview of 64 resources identified through the EDIDesK WP2 research and organised into three interconnected databases: design-oriented resources, educational resources, and digital environments and tools.

Rather than reproducing the full analytical database, the annex is conceived as a compact operational guide for educators, researchers and design programmes interested in integrating Equality, Diversity and Inclusion (EDI) into design education. Resources were selected according to qualitative criteria including EDI relevance, methodological clarity, educational applicability, accessibility, open-access availability, scientific or institutional grounding, and transferability to higher education design contexts.

Sections B.1-B.3 provide the three resource databases, while Section B.4 offers practical entry points for selecting resources according to teaching goals and phases of the design process. Resource titles are hyperlinked where available.

Table B.0. Student Competency Framework for Design-oriented EDI Education.

ID	Database title	Resources	Main function
B.1	Toolkits, methodologies, approaches and tools for EDI	31	Design-oriented resources for inclusive design learning.
B.2	Teaching methodologies, guidelines and educational resources	11	Pedagogical resources for inclusive teaching and learning.
B.3	Digital environments and digital tools	22	Platforms and technologies for accessible and collaborative learning.
Total		64	

Note: Bibliographic references and online resources cited in this annex are included in the References and Web References sections of the volume.

B.1 Toolkits, Methodologies, Approaches and Tools for EDI

Database 1 presents 31 design-oriented resources selected for their relevance to EDI and related approaches. The resources include toolkits, methodologies and operational tools that can support the recognition of exclusion, the representation of user diversity, participatory processes, design development and the evaluation of inclusive outcomes. The selection is intended as an operational reference for educators and should be read together with the methodological discussion in Section 2.3.1.

Table B.2. Database 1: compact operational overview. See D2.2.1 General note on Annex B. The family and design-phase labels indicate the primary educational use and are not intended as fixed or exclusive classifications.

	Resource	Institution / author	Type / family	Main EDI / educational role	Design phase
A	Inclusive Design Toolkit	University of Cambridge	Process-oriented toolkit / method library	Understand user diversity, exclusion and inclusive design decisions.	Across process.
A.1	Exclusion Calculator Lite	University of Cambridge	Exclusion-awareness tool	Estimate exclusion and accessibility barriers.	Evaluation; Validation.
A.2	Digital Personas	University of Cambridge	Personas / user profiles	Represent diverse capabilities and user conditions.	Exploration; Definition; Evaluation.
A.3	Family Set of Personas	University of Cambridge	Personas / user profiles	Represent diverse needs and capabilities.	Exploration; Definition; Ideation; Evaluation.
A.4	Design Process Checklist	University of Cambridge	Checklist / process review	Monitor inclusion across the design process.	Across process; Validation.
B	IDEA Toolkit	University of Cambridge/Zallio & Clarkson	Process-oriented toolkit	Translate inclusion, diversity, equity and accessibility into design criteria.	Across process.
B.1	Inclusive Design Canvas	University of Cambridge	Canvas / template	Structure inclusive questions and design decisions.	Definition; Ideation.
B.2	IDEA Audit	University of Cambridge	Audit / checklist	Assess inclusion, diversity, equity and accessibility.	Exploration; Evaluation; Validation.
C	Microsoft Inclusive Design Toolkit	Microsoft	Process-oriented toolkit	Recognise exclusion, learn from diversity and extend solutions.	Across process.

	Resource	Institution / author	Type / family	Main EDI / educational role	Design phase
C.1	Inclusive Activity Cards	Microsoft	Cards / prompts	Prompt inclusive reflection, discussion and ideation.	Exploration; Ideation; Evaluation.
C.3	Inclusive Design for Cognition Worksheet	Microsoft	Worksheet / checklist	Support reflection on cognitive accessibility and diverse needs.	Definition; Ideation; Evaluation.
C.3	Inclusive Design for Cognition Screeners	Microsoft	Screening / evaluation tool	Identify potential cognitive barriers.	Evaluation; Validation.
D	Operationalizing Inclusive Design	Google	Process-oriented toolkit	Embed inclusive design activities within the design process.	Across process.
E	EDI by Design Cards	University of Nottingham / Research Consulting	Cards / prompts	Support critical reflection and peer discussion on EDI.	Exploration; Ideation; Evaluation.
F	The Inclusive Design Guide	Inclusive Design Research Centre / OCAD University	Process-oriented guide / toolkit	Provide inclusive design principles, guidance and teaching reference.	Across process.
G	Community-Led Co-design Kit	Inclusive Design Research Centre / OCAD University	Co-design / participatory toolkit	Support community-led participation, facilitation and shared decisions.	Exploration; Definition; Ideation; Prototyping; Evaluation.
G.1	Inclusive Cities Co-design Kit	Inclusive Design Research Centre / OCAD University	Co-design / participatory toolkit	Support community-based and participatory design activities.	Exploration; Definition; Ideation; Prototyping.
H	Inclusive Co-design Toolkit	Bridgeable / Hitomi Yokota	Co-design / participatory toolkit	Plan and facilitate more inclusive co-design activities.	Exploration; Definition; Ideation; Prototyping.
I	Inclusive Design Toolkit	Politecnico di Milano / Tangity	Process-oriented toolkit / templates	Support inclusive studio and service design activities.	Across process.
J	Inclusive Design Toolkit Ontario	Ontario Digital Service / Accessibility Centre of Excellence	Process-oriented toolkit	Support inclusive digital-service and UI/UX design.	Across process.

	Resource	Institution / author	Type / family	Main EDI / educational role	Design phase
L	Inclusive Digital Mobility Toolbox	INDIMO Horizon 2020 Project	Process-oriented toolkit	Support inclusive mobility, service and digital-design projects.	Exploration; Definition; Evaluation.
M	Inclusive Signs	University of Lincoln / Emilio Rossi	Cards / prompts	Build awareness and support reflection on social inclusion.	Exploration; Ideation.
N	Cards for Humanity	Frog Design	Cards / prompts	Broaden user perspectives through diverse needs and scenarios.	Exploration; Ideation; Evaluation.
O	Inclusive Design Works	Google I/O / Grace Hopper / SF Design Week	Case-based design resource	Support professional case-based learning and inclusive reflection.	Exploration; Evaluation.
P	18F Method Cards	GSA Technology Transformation Services	Method cards / deck	Support method selection and structured design processes.	Across process.
Q	Digital Ethics Compass Toolkit	Danish Design Center	Prompts / reflective toolkit	Support ethical reflection and decision-making in digital design.	Definition; Ideation; Evaluation.
R	Liberatory Design Toolkit	Stanford d.school / National Equity Project	Process-oriented toolkit	Support equity-oriented, critical and reflective design practice.	Across process.
S	Actionable Futures Toolkit	Nordkapp	Process-oriented method library	Support scenario building and strategic futures design.	Exploration; Definition; Ideation.
T	UNaLAB Toolkit: Tools for Co-creation	UNaLAB Horizon 2020 Project	Co-design / participatory toolkit	Support co-creation, stakeholder engagement and collaborative planning.	Exploration; Definition; Ideation; Prototyping.
U	Social Impact Design Toolkit	Kentsel Strateji / World Bank	Process-oriented toolkit	Support social-impact and service-design contexts.	Exploration; Definition; Ideation; Evaluation.

	Resource	Institution / author	Type / family	Main EDI / educational role	Design phase
V	Service Design Tools	POLI.design	Process-oriented method library	Support service-design education and method selection.	Across process.

B.2 Teaching Methodologies, Guidelines and Educational Resources

Database 2 presents 11 resources selected for their relevance to inclusive teaching and learning. Unlike Database 1, these resources are not necessarily design-specific: they include toolkits, guidelines, frameworks, open educational resources and teaching materials addressing accessibility, learner variability, inclusive instruction and participation. Their value for Design for EDI lies in supporting educators in the design of accessible materials, flexible learning pathways, inclusive classroom practices and participatory learning environments.

Table B.3. Database 2: compact operational overview. See D2.2.1 General note on Annex B. The type and educational-use labels indicate the primary function of each resource and are not intended as fixed or exclusive classifications.

Resource	Institution / author	Type	Main pedagogical function	Educational use
EDI Toolkit for Researchers	Newcastle University	EDI toolkit	Support understanding of EDI in research teams and academic practice.	Research supervision, team culture and inclusive academic practice.
Teaching for Belonging: Equity, Diversity and Inclusion Faculty Toolkit	Humber College	Faculty toolkit	Support inclusive and identity-responsive instruction and belonging.	Course design, classroom facilitation and reflective teaching practice.
Accessibility Toolkit – 2nd Edition	BCcampus	Accessibility toolkit / OER	Support accessible learning materials and learning environments.	Documents, images, multimedia, links and course-content accessibility.
FLOE Inclusive Learning Design Handbook	FLOE Project / IDRC	Learning design handbook / OER	Support flexible, adaptable and personalisable educational resources.	Inclusive content design, learning materials and accessibility evaluation.
Universal Design for Learning Guidelines	CAST	Framework / guidelines	Address learner variability through flexible curricula, materials and resources.	Curriculum planning, learning activities, materials and assessment.

Resource	Institution / author	Type	Main pedagogical function	Educational use
Tools for Taking Action	Stanford d.school	Workshop resources	Provide human-centred, action-oriented resources for learning and systems change.	Workshops, collaborative activities and educator-led learning experiences.
Designing Our Tomorrow (DOT)	University of Cambridge	Design & Technology resources	Support authentic and inclusive learning in STEM and Design & Technology.	Design briefs, iterative activities and technology-oriented learning.
Design Thinking for Educators	IDEO	Toolkit / workbook	Apply design thinking to educational challenges and learning environments.	Course, classroom and school-level learning design.
Inclusive Learning Design	Virna Rossi	Guide / open educational resource	Support equitable learning experiences in Higher Education.	HE course design across values, context, content and assessment.
SNOW Inclusive Learning & Education	Inclusive Design Research Centre / OCAD University	Resource hub / guides	Support inclusive education and the creation of accessible learning materials.	Alternative and accessible formats, inclusive content and educator guidance.
Voices into Action (VIA) Online Toolkit	European Agency for Special Needs and Inclusive Education	Participation framework / toolkit	Support meaningful learner and family participation in inclusive education.	Planning, implementing and evaluating participatory educational processes.

B.3 Digital Environments and Digital Tools

Database 3 presents 22 digital environments and tools selected for their potential to support inclusive teaching and learning. The resources include accessible and personalisable learning environments, open-source interface components, guidelines and databases for accessible information, collaborative platforms, co-creation tools, 3D design environments and game-based learning resources. Their value lies in supporting accessibility, personalisation, collaboration, documentation and reuse. Digital availability, however, should not be interpreted as inclusiveness in itself: tools should be selected and adapted according to accessibility, usability and pedagogical coherence. The database should be read together with the methodological discussion in Section 2.3.2.

Table B.4. Database 3: compact operational overview. *See D2.2.1 General note on Annex B.* The type and educational-use labels indicate the primary function of each resource and are not intended as fixed or exclusive classifications.

Resource	Institution / project	Type	Main inclusive / educational function	Educational use
Clusive®	CAST / Center on Inclusive Software for Learning	Accessible learning environment	Support adaptable reading and learning through learner preferences and personalised supports.	Accessible and personalised content use.
UDL Studio™	CAST	Content-authoring tool	Create universally designed educational materials with learning supports, assessments and interactive elements.	Accessible learning-material production.
UDL Exchange™	CAST	Resource platform / OER	Create, remix and share instructional resources guided by Universal Design for Learning.	Resource creation, sharing and reuse.
CAST Figuration®	CAST	Accessible web components	Provide reusable components for accessible, responsive and interactive websites.	Accessible interface design and prototyping.
FLOE – Flexible Learning for Open Education	Inclusive Design Research Centre / OCAD University	Open learning ecosystem	Support adaptable open educational resources and inclusive learning for diverse learner needs.	Flexible and open learning design.
FLUID Project / Infusion	Inclusive Design Research Centre / OCAD University	Open-source UI framework	Support the design of flexible, personalisable and accessible user interfaces.	Interface prototyping and accessibility.

Resource	Institution / project	Type	Main inclusive / educational function	Educational use
User Interface Options (UI Options)	FLOE / Inclusive Design Research Centre	Personalisation tool	Allow users to adjust presentation and content according to individual preferences and access needs.	Personalised access to digital content.
Weavly	FLOE / Inclusive Design Research Centre	Coding learning environment	Support accessible introductory coding activities and creative participation for diverse learners.	Digital and interaction-design learning.
5 Microsoft Education Tools for an Inclusive Classroom	Microsoft Education	Guidance / tool set	Support reading, accessibility checking, captions, translation and inclusive classroom participation.	Accessible content and classroom support.
ToFIE – Tools for Inclusive Education	EU project	Educational toolkit / project	Support educators working with specific learning disorders and linguistic diversity.	Inclusive higher education teaching.
Guidelines for Accessible Information	ICT4IAL / European Agency for Special Needs and Inclusive Education	Guidelines / OER	Support the creation of accessible information for learning and communication.	Accessible content production.
Country Resources from the ICT4I Project	ICT4I / European Agency for Special Needs and Inclusive Education	Resource database	Provide research abstracts and examples of innovative ICT for inclusion in practice.	Research and practice reference.
ICT as a Tool for Promoting Equity	ICT4I / European Agency for Special Needs and Inclusive Education	Research / practice database	Document ICT practices and evidence related to equity in educational opportunities.	Policy and practice reference.
EID Toolkit for Teaching	VCU	Inclusive teaching toolkit	Provide practical tactics for syllabi, assignments, classroom interactions and accessibility.	Course design and inclusive teaching practice.
Inclusively Designed PhET	University of Colorado Boulder	Accessible simulation platform	Support inclusive design processes and multimodal interaction through open-source simulations.	Accessible STEM and interaction learning.

Resource	Institution / project	Type	Main inclusive / educational function	Educational use
Gamestorming	Gamestorming	Co-creation toolkit / templates	Provide games and templates for collaborative ideation, facilitation and design.	Workshops, process facilitation and co-design.
Miro	Miro	Collaborative whiteboard	Support remote and distributed co-creation, mapping and shared process documentation.	Collaborative studio and project work.
Inclusive Design for Cognition – Figma template	Microsoft / Figma Community	Collaborative template	Support cognition-focused inclusive design activities within a shared digital workspace.	Collaborative interface design and prototyping.
Mural	Mural	Collaborative whiteboard	Support shared templates, visual collaboration and distributed co-creation.	Collaborative studio and workshop activities.
Makers Empire	Makers Empire	3D design learning platform	Support Design Thinking, STEM problem solving and collaborative 3D design activities.	Collaborative ideation and 3D prototyping.
Minecraft Education	Minecraft Education	Game-based learning platform	Support collaboration, problem solving, coding and creative activities in shared environments.	Simulation and collaborative learning.
StoriumEDU	StoriumEDU	Collaborative writing game	Support collaborative storytelling through character roles and prompt-card mechanics.	Narrative and game-based learning.

B.4 Choosing Resources for Design for EDI

The guide provides practical entry points to the three databases. It does not prescribe a fixed sequence: resources may support more than one goal or phase, and their educational value depends on how they are selected, adapted and integrated into the learning pathway.

WHAT DO YOU WANT TO DO?

	Teaching goal	Where to look	Resource families
01	Recognise exclusion and user diversity	B.1	Simulations · Personas · Audits
02	Frame an inclusive design challenge	B.1	Canvases · Cards · Checklists
03	Engage users and stakeholders	B.1	Co-design · Participatory toolkits
04	Design an inclusive learning experience	B.2	UDL · Guidelines · Accessible learning resources
05	Enable collaboration and accessible participation	B.2 + B.3	Collaborative methods · Digital environments
06	Evaluate and reflect on inclusive outcomes	B.1 + B.2	Audits · Evaluation tools · Reflective resources

WHERE ARE YOU IN THE PROCESS?

EXPLORE → DEFINE → IDEATE → PROTOTYPE → EVALUATE → VALIDATE

Database	Role	How to read it
DB1 — DESIGN-ORIENTED RESOURCES	Across the design process	Tools and methods that can support exploration, framing, ideation, prototyping, evaluation and validation.
DB2 — EDUCATIONAL RESOURCES	Transversal layer	Resources for structuring inclusive teaching, accessible content, learner variability and reflective learning.
DB3 — DIGITAL RESOURCES	Enabling layer	Digital environments supporting access, collaboration, documentation, personalisation and reuse.

General note on Annex B

This annex draws primarily on EDIDesK Deliverable D2.2.1, *Digital and Traditional Teaching and Learning Methodologies*, developed within Work Package 2 (WP2).

The deliverable provides the research basis for the mapping and selection of design-oriented resources, educational resources and digital environments and tools presented in this annex. The resources have been reorganised here as a compact operational reference to support their consultation and potential use in Design for EDI education.

The complete documentation can be accessed through both the project website and the dedicated repository. Available at:

- EDIDesK project website – www.edideskproject.com
- Book repository – https://drive.google.com/drive/folders/14cizQvxRAHK4iRiII26i4I1pOMGmDUDF

Related open-access publication

The EDIDesK Special Issue of Strategic Design Research Journal, "EDIDesK – Open Access Contents on Design for Equality, Diversity, and Inclusion for Higher Education Programmes", brings together research addressing Equality, Diversity and Inclusion in design education.
Brischetto, A. & Iacono, E., Mapping Inclusive Teaching Methodologies in Design Education: A Benchmarking Study on Digital and Traditional Tools for Equality, Diversity, and Inclusion. https://doi.org/10.4013/sdrj.2024.171.07.

Design Education for Equality, Diversity, and Inclusion presents the main research outcomes of the EDIDesK project, developed through a collaborative European process involving higher education institutions, design researchers, educators, students, professional communities, and international NGOs. The volume investigates how Equality, Diversity, and Inclusion can be embedded more systematically within design education, moving beyond isolated or occasional approaches towards structured, transferable, and critically informed teaching practices.

The book combines theoretical reflection, comparative analysis, teaching experimentation, and the development of educational resources. It examines current approaches to Design for EDI across different disciplinary and institutional contexts, documents the testing of teaching modules in European higher education, and translates the evidence gathered into the European Teaching Framework on Design for EDI. The volume also presents the EDIDesK digital platform, conceived as an open and collaborative environment for sharing methodologies, resources, learning itineraries, and concepts related to EDI.

Bringing together critical perspectives and practical tools, the book is intended for educators, researchers, students, programme leaders, and institutions interested in developing more inclusive, accessible, and socially responsible approaches to design education. Its structure supports both sequential reading and thematic consultation, connecting conceptual foundations with methods, experimentation, digital resources, and recommendations for future teaching and research.

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