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EDIDESK

Open Access Contents on Design for Equality, Diversity, and Inclusion for Higher Education Programmes

Fostering Innovation in Design Education through Equality, Diversity, and Inclusion

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ABSTRACT

Equality, Diversity, and Inclusion (EDI) are key principles used today to innovate the Higher Education system in Europe, particularly Design programmes, where components of socially responsible and innovative Design Education are considered strategic. Within this framework, the EDIDesK Project (*Open Access Contents on Design for Equality, Diversity, and Inclusion for Higher Education Programmes*, Erasmus+ KA220-HED) aims to seek to propose innovative pathways to improve the teaching of Design for EDI at the level of European Higher Education system. The article, which introduces this Special Issue, examines the integration of Equality, Diversity, and Inclusion (EDI) principles into higher education Design programmes in Europe. The study proposes the methodological setting used to map existing teaching practices, identify systemic challenges, and outline directions for embedding EDI more comprehensively within design curricula. The work, along with the collection of articles composing the Special Issue, argues for the need for structural reforms in Design Education. An emphasis is placed on interdisciplinary teaching, closer collaboration with stakeholders, and the recognition of EDI as a core competence for present students. Such measures are essential for preparing students to engage in inclusive, socially responsive, and future-oriented design practice.

Keywords: Design Education, Equality, Diversity, Inclusion, EDI.

INTRODUCTION

There is no doubt that the present times are characterized by evident frictions that impact humans and their social dimensions in many ways. Along with the constant attention to human-ecosystem interactions, which directly relate to sustainability-related issues, the challenges posed by pressing social instances such as global demographics, geopolitical tensions, economic inequalities, migrations, and the evolved idea of human diversity prioritize the concepts of Equality, Diversity, and Inclusion (EDI) as one of the most pressing issues to address. This trend is evident within both scientific and professional communities working in Design studies, where there is an imperative to provide answers to important questions like "in a socially exclusive era, what solutions should be created to meet the new human needs?", "how solutions designed around the concepts of EDI look like?", etc.

When compared to the current panorama of industrial productions, it can be said that the global design industry has already started to make initial attempts by including the EDI principles into commercial products (Holmes, 2018). For example, recent digital services

enable all users to access a wide range of products by using accessible interfaces and user-friendly delivery systems, innovative manufacturing technologies have improved the capability of SMEs to provide solutions for many user groups, including vulnerable ones, while reducing the cost of productions; co-design research tools for co-creation are used by public organisations. As the global design industry evolves, the EDI principles gain recognition for their critical role in fostering innovation, creativity, and socially responsible design practices. In a scenario that needs for mature cultural approaches and inclusive products, designers can enable effective actions to contrast potentially disabling conditions driven by mere profit-based pushes.

Designers play a fundamental role (Cross, 2006). Indeed, when correctly trained to address EDI-related issues, they can be considered creators of value for several organisations, both industrial and public. This because when launched into markets, inclusive solutions that fully comply with EDI principles are perceived as having higher value – an inclusive solution that is equitable provides opportunities to be used regardless of exogenous barriers (everyone can have at least one fair opportunity to access it); when designed to meet human diversity, an inclusive solution can be seen as suitable for all humans (flexibility in use regardless of users' physical or cognitive limitations as well as ability in fulfilling a task); when designed with final users, an inclusive solution shows higher value and meaning for consumers (i.e., goal-oriented design and research-through-design versus function-oriented or performance-based design). The more designers are educated to deal with EDI – training on Design for EDI – the more industrial products will be capable to overcome the emerging social issues.

However, integrating EDI into Design Education remains a complex challenge that requires more than just a theoretical understanding. It demands the Higher Education system to operate a significant restructuring of how future designers are educated to act responsibly and ethically (Rossi & Brischetto, 2024). At the same time, EDI does not merely mean designing to contrast negative aspects or solving problems. It is believed that a "searching for opportunities" mindset can be central to this effort and should be employed to ensure high-quality education – a core principle promoted by the Sustainable Development Goal 4. A deeper and more intentional focus on preventing biased actions while creating equitable opportunities can help to achieve this goal in Design Education. That is to say that Higher Education Institutions (HEIs) can play a pivotal role in translating the EDI-oriented teaching and learning frameworks into practical pedagogical strategies so that at the end of educational careers, students are more prepared to address the increasingly diverse needs of future society.

The opportunities raised by EDI, and its potential impact on the quality of future commercial productions of industrial products, both physical and digital, reveal interesting openings for the Design Education sector (Julier, 2013), which however is called to promptly answer to the fast-growing forces coming from the society. Despite the clear market requests, only recently Design schools are showing interest in integrating EDI concepts into undergraduate and postgraduate programmes. Considering the multifaceted scenario of approaches and cultural advances, the delivery of teaching contents on "Design for EDI" is generally fragmented and not uniform with standards (e.g., design contents, studio settings, teaching and learning practices, evaluation strategies, staff training, etc.). In addition to that, cultural barriers, biased contents delivered to students, and the lack of networking among Design schools further limit the creation of a shared culture on Design for EDI. This means that the entire Design Education

sector can easily miss the chance to adopt new teaching avenues to progress the field, establishing knowledge terrains needed by graduates to tackle emerging market issues.

The EDIDesK project – "Open Access Contents on Design for Equality, Diversity, and Inclusion for Higher Education Programmes" – is a European Erasmus+ cooperation project among higher education institutions that aims at improving the teaching of Design for EDI within the European's Higher Education system (Design Education in the European territory) (EDIDesK, 2023). It aspires to improve the European economy in terms of readiness to inclusivity and sustainability by accelerating the development of Design students' cultural, technical, and digital skills on Design and EDI. The project involves five European universities and two NGOs; all project partners have proven track record of excellence in the field of Design studies.

EDIDesK was born with the clear intention to overcome some of the above-mentioned barriers that several Design schools experience when confronting the challenges posed by EDI in different fields, mainly at the teaching and learning level of undergraduate and postgraduate programmes. These include biased information useful for setting up a design culture and to preparing lectures, reference models for teaching and learning, suitable vocabulary of terms, replicable models for effective learning (e.g., correct use of Universal Design for Learning), etc. To overcome these pre-identified barriers, the EDIDesK project is working to achieve four ambitious goals. Specifically:

1. To map undergraduate and postgraduate modules delivering EDI-related design topics in order to provide elements to understand the current scenario of teaching and learning in Design studies.

2. To propose a European framework for teaching Design for EDI, to be applied to both undergraduate and postgraduate programmes.

3. To design and develop an open access digital learning platform to collect and share multilanguage teaching materials on Design for EDI.

4. To develop a first set of open access teaching contents on Design for EDI for different sectors and suitable for both undergraduate and postgraduate programmes.

5. To promote open collaboration among scholars and Design schools, to overcome regionalisms and biased contents on Design for EDI.

All these goals shape a challenging pathway to trigger an initial but significant change in the status quo of Design Education, when confronted with EDI. While the pressure of providing students with high-quality contents is still paramount, the project approaches a present horizontal priority for Design students to improve their market readiness on topics that will be crucial soon.

This volume of the Strategic Design Research Journal (SDRJ) collects the early research results of the EDIDesK project and developed in the Work Package 2 "Research and analysis of teaching contents on Design and EDI". It collects seven high-quality contributions made by EDIDesK's project partners exploring the explicit and hidden aspects of teaching EDI in Design studies in some European countries. Specifically, the Work Package 2 aimed at defining, within the context of Design studies in the Higher Education sector, existing practices and tools used to develop contents on Design for EDI as well as investigations on inclusive teaching models and suitable technologies to create inclusive learning environments. The second part of this introductory manuscript provides clear evidence and information about the methodology

used in this research activity. If significant structural transformations can start only by critically reflecting on existing practices made at regional and national level, the research results shown in the articles composing this volume provide readers with clear elements for deeper understanding of multifaced aspects related to Design and EDI in different countries. Specifically, seven articles will be presented. The intention is to present and critically analyse the current state of art from which later to operate effective improvements.

The first article of this volume discusses the pedagogical advances offered by EDI in Design Education. In an era where societal values are rapidly evolving, Design Education stands at the forefront of cultural transformation, embracing the EDI principles. This article delves into the pedagogical innovations birthed from EDI initiatives, synthetically exploring how they revolutionize teaching methodologies, curriculum development, and student engagement in design programs.

A group of four articles delve into the contexts of EDI in Design Education, mainly in Italy, Poland, Slovakia, and Spain. These articles contain the main research results developed in the EDIDesK's Work Package 2 and show phenomenological analyses made in the countries where EDIDesK has concentrated its efforts. These works, independently written by autonomous research units, also contain critical analyses mixing qualitative and quantitative data. The third part of this introductory manuscript synthetically introduces the main findings discussed in these articles.

A sixth article introduces the result of an extensive survey on EDI-related design methods and tools for content delivery. This work delves into the critical analysis and comparison of tools used by the academic community to teach EDI in Design and Design-related programmes. It also provides useful metrics and comparisons to understand pros and cons, as well as limits and opportunities for each entry collected.

Finally, a conclusive article focuses on the importance of EDI in educational institutions and broader societal contexts. The article is jointly written by representatives of NGOs involved in the EDIDesK project and emphasizes how EDI frameworks can enhance creativity, foster innovation, and promote social justice within academic environments, while also benefiting society at large.

Through a collection of themed studies, the articles composing this volume explore innovative pedagogical practices, curriculum strategies, and broader implications of EDI in Design Education as a practice useful for cultivating designers capable of producing inclusive and forward-thinking design solutions. By bringing together diverse perspectives and strategic outlooks, the volume intends to be a valuable resource for educators, practitioners, and students.

1. RESEARCH AND ANALYSIS OF TEACHING CONTENTS ON DESIGN AND EDI

As said, this research activities performed in the Work Package 2 were aimed at identifying and analysing current practices and methodologies for integrating EDI into Design Education at the Higher Education level. It explored inclusive teaching models and technologies that support equitable and accessible learning environments. To ensure a comprehensive and coherent approach, the research was divided into two complementary parts (Figure 1). Part 1 – "Research and Analysis of Teaching Content on Design and EDI" – focused on examining how

EDI principles are embedded in Design and Design-related programmes. The study was conducted in four countries – Poland, Italy, Slovakia, and Spain – and structured into three main stages. The first stage consisted of desk research aimed at identifying modules that integrate EDI into their curricula. This phase facilitated the mapping and preliminary evaluation of promising modules across the selected countries. The second stage involved in-depth interviews with academics responsible for delivering high-quality EDI-content modules. These interviews provided qualitative insights into pedagogical strategies, underlying values and the practical tools employed in the teaching process. Part 2 – "Digital and Traditional Teaching and Learning Methodologies for Design and Design-Related Programmes" – focused on the comparative analysis of educational tools and methods. Its objective was to benchmark both digital and traditional teaching strategies, evaluating their effectiveness, scope of application, level of complexity, and relevance to EDI-related subjects. The analytical framework developed in this phase also shaped the interviews in Part 1, ensuring consistency between exploring teaching content and evaluating delivery methods. Together, the two parts formed a coherent research framework: Part 1 analysed curricula and academic practices, while Part 2 critically assessed pedagogical tools and learning environments supporting EDI integration.
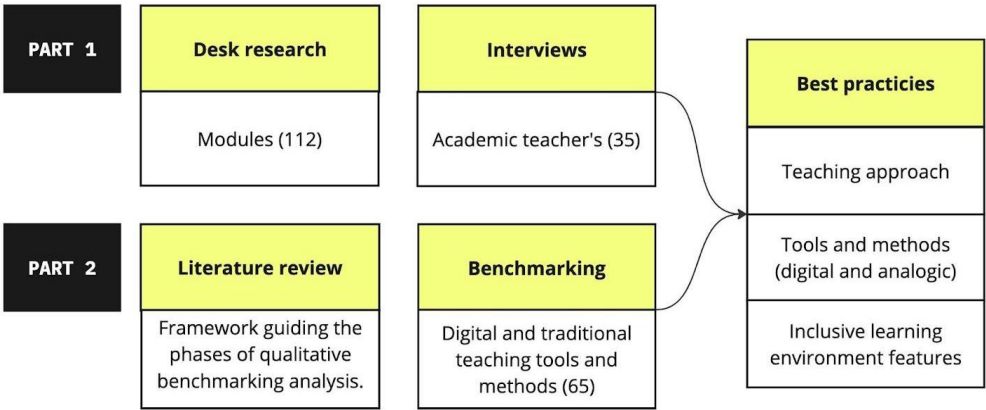

Figure 1. The framework of research plan.

1.1. Methodology used in Part 1: Common language and structure

Each research unit conducted a national-level desk-based research, selected interviewees, collected data, and contributed to the cross-country analysis. To ensure consistency, a key objective was to establish a shared understanding of terminology, taxonomy, and methodological approaches across partners, aligning curricula structures, teaching practices, and EDI interpretations. The process began with defining EDI not only as a set of values but also in terms of its practical application in curricula, design practices, and broader social contexts. This common framework guided all subsequent research activities. Table 1 presents an example – a condensed summary of EDI components, highlighting key categories and their relevance to education.

An analysis of national curricula helped establish a shared understanding of subject types across universities. Following consultation, the EDIDesK consortium defined a set of module types (Figure 2), representing the full educational path – from foundational courses like Basic Design, through theoretical subjects, to design and diploma studios where the complete design process is practiced.

Table 1: EDI Definition applied to Design Education.

| EDI Components	Design Topics	T&L Approaches	Educational Environment
Equality	Designing for fair access to artefacts and services; considering how design enables or limits access.	Equal delivery of content and support, regardless of learners' backgrounds or abilities.	Fair treatment and access for all – teachers and learners; equal opportunity to participate, express opinions, and be assessed fairly, regardless their background, belief, etc..
Diversity	Designing for human diversity (cultural, gender, disability, etc.) and its impact on quality of life.	Teaching tailored to the needs of learners with diverse (dis)abilities, including inclusive adaptations of content and tools that empower all students.	Equal access, participation, and engagement in all aspects of academic and community life for all individuals, regardless of (dis)ability, race, gender, or other differences, within a discrimination-free learning environment.
Inclusion	Involving users in the design process (e.g., co-design); addressing needs of marginalized groups.	Co-created content; learners seen as peers and collaborators.	Shared responsibility in shaping learning spaces; all voices valued; diversity seen as an asset.
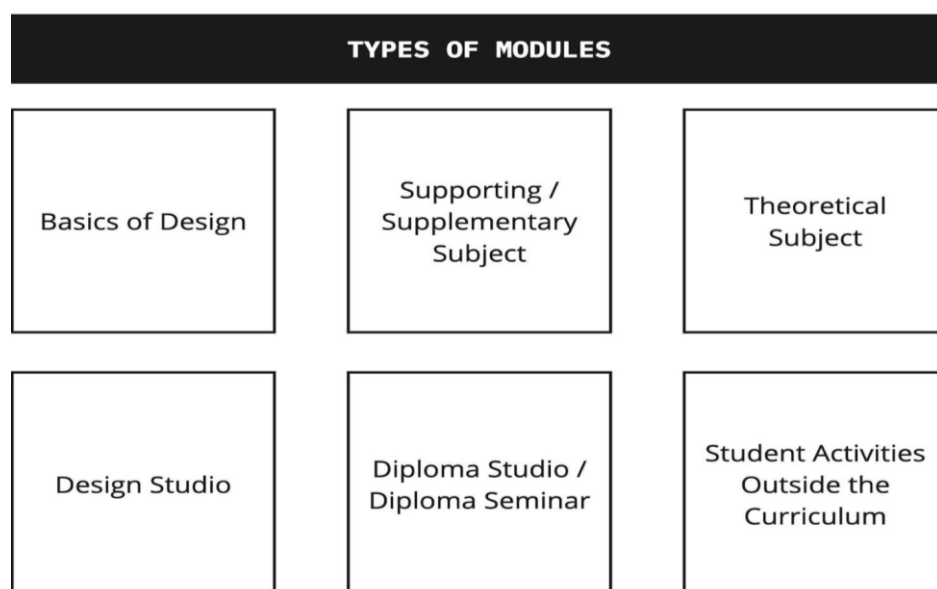
Figure 2. Types of modules.

Each module was analysed for its formal characteristics as well as the cultural depth and nature of EDI integration. For this evaluation, an "EDI Integration Scale" was developed, enabling the categorization of modules based on the degree to which EDI principles were embedded in both curriculum content and student outcomes. The scale ranges from minimal inclusion to comprehensive integration, including collaboration with external EDI stakeholders (Table 2).

Table 2: EDI Integration Scale.

EDI Contents Level	Description
Level 1	The programme covers selected EDI issues.
Level 2	The programme covers selected EDI issues, and some student work includes EDI issues.
Level 3	The programme covers selected EDI issues, and most of the student work includes EDI issues.
Level 4	The programme covers selected EDI issues, and most of the student work includes EDI issues, and cooperation with an external partner around EDI is carried out.
Level 5	The programme focuses entirely on EDI, and all student work carried out addresses EDI issues.

After establishing a shared framework, a structured database was developed to collect consistent and comparable data during the desk research phase (Figure 3). Based on this, the interview structure was jointly designed, with partners agreeing on core questions addressing teaching methods, tools, EDI understanding, and related competencies (Figure 4). This methodology ensured coherence across research partners and provided a solid foundation for identifying best practices in EDI education.
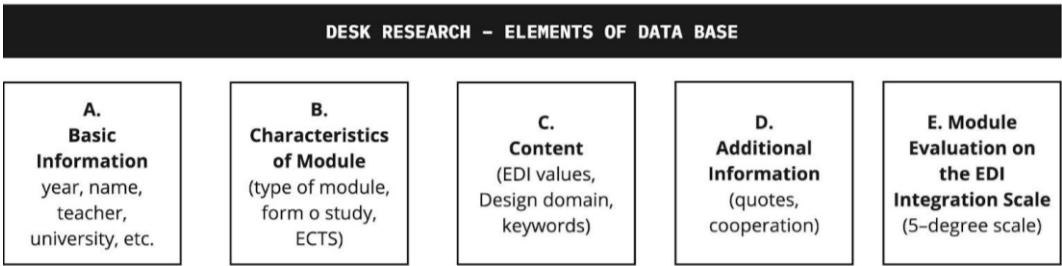

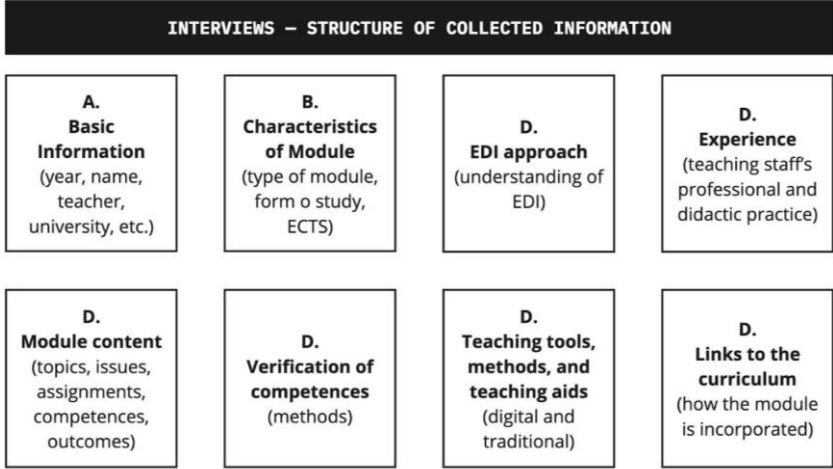Figure 3. Structure of the desk research database – categories of collected information.

Figure 4. Structure of the desk research database – categories of collected information.

As a result, 112 modules were analysed. Most scored 3 on the EDI Integration Scale, with 32 scoring 4–5 and 24 scoring 2. The database includes various module types, with EDI content embedded across theoretical and practical approaches at different educational levels. Module emphasis varies by country (Figure 5) and spans 19 design domains – from General Design to fields like Interior Design and Digital Product Design – reflecting regional diversity (Figure 6).
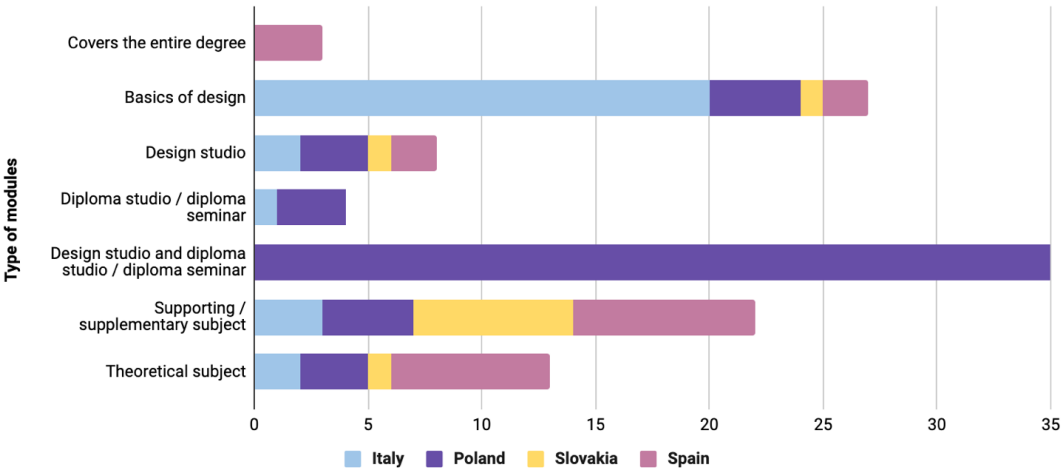
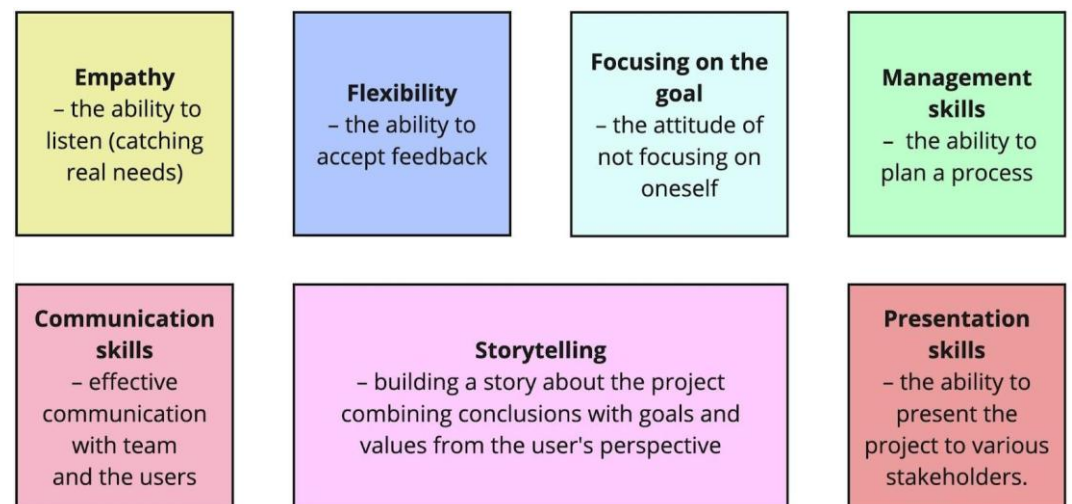Figure 5. Chart illustrating the quantitative distribution of identified modules by type.

Figure 6. WordCloud created from the list of keywords that describe the program modules (created using: **https://www.jasondavies.com/wordcloud/**).

The interviews reveal that modules aimed to raise students' awareness of applying EDI in design practice, some focusing on specific aspects (e.g., accessibility, social factors like gender, age, economic background). Academics emphasized that EDI is intrinsic to Design studies through user-centered research and contextual analysis. The findings highlight the EDI's multifaceted nature in Design Education, where key competencies include empathy, active listening, flexibility, feedback responsiveness, goal-oriented thinking, team communication, and the ability to present and frame design from the user's perspective (Figure 7).

Empathy – the ability to listen (catching real needs)

Flexibility – the ability to accept feedback

Focusing on the goal – the attitude of not focusing on oneself

Management skills – the ability to plan a process

Communication skills – effective communication with team and the users

Storytelling – building a story about the project combining conclusions with goals and values from the user's perspective

Presentation skills – the ability to present the project to various stakeholders.

Figure 7. Competencies supporting the EDI approach in the design process, as identified by teachers during interviews.

1.2. Methodology used in Part 2: Stages and consistency

Part 2 aimed to identify suitable digital as well as analog teaching tools and methodologies for integrating EDI into Design and Design-related programmes at Higher Education level. Objectives included defining the scientific framework of EDI in Design, mapping existing tools and methods, assessing their use in educational and design processes, and exploring new technologies' potential for inclusive and collaborative learning. To achieve this, a structured methodology was applied, starting with a literature review (e.g., Scopus, Google Scholar, year range: 2010–2024) on EDI in Design Education, which identified key trends and gaps and

provided a solid conceptual foundation, followed by systematic benchmarking of inclusive teaching tools and methodologies.

Building on insights from the literature, the benchmarking focused on toolkits, methodologies, pedagogical approaches, and institutional guidelines. The goal was to evaluate their accessibility, effectiveness, and educational relevance. A comprehensive mapping was conducted across three key domains which become in the end a three individual data base: (1) Toolkits, methodologies, approaches, and tools for EDI (analogic and digital), (2) Tools/teaching methodologies and guidelines for EDI and database, (3) Digital environments and tools supporting inclusive education. A structured set of indicators was applied to ensure clarity, objectivity, and relevance in assessing each resource (Figure 8). Together, they provide a foundational resource for analysing and developing inclusive teaching practices in Design Education.
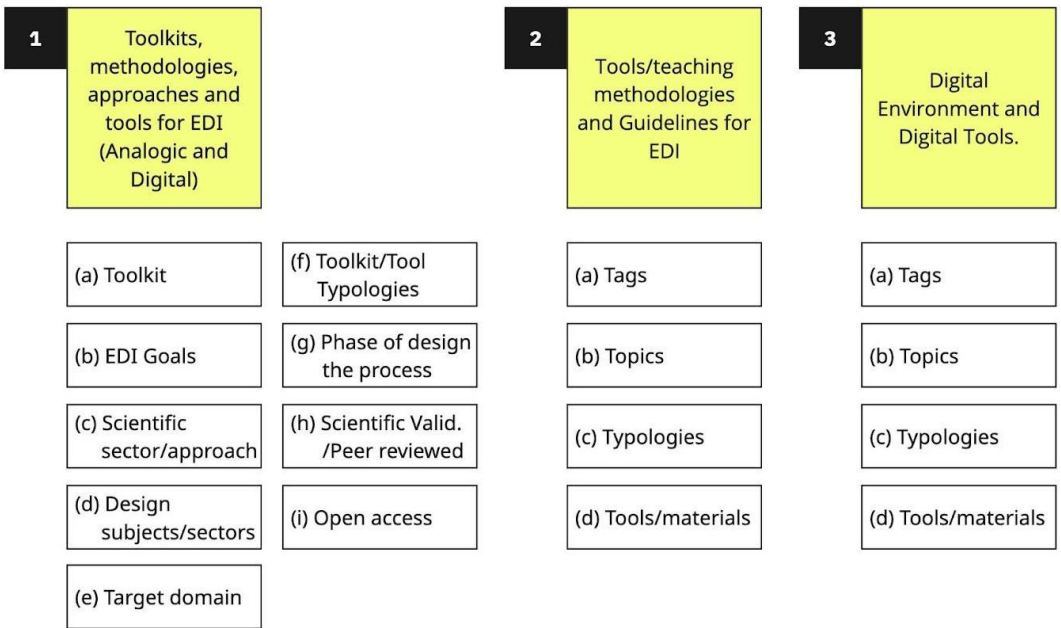

Figure 8. Structure of the compiled database: Descriptive categories.

The benchmarking results revealed that although EDI is increasingly acknowledged, its integration into Design Education methods remains limited. The analysis showed that most tools and teaching strategies are grounded in frameworks such as Human Centered Design, Design Thinking, Inclusive Design, and Universal Design. While only a few resources directly addressed EDI, many promoted related concepts like empathy, usability, co-creation, and accessibility. Database 1 included 31 tools, of which 26 were explicitly EDI-related. Most were focused on practical aspects of inclusive design, particularly in participatory and user-focused approaches. Database 2 contained 11 resources dealing with curriculum flexibility, open educational practices, and accessibility in content delivery. Database 3 featured 22 digital tools designed to support inclusive learning environments, including user interface design aids, collaborative platforms, and open-source software.

This two-part research approach provided a structured and comparative overview of how EDI is addressed in Design Education across different undergraduate and postgraduate curricula, pedagogical methods, and learning environments. The findings serve as a foundation for future development of inclusive, effective teaching models, and tools that align with the principles of EDI in Design and Design-related fields.

2. EDI IN DESIGN EDUCATION: NATIONAL PERSPECTIVES AND CRITICAL REFLECTIONS

The work done in the EDIDesK project clearly demonstrates that the integration of EDI principles into the Higher Education system of Design Education represents an increasingly urgent challenge across European educational systems. The EDIDesK project is providing a first attempt to address this issue through a multi-level comparative study aimed at mapping curricular contents, pedagogical methods, and teaching tools in four national contexts – Italy, Poland, Slovakia, and Spain. The analysis performed in the Work Package 2 considered 112 design modules and assessed how each country incorporates EDI themes within its higher education design programmes. The findings produced by EDIDesK's research units, and included in this volume, offer a comparative and critical interpretation of national approaches, highlighting shared trajectories, divergences, and opportunities for improvement.

The work of D'Onofrio, Cipressi, and Massacesi depicts the analysis performed in Italy. Specifically, the Italian dataset comprises 28 modules from 6 universities (10 undergraduate modules, 18 postgraduate ones), mostly at the postgraduate level. The work of the authors clearly shows how the teaching and learning approach to EDI in Italy is primarily technical and functional, with emphasis on Universal Design, accessibility, and Ergonomics (HFE). Recurrent terminology includes "Design for All" and "User-Centred Design," reflecting an inclusion model oriented toward usability. However, concepts such as intersectionality, structural inequity, or socio-cultural diversity are scarcely addressed. Data presented confirm that while instructors show awareness of EDI principles, these often address physical impairments, rather than exploring the structural dimensions of exclusion – for which unbiased knowledge on EDI is paramount. Stakeholder involvement is minimal, with only one module involving collaboration with a local NGO. Overall, EDI content is rarely included in foundational courses, reinforcing its perception as a specialised rather than core competence.

The work of Więckowska and Rudnicka presents the analysis in Poland. Polish design education is informed by a strong ethical tradition, shaped in part by post-socialist pedagogical narratives and figures such as Andrzej Pawłowski, who envisioned design as a socially responsible and morally engaged discipline. The study reviewed 52 modules (25 at undergraduate level, 19 at postgraduate level, 7 delivered both at undergraduate and postgraduate level, and 1 in a non-degree programme) from 8 public academies. It can be observed that EDI principles appear more systematically embedded compared to the Italian case, particularly within academically oriented institutions – higher percentage of modules that have reached levels 4 or 5 out 5 in the qualitative assessment. Higher degree of integration was observed in studio-based and diploma modules, particularly in terms of accessibility, user engagement, and diversity. However, equality is rarely addressed, while systemic or intersectional concerns are underdeveloped. The Polish model stands out for its methodological innovation: EDI topics are often explored through practice-based learning, collaborative formats, and student-led initiatives. Additionally, European-funded programmes such as *Accessibility Plus* and *Universal Design* have promoted EDI integration through infrastructure and curricular reforms.

Čerešňová et al. discusses an interesting picture of modules related to EDI in Slovakia. Although numerically limited (only 10 modules, 5 at undergraduate level and 5 at postgraduate level), the Slovakian sample features some of the most advanced pedagogical approaches in the study. The Faculty of Architecture and Design at the Slovak University of Technology (FAD STU) in Bratislava hosts the Centre of Design for All (CEDA), a teaching and

research hub that offers a comprehensive model for EDI integration. Courses such as 'Universal Design', 'Body Conscious Design', and 'Humanization of Microenvironment' employ multisensory and empathic teaching and learning methods, including physical simulations, environmental audits, and mobile eye-tracking. These modules adopt the Universal Design for Learning (UDL) framework, promoting inclusive engagement, diverse modes of representation, and learner autonomy. Notably, students are involved in applied projects in partnership with municipalities and NGOs, demonstrating the social relevance and real-world impact of EDI integration. Despite the small size of samples recorded, the Slovakian case offers valuable references for interdisciplinary and user-centred education.

Finally, Carrasco Parodi and Menichinelli portrays the analysis conducted on module in Spain by considering Catalonia and the city of Barcelona. The geographical area emerged as a leader in inclusive policymaking related to urban planning, gender-sensitive spatial design, and accessibility. Since the 1980s, legislative frameworks and bottom-up movements have consolidated intersectional approaches in public design. However, this progressive policy environment has yet to translate into coherent pedagogical practice. The Spanish study originally reviewed 113 programmes (79 undergraduate and 34 postgraduate); after excluding those with insufficient documentation, only 22 were ultimately retained (17 undergraduate modules, 3 postgraduate modules, and 2 non-degree modules), of which only 5 (4.4%) reached levels 4 or 5 out 5 in the qualitative assessment. While dedicated institutions and research centres exist, their influence on curriculum design remains limited. One contributing factor is the relatively recent academic accreditation of Design as an autonomous discipline (2010), which necessitated structural adaptation and regulatory alignment. Some integration of EDI is evident in programmes related to urban and social design, yet substantial gaps remain in aligning public policy, curriculum innovation, and faculty development.

The cross-national analysis reveals both common patterns and divergent features. Table 3 provides a summary of six key indicators across the four national contexts. Poland has a strong foundation in core courses, emphasizing an ethical-educational approach rooted in social design with moderate involvement of stakeholders. Slovakia, though analysing fewer modules, shows promising integration through an experiential and methodological approach, with relatively good engagement of external stakeholders. Italy and Spain display a more limited EDI presence, with weak stakeholder collaboration and minimal integration in foundational courses. Italy's focus leans toward technical-functional aspects, while Spain reflects a political-institutional framing, often tied to feminism and accessibility. Overall, the data suggests that while EDI integration is gaining ground, it remains inconsistent and underdeveloped in many contexts, particularly in foundational design education and stakeholder involvement.

The research performed confirms that, although EDI is increasingly recognised as a priority in contemporary Design studies, its integration into Higher Education systems remains inconsistent. Shared challenges are evident: EDI is often included in specialised or postgraduate courses rather than embedded across curricula as a transversal competence. The integration of EDI is frequently fragmented, with limited attention to intersectionality or to its application in foundational teaching. Gender, race, disability, and socio-cultural diversity are still rarely addressed in a systemic way.

Table 3: Comparative data by country.

Country	Modules Analyzed	EDI Modules at Level 4-5	% EDI Modules at Level 4-5	Dominant Approach	External Stakeholders	EDI in Foundational Courses
Italy (including Republic of San Marino)	28	6	21.4%	Technical-functional (HCD, DFA, UD, Accessibility)	Weak	Limited
Poland*	52	17	32.7%	Ethical-educational (Social Design)	Moderate	Good
Slovakia	10	4	40%	Experiential and methodological (UDL, empathy)	Good	Rare
Spain	22	5	22,7%	Political-institutional (feminism, accessibility)	Weak	Very limited
Total	112	32	28.5% (average)			

Note: * Some of the modules are offered at both the undergraduate and postgraduate levels.

Legend of Integration Levels:
Level 1: No presence (EDI is absent or irrelevant).
Level 2: Minimal presence (general references without curricular impact).
Level 3: Present in content (not in teaching practice).
Level 4: Partial integration (content + some methods).
Level 5: Full integration (content, methods, evaluation, stakeholders).

However, significant differences persist and shape national identities. Poland demonstrates widespread and methodologically innovative integration, strongly supported by public funding and participatory methods. Conversely, Italy applies a technically oriented approach that lacks structural or institutional anchoring. Spain benefits from a progressive policy landscape yet fails to translate these advantages into consistent pedagogical outcomes. Despite its limited size, Slovakia sets a high benchmark for holistic, experiential education practices. One of the major obstacles remains the absence of a coherent European policy framework to guide and assess EDI integration in Design Education. On this matter, the contribution made by the EDIDesK project stands as a urgent action to discover structural criticalities, and later, to cover the gaps in Design Education. While the diversity of educational traditions is enriching, the lack of common reference points limits mutual learning and the scalability of successful practices. Without structured tools for training, curriculum reform, and institutional support, EDI risks being treated as an optional rather than foundational aspect of design education.

In this context, the EDIDesK project provides a strategic platform to bridge systemic gaps. By facilitating cross-national dialogue and highlighting the most effective models, the project offers valuable insights for constructing a shared European space for Inclusive Design Education. Accordingly, four key recommendations emerge:

1. Establish EDI as a foundational competence across all levels of Design Education – the promotion of EDI in the early years of undergraduate programmes can promote consistent learning to be gradually reinforced over time.

2. Promote interdisciplinary and practice-based pedagogies that integrate critical theory with user-centred methods.

3. Implement structural reforms in teacher training, curriculum standards, and institutional governance to support EDI. One of the main findings achieved by the project so far concerns the critical role played by teaching staff, who act as a bridge between knowledge bodies and learners – biased information delivered to students often comes from untrained staff.

4. Strengthen collaborations with external stakeholders, including NGOs, public agencies, and marginalised communities. As evinced by interviews and methods considered, live academic projects that connect Design students with real-life situations is an effective means to promote consistent learning on EDI.

Ultimately, a genuine shift toward inclusive education demands a transformation in mindset – EDI must no longer be treated as an isolated add-on, but as a core value for Design Education that informs the pedagogical, cultural, and institutional foundations of Design. Embracing EDI as a strategic framework for Design studies can empower future generation of designers to engage meaningfully with the complexities of contemporary society, advancing both democratic participation and social justice through the lens of Design.

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REFERENCES

Cross, N. (2016). *Designerly Ways of Knowing.* London: Springer.

EDIDesK. (2023). *Homepage*. Retrieved September 10, 2025, from https://www.edideskproject.com/

Julier, G. (2013). *The Culture of Design (3rd Edition).* New York, NY: SAGE

Holmes, K. (2018). *Mismatch: How Inclusion Shapes Design.* Cambridge, MA: MIT Press.

Rossi, E. & Brischetto, A. (2024). Contribution of the 'Equality, Diversity, and Inclusion' Concept to Design Education: A Systematic Literature Review. *Sustainability, 16*: 8478. https://doi.org/10.3390/su16198478

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Equality, Diversity, and Inclusion in Design Education: Pedagogical Advances and Future Opportunities

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ABSTRACT

In an era where global societal pushes are rapidly producing alterations of social dimensions, both in positive and in negative, the need for enabling solutions that help people to live more cohesively and inclusively is apparent. In this scenario, the principles of Equality, Diversity, and Inclusion (EDI) enable Design Education to be at the forefront of cultural transformations by innovating the teaching and learning practices. Although the concept of EDI is not new in Design studies, today it can contribute to promote pivotal changes in the way designers are trained to work with companies and competitive markets. By stimulating new teaching and learning pedagogies, it is possible to prepare students to better address the pressing issues that are arising. However, to properly integrate EDI into Design Education, some aspects need to be strategically considered; these span from institutional positions against the design culture of teaching staff, to studio settings, and the nature of projects proposed to students. This article delves into the pedagogical advances promoted by the introduction of EDI principles in Design Education and explores how this concept transforms the current teaching and learning methods of Design programs, as well as curriculum development and student engagement.

Keywords: Design Education, Equality, Diversity, Inclusion, EDI, Design pedagogy.

INTRODUCTION

In the current globalized society, designers are often asked to address the fear of social exclusion expressed by a large part of the population. Designers accomplish this by creating solutions that help people, regardless of their psychophysical abilities or disabilities, to live better and healthier, while respecting individual needs and desires (Holmes, 2018). In this context, the concepts of Equality, Diversity, and Inclusion (EDI) emerge as powerful cultural means to contrast the trend of global standardization of products driven solely by international market pressures. Although the synergy between these concepts and the tradition of Design studies has a long history (Story et al., 1998; Clarkson and Coleman, 2015), without structural disciplinary integrations risks being reduced to a mere cultural trend. In fact, EDI in Design studies calls for mature considerations such as human-product interaction, the social value of artifacts, the participatory processes used to conceive solutions, and a more ethical culture in Design.

Moving from the cultural dimension to the impact of enabling solutions on global markets, there are clear trends that demonstrate the interest of companies to intercept inclusive markets. This is usually achieved by offering products that cater to the broadest range of user

needs. For example, it is estimated that in the future, the global spending power of the disability community will reach $13 trillion (World Economic Forum, 2023), while $697 billion is the estimated growth in the fashion industry by 2027 according to Allied Market Research (2024); about digital solutions, previsions affirm that the number of vulnerable people who will access to e-commerce services will increase in the next years (WebAIM, 2025). All these trends not only confirm the economic growth of a specific market niche, but an imperative for designers to consider other target groups of consumers. However, this expansion requires designers to demonstrate mature design awareness and ethical considerations in relation to EDI to adequately address with the new needs of future consumer groups.

The cultural forces and the future picture of global markets inevitably draw attention to the role of Design Education and its position regarding EDI-related issues. In educational contexts, it is known that EDI principles have become paramount, prompting modifications across various disciplines, with Design Education emerging as a critical arena for transformative applications (Cooper, 2018). However, rapid pace of social changes and a heightened awareness of historical injustices and current systemic inequalities have together underscored the urgent need for educational systems to reflect and actively contribute to a more just and inclusive world. Design studies, as a discipline concerned with shaping human experience, bears a unique responsibility (Papanek, 1971). This is true not only at the product, service, and system design level, but also within the cultural dimension of Design studies. Designers are no longer seen as "creators of objects", but rather as professionals who build bridges among disciplinary areas (Amrita and Aaron, 2022). Thus, the imperative is aligned with the motto: "training today to lead tomorrow".

To better understand how Design Education can properly meet the cultural advances introduced by EDI and its related topics, some questions are particularly relevant. How can Design schools empower the future generation of designers to address the demands of EDI-oriented markets? How can Design Education align with the emerging trends of EDI so that the students are prepared to address future market scenarios while acting as bridges between companies and end-users? What are the structural and pedagogic advances that EDI can bring to curriculum design? How can EDI improve the way teaching staff teach and relate with students? This paper explores the pedagogical advances promoted by EDI in Design Education and the illustrates the potential areas for future development in Design studies.

1. EDI AND DESIGN EDUCATION

The tradition of Design Education, driven by functionalism and market-driven focus, can be characterized by the combination of creativity and technical skills (Margolin, 2002). Although this framework has produced a robust cultural baseline instrumental in advancing the field's body of knowledge, it exhibits intrinsic biased culture when compared to EDI. As such, Design curricula, historically tended towards Western-centric canons, has demonstrated shortcomings in preparing students to navigate the intricate social, cultural, and ethical dimensions of contemporary design practice. To better understand this phenomenon, this section explores how EDI has influenced Design Education.

1.1. EDI in Design versus EDI in Design Education

The concept EDI has emerged as multi-dimensional, capable of influencing not only the subjects to be taught, but also the cultural ecosystem surrounding teaching and learning practices (Hitch et al., 2016). Today, there is an unprecedented opportunity to rectify the historical shortcomings so that a new era of relevance and responsibility can be fostered through innovative design pedagogies. EDI, however, exhibits an interesting dichotomy when considered at the design level versus the educational level.

Regarding the design dimension, EDI concepts generally lead to straightforward applications (cfr. Holmes, 2018); for instance, an equitable product should be accessible and intuitive not only physically and cognitively, but also economically and relationally accessible. a product designed to accommodate human diversity should acknowledge and enhance human differences, so that even people experiencing permanent disabilities, temporary impairments, and cultural differences can enjoy it and fulfil a given task; finally, inclusivity encompasses both the design processes used to create new solutions and the assessment of the societal impacts produced by artifacts, leading to social improvements.

At the educational level, there is an observable increase in the level of cultural sophistication. Rossi and Brischetto (2024) have provided a detailed analysis on how EDI has influenced Design Education, discussing its implications for cultural advancement. Equality in Design Education is crucial for diversifying the design process used in teaching and learning and breaking down systemic barriers; equality creates learning opportunities that later lead the creation of solutions empowering all end-users to have equal access and possibilities. The concept of Diversity in Design Education promotes an improved understanding of cultural, social, psychophysical, and economic differences of all end-users; to do this, holistic design processes and informed work methodologies must be promoted to encourage pupils to examine user abilities and attitudes, while promoting collaborations with social stakeholders. Inclusion is crucial for developing ethical behaviours and social consciousness needed to emphasize the cultural and methodological processes used by designers; at the same time, inclusion requires educators to be proficient in unbiased approaches, enhancing user experience and highlighting designers' ethical responsibility.

It can be noted how EDI in Design Education is rooted in sustainability when analysed through the lens of Sustainable Development Goals – in particular SDG 4 "Quality Education" (UNDP, n.d.), though impacts are produced on other SDGs when EDI is translated into design practice – by fostering barrier-free education, diversity in open knowledge, and accessibility to educational facilities.

1.2. Advances in Design Education

When related to the cultural complexities introduced by EDI-related issues, the mantra of functionalism can jeopardise the cultural setting traditionally used to build the Design curriculums. In other words, EDI forces students, but mostly teaching staff, to move beyond merely aesthetic and functional considerations, to cultivate awareness, empathy, and the set of soft skills that are essential to create enabling solutions that genuinely serve the society (Ceyhan et al., 2023).

The introduction of EDI into Design Education is essential to make students aware of their strategic role as societal shapers (Rieger and Rolfe, 2021). However, this may have important cultural and operative limitations. For example, it is essential to teach that Design is not

neutral, and designers cannot design inclusive or EDI-based solutions that comprehensively meet the needs of all users; training them to make conscious interventions to realistically include certain groups of users can enhance their ability to reduce abstraction while interacting with real stakeholders. Developing clear metrics to assess how much an inclusive solution enhances the EDI dimensions can guide them to undertake tangible actions. Also, designing non-tangible experiences and opportunities are even more important than creating just functionally performant solutions – this aspect is crucial to move the attention from the "here-and-now design attitude" to the goals and impacts of informed inclusive practices.

Equipping students with a foundational understanding needed to creatively interpret EDI, while adopting adequate research and design methodologies, is crucial to foster the creation of more just and equitable conditions for societal prosperity so that users, including vulnerable ones, can feel welcomed (Dong et al., 2015). This leads to an understanding of how they can guide stakeholders and companies to overcome systemic cultural biases. A common misconception in teaching Design for EDI (or Design for Inclusion) is that it exclusively yields objects for disabled individuals. In Design Education, this important implication impacts the core competencies required by contemporary designers. The globalized nature of markets and the increasing diversity of user bases mean that designers must be able to work effectively across cultural boundaries and design for a vast spectrum of human needs and preferences. A Design Education deeply rooted in EDI is not just capable of training pupils within inclusive teaching and learning ecosystem, but also a powerful means that enables them to navigate complex dilemmas inherent in the pursuit of enabling innovations (Altay et al., 2016).

The inclusion of EDI in Design Education is not about "checking a box"; it is instead a radical and profound enrichment of the creative process shaping the creative mindset of future societal shapers. Holistic approaches ensure that inclusive solutions can be culturally sensitive (Equality), universally accessible (Diversity), and socially impactful (Inclusion).

2. EDI AND PEDAGOGICAL ADVANCES IN DESIGN EDUCATION

The integration of EDI has spurred profound innovations in Design studies, and the analysis of scientific productions made in the last forty years confirms that informed creative practices rooted in inclusivity make significant improvements in Design Education. However, it must be noted that spontaneous developments are not exempt from biases. Design Education' focus on addressing complex societal issues necessitates deeper analysis of how the Discipline is holistically taught, its relationship with the existing educational ecosystem, and its connection to curriculum development. At the same time, EDI has already stimulated the implementation of important pedagogical advances, and these move beyond superficial adjustments of teaching and learning practices. To provide evidence to these assertions, this section discusses four relevant pedagogical advances.

2.1. Design culture on EDI

EDI acts as a bridge between society and the informed culture needed by designers to act responsively and ethically. However, in Design Education this bridge also generates a significant transformation course-centric approaches, where the intrinsic nature of projects and the personality of teachers are predominant, to a student-centric creative reflective culture that promotes an ethos of inclusivity.

When it comes to the creation of a creative and ethical reflective culture, EDI considers a variety of user groups, such as students, teaching staff, and school managers. In particular, teaching staff are considered the most important link in a pedagogical chain, due to their role in promoting a culture of reflexivity and critical self-awareness regarding student biases, assumptions, and positions within the design world. EDI offers Design Education the opportunity to develop open dialogues about identity, privileges, and overlooked social dynamics necessitating a redesign of the modalities through which content is delivered to students. On this matter, creativity plays a fundamental role, offering the opportunity to challenge the status quo and advocating for marginalized voices. In fact, reflective creative thinking (Schön, 1987; Cross, 2006) and the use of live teaching modalities to expose students to inclusion/exclusion phenomena foster deeper incorporation of notions, which transcend the traditional factual knowledge, to emphasise experiential learning.

This cultural shift extends to the language used in classrooms and studios, moving away from biased knowledge and promoting culturally sensitive experiences by embracing inclusive practices. Moreover, creative learning promoted by live experiences is essential to overcome intrinsic cultural barriers, stimulating a reflection on the core topics of EDI, for instance: what are the creative modalities to promote equal access to resources and products? How does the sense of diversity vary when applied to social instances that are not directly tied to physical diversity? What informed practices can designers employ to generate inclusive effects?

EDI positively influence Design Education by fostering intercultural competences, moving beyond a superficial understanding towards a deeper engagement with various design epistemologies (Altay, 2016; Ceyhan et al., 2023). A design culture in EDI becomes essential in the process of reinforcing the structural components of teaching and learning methods, creating more authentic learning environments where students can see themselves reflected in their educators and feel more comfortable in sharing their unique cultural insights.

2.2. Inclusive teaching and learning methodologies

The current body of teaching methodologies traditionally employed in Design Education are very flexible and capable of being adapted to a variety of subjects, user groups, and contexts of use. However, when it comes to EDI, they risk failure if implemented impersonally. This is because the complexities introduced by the multidimensional and the multidisciplinary concepts of equality, diversity, and inclusion require profound updates to foster consistent learning among students, so that they can navigate the complexity of real-world challenges. More inclusive and participatory learning experiences must be used as alternatives to traditional lecture-based approaches.

Several studies document how EDI can benefit from live activities that bring diverse human experiences into educational contexts (Nae and Smith, 2021). Collaborative design projects that intentionally bring together students from diverse backgrounds and perspectives with real users and societal stakeholders are essential to this end (Kuzmina et al., 2023). This is not only because exposing students to real-life situations is an effective means to generate deeper and consistent learning, but mostly because the participation of real users potentially representative of final target groups helps learners to overcome biased prejudices and cultural clichés, often driven by a pessimistic interpretation of others' lives. Therefore, students can develop first-hand knowledge to be shared with others, including teaching staff, enabling them to develop a shared body of knowledge for future learners.

The shift in teaching and learning methodologies encourages interdisciplinary teamwork and democratic teaching and learning environments where different viewpoints are not just tolerated but actively sought out and valued as essential to design processes. To foster this core value, community-engaged learning is emerging as a cornerstone of EDI-driven design pedagogy.

EDI radically innovates the teaching and learning settings used in Design Education by applying elements of critical pedagogy to encourage students to deconstruct power dynamics, biased knowledge, and assumptions inherent in design processes, products, and systems of solutions. Better empathy, cultural humility, disposition toward learning, and a deeper sense of social responsibility are the result of a pedagogic evolution that moves Design Education from a purely aesthetic pursuit to one deeply rooted in social justice.

2.3. Participative curriculum development and content integration

EDI, given its complexity and interplay with an array of subjects and disciplines, cannot be a taught as a standalone subject within a Design programme. In fact, a core aspect often often brought by EDI into Design Education is its capacity to restructure both undergraduate and postgraduate curriculums. This ensures that the capability of designers to engage with diverse perspectives and cultural contexts, while enhancing their social responsibility in acting as agents of inclusive change is met. Learning content, however, is part of a broader narrative that lies in curriculum development.

When considered in terms of curriculum development, EDI draws attention to the need for a systematic revision of existing courses, the distribution of EDI-based or EDI-oriented concepts across programmes, as well as the creation of entirely new modules or programmes that explicitly address EDI themes (Ceyhan et al., 2023). This systematic review produces threefold benefits. Firstly, it allows students to integrate EDI in a pathway that is more distributed over time, giving them the opportunity to foster holistic learning through a series of integrated teachings that address themed contents and aspects. Secondly, it enables learners to acquire comprehensive knowledge of learning content that are increasingly complex. In this way, they can have sufficient time to foster deeper reflection and self-awareness, instrumental in shaping their design philosophy, ethos, and attitudes. Thirdly, teaching staff can be part of a choral learning process, and this in a long run generates a design culture within programmes.

At the level of curriculum, it can be reimagined to embed inclusive design principles as foundational elements from which to foster learner growth (Dong, 2010), rather than optional add-ons to be sporadically addressed by far-sighted teachers. This involves introducing specific methodologies and contents that become fundamental part of the creative process, fostering informed inclusive practices and cultures grounded in EDI. Furthermore, this pervasive integration could be "unlabelled" – as it is believed that attitudes, knowledge, and abilities related to EDI must be core skills for Design students.

Students can learn how to identify and challenge assumptions about equality, diversity, and inclusion across various components of the discipline to proactively envision solutions that maximize participation. In this way, ethical considerations and social justice issues commonly linked to Design for EDI can be explicitly integrated into Design curricula, moving beyond a purely vocational training to a powerful force for cultivating socially responsible practitioners.

2.4. Inclusive learning environments

Beyond culture, curriculum, and methodology, EDI can be a crucial means to effect fundamental reconfigurations of the learning environment itself. An aspect that is often underestimated when it comes to the design of new curricula, especially in Design, is the physical and technological setting of studios where teaching occurs. In these environments, students perform several tasks such as developing projects, sharing experiences, and presenting results. However, an inclusive environment is also a space, even phygital, where Design students feel valued, represented, and empowered to engage authentically with EDI-oriented challenges (Fathallah, 2021).

An inclusive teaching and learning environment is the one where every student, regardless of their background, identity, or learning style, feels psychologically safe to express ideas, take risks, and make mistakes without fear of judgment or marginalization. At the teacher level, this involves the creation of intentional strategies to build trust, foster respect, and celebrate diversity within the classroom and studio, as well as validating diverse forms of knowledge to embrace experiential learning and community wisdom (Ahmed, 2012).

On a daily basis, inclusive learning environments promote student engagement by fostering equitable participation. Sometimes, traditional design critiques can be intimidating, especially when students are deeply involved, even emotionally, with sensitive topics, or when external stakeholders are invited to work with learners. Inclusive environments encourage constructive criticism, actively democratizing the voices of both learners and teaching staff. Consequently, diverse mentorship opportunities can be promoted to foster inclusive engagement.

In terms of equipment and architectural features, design studios are often considered as the heart of Design Education. However, when EDI principles are truly embedded into Design schools and in their culture, studios can celebrate diversity by mitigating possible barriers. This goes beyond the physical layout to encompass studio norms, thereby creating a microcosm for inclusive design practices that models the equitable and collaborative environments designers should strive to create in the real world.

3. FUTURE OPPORTUNITIES

The set of pedagogical advances introduced by EDI in Design Education presents revolutionary shifts in teaching and learning, which positively impact different areas. However, given that EDI a complex topic that necessitates deep reflection to be fully understood and integrated in all aspects of the higher education ecosystem, it is fully acknowledged that initiatives described in the previous section represent an initial, though very important, sign of change. Building on the current dynamics observed in some forward-looking examples, some future opportunities for a more equitable and impactful Discipline can be proposed. These involve changes in policy at the institutional level, professional development, research, and innovative use of digitalization as a means for holistic expansion of work and pedagogical environments.

3.1. Policy changes

It has been said that modules covering EDI topics cannot stand alone within undergraduate or postgraduate programmes. However, programmes aligned with EDI directly and indirectly

demonstrate a clear vision from management teams in addressing the growing demand for innovative soft skills and cultural competencies, more aligned with present and future trends of a profession that imperatively requires resilience and adaptability.

Profound policy changes within Design schools can ensure that EDI is not just a departmental initiative or a cultural trend, but a systemic commitment agreed and promoted by the entire academic body to act in tune with real-world scenarios (Sohoni, 2009). Strategic action plans are essential to achieve this goal, so it is important to fuel this evolution rather than keep it as a fixed endpoint. At the same time, changes in policies can improve administrative aspects such as hiring practices, promotion criteria, and student support services, resulting in improved institutional positioning and reputation in relation to assessment criteria.

3.2. Professional development

EDI requires both new competences and a desire to further refine existing ones to create shared narratives so that the teaching staff can act cohesively by aligning not only content and design subjects, but also the search for new open competencies – both factual and experiential. There is a need for continuous professional development for all faculty and staff, moving beyond initial training to foster ongoing learning and adaptation to evolving EDI-related best practices.

Professional development aligned with EDI principles is essential to address potential reluctance of staff, such as lack of familiarity with its concepts, discomfort with discussing sensitive topics like race, gender, or disability, or a perceived lack of expertise in these areas. Consequently, the complexities traditionally associated with assessing EDI outcomes can be mitigated: unlike traditional design, which can often be measured through project outcomes, the impact of EDI on students is more nuanced and difficult to quantify (Gurin et al., 2002).

3.3. Research

If Design Education is essential and is considered a "first mission" for Design universities, research can be a vital "second mission". Beyond research grants and fundraising, the opportunity to contribute to novel projects and studies, as well as teaching and learning outcomes offers academic staff the chance to develop their own research outcomes, which are needed to advance the knowledge in the field.

Increased research on EDI impact is crucial to build evidence for effective pedagogical strategies and to demonstrate the tangible benefits of inclusive Design Education on students. This leads to more consistent learning outcomes. Research on EDI offers the chance to cultivate a self-sustaining ecosystem where EDI principles are intrinsically woven into every aspect of Design Education. At the student level, this means preparing students to be skilled designers and powerful advocates for a more inclusive world. This ongoing commitment ensures that Design Education remains at the forefront of societal transformation, meeting the needs of a diverse global community.

3.4. Digitalization

Innovations in teaching and learning made during and after the COVID-19 pandemic have revealed the power of digitalization in supporting both formal and informal educational practices. This was evident in many disciplinary fields, though Design studies benefitted from

this transition not only in terms of instrumental improvement, but also culturally. Digitalization can be a powerful avenue to expand the inherent values of EDI in Design studies.

First, digitalization can mitigate problems related to the lack of resources (i.e., unbiased knowledge, access to refined data, public engagement, co-development of initiatives in civic society), which is a serious issue in relation to the promotion of a culture of EDI in Design Education. Implementing initiatives related to Design and/for EDI often requires significant investment, so smaller institutions may struggle to allocate the necessary funds, leading to superficial efforts and impacts.

Second, virtual ecosystems for teaching, learning, research, and collaboration can be a valuable means to increase the capability of Design schools to attract funding for studies on Design for EDI (Callahan, 2021). Partnerships with industry and community organizations to share resources and expertise can also be promoted.

Third, instrumental integration via digitalization, such as AI, VR, and AR, can create immersive empathy-building experiences, allowing students to "walk in the shoes" of diverse users, including vulnerable ones like disabled people, and understand their challenges firsthand.

Fourth, in a connected world, interdisciplinary collaboration promotes virtuous knowledge ecosystems for peer learning and content sharing. If biased knowledge is one of the main barriers that limits the expansion and the development of creative reflective practices on EDI, digitalization can overcome the physical obstacles.

Finally, if Design for EDI is an informed creative design practice that contributes to achieve one or more aspects in terms of equality, diversity, and inclusion, the full access to any educational content that deals with this subject must be promoted. EDI is about real people, so designs aligned with EDI principles can have a tangible impact on how people interact with their environment. Therefore, digitalization can support the promotion of open and fair access to data, case studies, and projects, as well as to collaborative and multilingual initiatives.

3.5. Positivistic narratives

The themes and the subjects related to EDI often evoke a sense of commiseration, sadness, or pity. However, EDI does not always refer to the negative side of human experience. A design culture that approaches EDI through a commiseration lens can easily fall into biased solutions. Design Education must strive to overcome this negative interpretation and focus attention on the inner essence of EDI: people.

Positivistic narratives are essential in Design Education, and in Design for EDI (Lee et al., 2021), they can play a pivotal role at several stages. During the research stages, positivistic narratives can help students explore the different dimensions of human diversity by highlighting aspects to enhance, rather than problems to solve. During the design stages, a positivistic narrative can emphasise the value and the social impacts of enabling solutions when used by a variety of users such as everyday users, children, older adults, and foreign users, but also disabled people, users with temporary disabling conditions, users experiencing social inequalities, among others. During the presentation and promotion stages, positivistic narratives can become essential to translate all cultural values associated with EDI to non-expert audiences, making design practice a more powerful means for public education.

4. CONCLUSION

Design Education and Design studies are fundamental pillars for shaping a sustainable and resilient society, culturally and technically. However, the cultural growth of future generations of designers must consider the contributions offered by EDI with its holistic and multidimensional contributions. EDI in Design studies offers opportunities to create innovative and enabling solutions, which can meet the needs of present and future users. Therefore, Design Education needs to address this emerging topic by considering its inherent features to properly integrate them into all components of the academic life. As it has been discussed in this work, EDI offers several improvements to Design Education, however, further exploration of other areas is needed to fully align with the evolving landscape of equality, diversity, and inclusion.

In the ongoing transition process toward a sustainable and inclusive society, the journey towards fully embedding the EDI principles in Design Education is not a linear path but an ongoing process of learning, adaptation, and commitment. For this reason, the imperative for an EDI-based Design Education extends beyond mere compliance with norms and standards, leading to a fundamental re-imagining of what design education can and should be in the coming years, and of the tangible impacts it can produce.

Internal catalysts for profound pedagogical advances can be found by transcending singular perspectives and voices. However, synthesizing these diverse viewpoints is crucial to developing a cohesive narrative that holds both global and local value. Given the immense transformative potential of EDI in preparing the new generations, Design schools are imperatively called upon to act promptly and accordingly, to foster the necessary open, inclusive culture required to drive global progress and improvements.

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REFERENCES

Ahmed, S. (2012). *On Being Included: Racism and Diversity in Institutional Life.* USA: Duke University Press. https://doi.org/10.2307/j.ctv1131d2g

Allied Market Research. (2024). *Plus Size clothing Market Size, Share, Competitive Landscape and Trend Analysis Report, by Type, by Gender, by Age Group, by Price Point: Global Opportunity Analysis and Industry Forecast, 2024 – 2033.* Retrieved July 5, 2025, from https://www.alliedmarketresearch.com/plus-size-clothing-market-A07966

Altay, B., Ballice, G., Bengisu, E., Alkan-Korkmaz, S., Paykoç, E. (2016) Embracing Student Experience in Inclusive Design Education through Learner-Centred Instruction. *International Journal of Inclusive Education, 20:* 1123-1141. https://doi.org/10.1080/13603116.2016.1155662

Amrita, D. Aaron, G. (2022) Envisioning Art and Design Education Through the Lens of Diversity, Equity, and Inclusion. In Bruyns, G., Wei, H. (eds.). With Design: Reinventing Design Modes. Singapore: Springer. pp. 197-215. 10.1007/978-981-19-4472-7_14

Callahan, K. (2021). Valuing and Supporting Introverted Students in the Virtual Design Classroom. *International Journal of Art and Design Education, 40*: 714-722. https://doi.org/10.1111/jade.12383

Ceyhan, P., Haklidir, E.A., Tellez, F.A. (2023). Rethinking the Design Studio Curriculum through Adaptive and Transformative Strategies and Acts: Cross-Cultural Reflections. *Journal of Design, Business & Society, 9:* 79-101. https://doi.org/10.1386/dbs_00047_1

Clarkson, J.P., Coleman, R. (2015). History of Inclusive Design in the UK. *Applied Ergonomics, 46:* 235-247. https://doi.org/10.1016/j.apergo.2013.03.002

Cooper, H. (2018). *Design Education: Increasing Diversity and Equity in Design Fields.* The Netherlands: IOS Press.

Cross, N. (2006). *Designerly Ways of Knowing.* UK: Springer.

Dong, H. (2010). Strategies for Teaching Inclusive Design. *Journal of Engineering Design, 21*: 237-251. https://doi.org/10.1080/09544820903262330

Dong, H., McGinley, C., Nickpour, F., Cifter, A.S. (2015). Designing for Designers: Insights into the Knowledge Users of Inclusive Design. *Applied Ergonomics, 46:* 284-291. https://doi.org/10.1016/j.apergo.2013.03.003

Fathallah, R. (2021). Pedagogies for Democratic Participation in Design Studios: Towards More Inclusive Group Work among Interior Design Students. *International Journal of Art and Design Education, 40:* 736-747. https://doi.org/10.1111/jade.12385

Gurin, P., Dey, E. L., Hurtado, S., and Gurin, G. (2002). Diversity and higher education: Theory and impact on educational outcomes. *Harvard Educational Review, 72(3):* 330-366. https://doi.org/10.17763/haer.72.3.01151786u134n051

Hitch, D., Dell, K., Larkin, H. (2016). Does Universal Design Education Impact on the Attitudes of Architecture Students Towards People with Disability? *Journal of Accessibility and Design for All, 6:* 26-48. https://doi.org/10.17411/jacces.v6i1.103

Holmes, K. (2018). *Mismatch: How inclusion shapes design.* USA: MIT Press.

Kuzmina, K., Branco, R.M., Trigueiros, P., Burrows, A. (2023). Educating for Complexity in Inclusive Design: From Products to Service Systems. *Art, Design & Communication in Higher Education. 22:* 241-261. https://doi.org/10.1386/adch_00076_1

Lee, J.H., Ostwald, M.J., Gu, N., Roberts, M. (2021). Linguistic and Cultural Perspectives on Globalised Design Education. *International Journal of Technology and Design Education, 31*: 165-181. https://doi.org/10.1007/s10798-019-09544-2

Margolin, V. (2002). *The Politics of the Artificial: Essays on Design and Design Studies.* USA: University of Chicago Press

Nae, H.-J., Smith, A. (2021). Preparing for Now and the Future Human User Experience with Interdisciplinary Projects. *Design Principles and Practices, 16:* 151-161. https://doi.org/10.18848/1833-1874/CGP/v16i01/151-161

Papanek, V. (1971). *Design for the Real World: Human Ecology and Social Change.* USA: Pantheon Books

Rieger, J. Rolfe; A. (2021). Breaking Barriers: Educating Design Students about Inclusive Design through an Authentic Learning Framework. *International Journal of Design Education 2:* 359-373. https://doi.org/10.1111/jade.12348

Rossi, E., Brischetto, A. (2024). Contribution of the 'Equality, Diversity, and Inclusion' Concept to Design Education: A Systematic Literature Review. *Sustainability, 16(19):* 8478. https://doi.org/10.3390/su16198478

Schön, D. A. (1987). *Educating the Reflective Practitioner: Toward a New Design for Teaching and Learning in the Professions.* USA: Jossey-Bass

Sohoni, A. (2009). Cultural Diversity and Non-Western Course Content in Interior Design Education. *Family & Consumer Science Research Journal, 37:* 329-343. https://doi.org/10.1177/1077727X08330689

Story, M.F.; Mueller, J.L.; Mace, R.L. (1998). *The Universal Design File: Designing for People of All Ages and Abilities (Revised Edition).* USA: The Center for Universal Design, North Carolina State University.

United Nations Development Programme. (n.d.). *Goal 4: Quality education*. Retrieved July 2, 2025, from https://www.undp.org/sustainable-development-goals/quality-education

Web Accessibility in Mind. (2025). *The WebAIM Million: The 2025 report on the accessibility of the top 1,000,000 home pages.* Retrieved July 10, 2025, from https://webaim.org/projects/million/

World Economic Forum. (2023). *Driving disability inclusion is more than a moral imperative – it's a business one.* Retrieved July 2, 2025, from https://www.weforum.org/stories/2023/12/driving-disability-inclusion-is-more-than-a-moral-imperative-it-s-a-business-one/

Rossi, E. (2024). Equality, Diversity, and Inclusion in Design Education: Pedagogical Advances and Future Opportunities. *Strategic Design Research Journal. Volume 17,* number 01, January - April 2024. 16-27. DOI: 10.4013/sdrj.2024.171.02

Research and analysis of teaching contents on Design and EDI in the Italian system of Design Education

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ABSTRACT

The study examines how the principles of Equity, Inclusion and Diversity (EDI) are integrated into the curricula of Italian universities, with a particular focus on Architecture and Design courses. It is part of the European project EDIDesK and was done alongside other European universities to compare how these issues are integrated in different countries. Using both qualitative and quantitative methods, the research involved reviewing syllabi and conducting semi-structured interviews with university lecturers. The goal is to provide a current view of how widely EDI issues are recognised and taught in design education in Italy. The findings show an increased interest in EDI but also highlight a significant variation in how these topics are addressed across different regions, teaching methods, and subjects. Inclusion is often seen as a technical issue, yet critical viewpoints and a deeper understanding of how to make inclusion a part of project development are often missing. Despite these challenges, the need to enhance EDI in educational curricula, starting from the early years, is clear. This preparation is vital for new generations of designers to tackle today's social challenges with more awareness and responsibility.

Keywords: Inclusive Design Education, Italian Higher Education, Equality, Diversity, Inclusion, EDI.

INTRODUCTION

This study examined and mapped the integration of themes related to Equality, Diversity, and Inclusion into the design curriculum at both undergraduate (UG) and postgraduate (PG) levels in higher education in Italy, as well as the related tools and teaching practices adopted. It provides an in-depth analysis of how Italian universities develop their teaching program model in response to these themes, fostering a more inclusive learning environment. Based on qualitative and quantitative methodologies, the study aims to give back both the breadth and depth of EDI content in design modules. In particular, the methodological approach includes on-desk research, data collection, analysis, and interviews with a selected group of academics. The focus is on how EDI-related topics are integrated into academic modules, providing a clearer view of EDI in Italian higher education. Particular attention is paid to institutional choices, the terminology used in course descriptions, the degree of curricular integration, and the presence (or absence) of collaborations with external stakeholders.

The research issue is particularly crucial considering the growing awareness of the need for more inclusive forms of education, which can effectively address the complexity of social differences.

Indeed, in recent years, the principles of Equality, Diversity and Inclusion (EDI) have become a top priority and value in the scientific and professional communities working in the field of Design Studies (Rossi and Brischetto, 2024). This shift signifies a broader understanding of how inclusive and diverse approaches foster creativity and innovation, while also creating a more welcoming environment for everyone. By proactively pursuing EDI, these communities aim for a design process that is representative of multiple backgrounds, experiences, and ideas, capable of developing more effective and impactful solutions for the discipline. Consequently, the knowledge and application of EDI principles have become indispensable for design practitioners and researchers. As the international design industry continues to evolve, these principles are increasingly recognised as key drivers of creativity, innovation and socially responsible design approaches. Prominent scholars such as Victor Papanek (1971), Victor Margolin (2005) and Ezio Manzini (2016) emphasise the need for responsible, ethical, and responsive design principles that promote social change and sustainable development. Carl DiSalvo (2022) reiterates the idea of "doing design otherwise" in order to contribute meaningfully to local democracy and community participation. Lorentzen et al. (2018) define "Diversity" as responding to the psychophysical, cultural, social, and economic differences of users. Holmes (2018) completes the picture by explaining that "Inclusion" is about designing environments that make people feel valued in every aspect, regardless of race, age, gender, or psychophysical abilities.

The application of EDI in design education is a complex issue that transcends mere didactics and requires a profound reorganisation of pedagogical frameworks. According to Boztepe (2007), the contribution of design to global market development is now evident, further highlighting the critical need for design education to generate economic and social outcomes.

In addition, educational researchers such as Asojo (2001), Sohoni (2009), O'Sullivan & Hakaraia (2018), Lee et al. (2021) and Albert et al. (2023) jointly emphasise the need for culturally diverse environments, transformative strategies, cross-cultural intelligence and affective engagement to design EDI-centred and impactful educational experiences.

Design courses in Italian higher education institutions have been embracing EDI issues in a transdisciplinary and holistic manner for several years.

Through the research conducted within the EDIDesK project in the Italian context, an attempt was made not only to map EDI within university curricula, but also to offer a critical reading of the approaches, priorities and gaps emerging from the collected data. Rather than limiting itself to a theoretical investigation, this research aims to provide guidance and practical tools for educators and scholars engaged in developing design practices that are inclusive, empathic and culturally aware of responding to the complexity of today's social and environmental challenges.

The article is structured as follows: Section 1 provides an overview of the courses identified in Italian higher education that engage with EDI-related themes in the field of design. It opens with a description of the methodological framework and the tools used for data collection and analysis, followed by a detailed presentation of both quantitative trends and qualitative observations.

Section 2 moves into a more interpretative dimension, offering a critical discussion that brings together insights from the data to highlight the strengths, limitations, and emerging trajectories within the current academic landscape. Finally, Section 3 presents the main conclusions and reflects on the broader implications of the findings, offering considerations for the development of more inclusive and reflective design education practices in Italy.

1. OVERVIEW OF DATA GATHERED

1.1. Research methodology

The research encompasses both quantitative and qualitative analysis. To ensure that, the methodology utilised followed three distinct stages. The first stage involves a systematic desk review of the academic modules provided by Italian institutions that offer Design or Design-related programs. The second stage includes interviews with a carefully selected group of academics. Finally, the third stage incorporates global surveys to gather diverse perspectives.

The data collection process followed a harmonised protocol developed jointly by the project partners to ensure consistency across the different national case studies. This protocol focused on publicly accessible information retrieved from official university websites, including course catalogues, module syllabi, programme descriptions, teaching staff profiles, and institutional curricula.

The aim was to identify modules that explicitly or implicitly address EDI-related topics. For this purpose, an analytical framework was created to extract and organise information under a series of categories that enabled both qualitative interpretation and quantitative comparison. The resulting database was constructed using a spreadsheet structure that included:

- Basic identifying information (university, department, module name, lecturer).

- Educational level (Undergraduate Programme UG; Postgraduate Programme PG).

- Type of subject (e.g., theoretical subject, design studio, diploma seminar, supporting subject, extracurricular activity).

- Number of ECTS/CFU credits assigned.

- Domain of design (e.g., product design, communication, service, architecture).

- Main EDI domain addressed (e.g., accessibility, diversity, inclusion).

- Module keywords and themes.

- Evidence of cooperation with external partners or stakeholders.

- Module content description and links to syllabi or institutional documentation.

- Evaluation of the module based on EDI relevance and integration, using a 1-to-5 scale.

This classification enabled a comparative overview of the structural and thematic aspects of each module, offering insight into how EDI-related issues are framed within academic design teaching.

The evaluation of the teaching modules constituted a critical component of the data analysis and was subject to comprehensive classification. Each module underwent assessment based

on three primary criteria: explicitness, depth, and consistency in addressing Equity, Diversity, and Inclusion (EDI). This evaluation adhered to a five-level scale:

- Level 1: The module includes only selected or incidental references to EDI.

- Level 2: EDI topics are present, and some student work addresses related issues.

- Level 3: EDI themes are structurally included, and most student work reflects those themes.

- Level 4: EDI topics are broadly integrated; student work consistently engages with EDI, and external collaborations support the module.

- Level 5: The module is fully and explicitly dedicated to EDI, with all learning outputs focused on these issues.

The evaluation was not intended as a hierarchical judgement but rather as a way to visualise degrees of integration and pedagogical consistency. It also allowed for identifying both emerging best practices and areas where EDI themes remain marginal or unstructured.

The second stage consists of a qualitative phase that complements the desk research, involving semi-structured interviews with university staff responsible for the identified modules during the initial data collection. Each national research partner selected a group of academics considered to be actively engaged with EDI-related topics in their teaching. In Italy, the selected academics represented different institutions and disciplines, providing a cross-section of approaches, strategies, and reflections on EDI in Design education.

The interviews were structured around seven thematic areas:

- Basic information on the module and institutional context.

- Personal understanding of EDI and how it informs teaching.

- Experience with EDI in professional and academic practice.

- Detailed module content, pedagogical objectives, and expected student outcomes.

- Evaluation methods used to assess EDI-related competences.

- Didactic tools, formats, and methodologies employed.

- Integration of the module within the broader curriculum.

The qualitative data collected through interviews provided valuable contextual insight and allowed for the identification of patterns not immediately visible in the desk analysis. Furthermore, interviews highlighted institutional constraints, cultural resistances, and opportunities for innovation, helping to frame the Italian case within a broader reflection on systemic challenges and pedagogical experimentation.

In addition to interviews, academic staff were asked to submit examples of student work that best exemplify the impact of EDI content within design education. These examples were intended to provide evidence of how students understand and respond to EDI principles in their design practice.

1.2. Quantitative analysis at the national level: Data collection

The Italian dataset comprises 28 modules from 13 academic institutions: Polytechnic of Milan, Polytechnic of Turin, IUAV University of Venice, University of Bologna, University of Campania "Luigi Vanvitelli", University of Genoa, University of Naples "Federico II", University of Perugia, Mediterranean University of Reggio Calabria, University of the San Marino Republic, University of Floence, University of Ferrara, and "Gabriele d'Annunzio" University of Chieti-Pescara. These institutions are distributed across the national territory and include both specialised polytechnics and multidisciplinary universities. The sample thus captures a variety of institutional missions, pedagogical traditions, and territorial contexts, from northern to central and southern regions. The selection aimed to offer a national-level snapshot and enable a comparative analysis of how EDI is addressed at different stages of academic formation.

The first element of this reading concerns territorial distribution: 13 of the 28 modules are located in six universities in Northern Italy, 8 courses in 3 universities of Central Italy, and 7 modules in only two universities of Southern Italy. This confirms an imbalance in the presence and integration of EDI in higher education curricula, potentially reflecting broader inequalities in institutional investment and research orientation.

Out of the 28 modules, 18 belong to postgraduate studies and 10 to undergraduate programmes. This confirms a preliminary hypothesis that EDI themes tend to be more present and more thoroughly developed at the postgraduate level.

Looking at the evaluation score, 6 modules were rated at levels 4–5 (0.21%), 14 at level 3 (0.53%), 2 at level 2 (0.07%), and 6 at level 1 (0.17%). This distribution illustrates the varying degrees of engagement with EDI themes, from minimal coverage to more structured and systemic approaches, with level 3 emerging as the most recurrent evaluation.

Modules were also categorised by type: 20 Basic of Design, 2 theoretical subjects, 2 design studios, 3 supporting or supplementary subjects, and 1 diploma seminars. These types cover both practical and theoretical dimensions and show that EDI is being introduced through different didactic strategies (Figure 1).
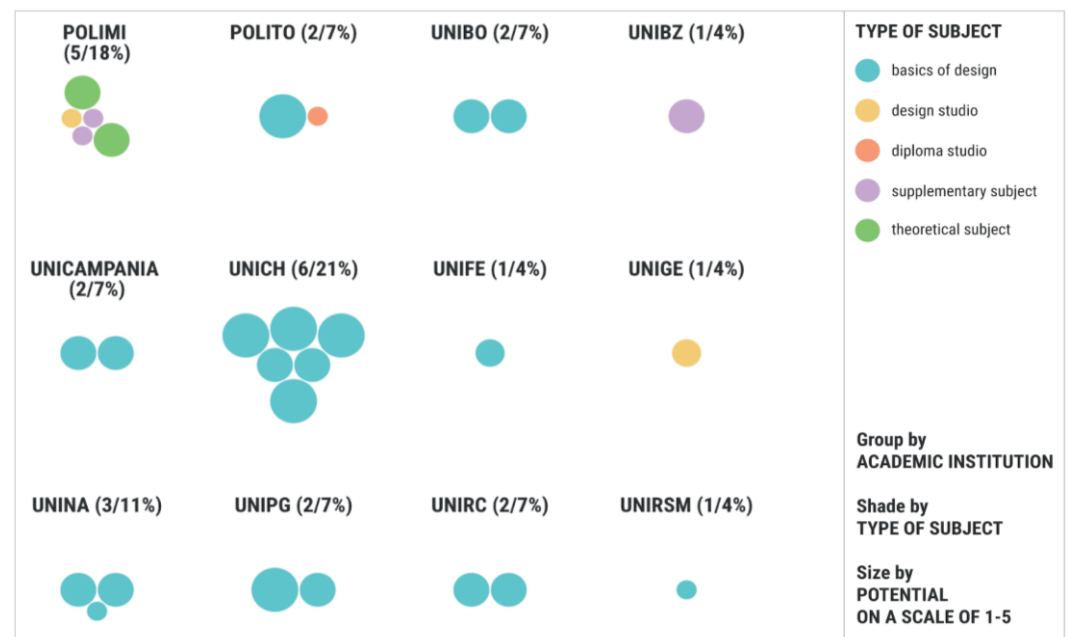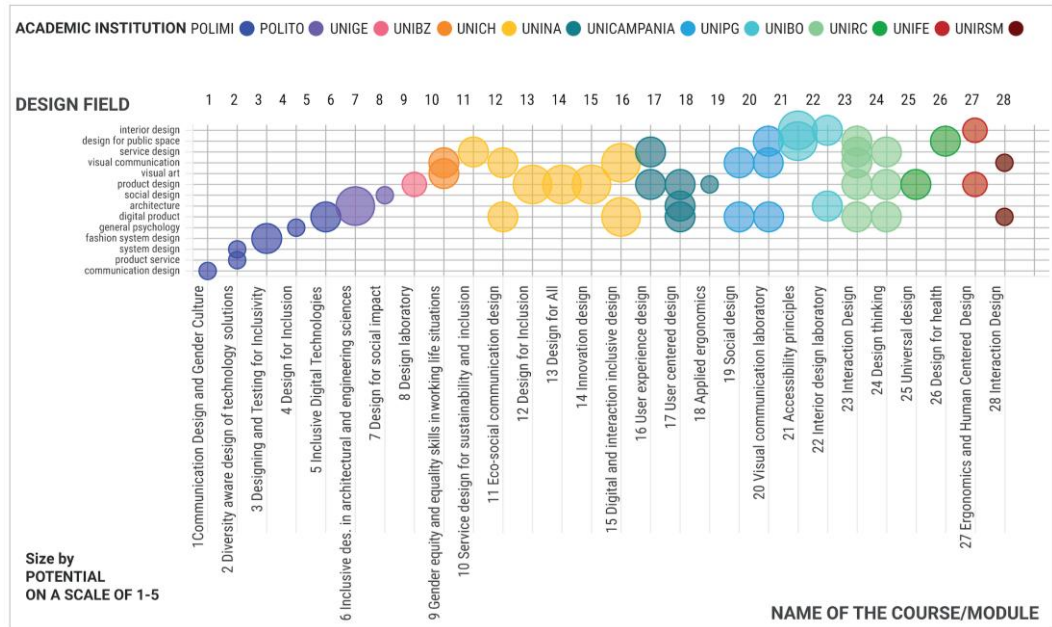
Figure 1. Desk research of modules on Design and Design-related fields deliver EDI in Italy: Details of the number of modules grouped by University where they are taught and by subject type.

From a disciplinary perspective, product design is the most represented field (11 modules), followed by digital product design (9 modules), communication design and visual culture (8 modules), interior and architecture-related design (6 modules), service design (4 modules) and design for public spaces (4 modules). Other areas, such as fashion, social design, and art and design, appear only once. This spread confirms a tendency to integrate EDI more within domains that are closer to user experience and interaction and artefacts dimension, while art and fashion show limited attention to such themes (Figure 2).

Figure 2. Desk Research of Modules on Design and Design-related Fields that Deliver EDI in Italy, Details of design field, name of the modules, sized based on levels of EDI integration (potential). View the interactive table: https://public.flourish.studio/visualisation/24149857

The thematic keywords extracted from the analysed modules offer useful insight into how EDI is currently framed within Italian design education (Figure 3). The most frequently recurring term is Design for All (11 occurrences), followed by User-Centred Design, Communication Design, and Social Inclusion (each mentioned 4 times). These are complemented by Universal Design and User Experience (3 mentions each), and Interaction Design, Design Thinking, Human Factors, and Co-Design (2 mentions each). Other terms appeared only once across the sample, such as 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.

Figure 3. Desk Research. Keyword frequency.

D'Onofrio, A.; Cipressi, S, J.; Massacesi, R. (2024). Research and analysis of teaching contents on Design and EDI in the Italian system of Design Education. *Strategic Design Research Journal. Volume 17*, number 01, January - April 2024. 28-43. DOI: 10.4013/sdrj.2024.171.03

This lexical distribution reinforces the prevailing focus on functional and ergonomic aspects of inclusion, mostly oriented towards usability and accessibility, founded in module classification.

The frequent use of expressions like Design for All, Universal Design, and User-Centred Design confirms a predominantly technical and instrumental interpretation of EDI.

Moreover, only one module reported a structured collaboration with an external stakeholder, which is specifically a local non-profit organisation. This isolated instance highlights a common situation in Italian Design Modules: a significant lack of engagement with external stakeholders such as NGOs, public institutions, or private organisations, pointing to a broader systemic disconnect between academic environments and the social contexts in which design practices unfold.

1.3. From quantitative mapping to qualitative insights: Interviews

While the quantitative mapping presented in Chapter 1.2 provides a comprehensive overview of how EDI themes are currently embedded in Italian design curricula, it offers only a partial understanding of the pedagogical rationales, challenges, and innovative practices underlying these modules. To gain a deeper and more nuanced perspective, the study complemented the desk analysis with semi-structured interviews with faculty members actively engaged in EDI teaching. In addition to the data analysis conducted, one university was incorporated into the list of participants for the semi-structured interviews, resulting in a total of 29 universities. This adjustment was made to facilitate the completion of 10 interviews. The following section explores these qualitative insights, which enrich the dataset by highlighting lived experiences, methodological approaches, and institutional constraints.

This chapter relates the quantitative mapping presented in Chapters 1.2 to the qualitative evidence gathered through ten semi-structured interviews with Italian design teachers who explicitly integrate the principles of Equality, Diversity, and Inclusion (EDI) into their teaching methods. Together, the interviews offer a granular view of how inclusive principles are operationalised in the classroom, what skills are assessed and how each module fits into the overall curriculum (Figure 4). Although the sample is small, the interviewed lecturers teach compulsory and characterising workshops in seven universities; the patterns that emerge thus shed light on the dominant pedagogical logics in the national context.

All the interviewed courses are full-time, studio-based and compulsory, confirming the centrality of practical learning in Italian design education. Six modules are offered at master's level and four at bachelor's level, reflecting the tendency of the wider dataset to consider EDI an "advanced" skill. In the programme and module descriptors, Product and Digital Product Design prevail (9 and 5 occurrences, respectively), followed by Service Design, Visual Communication, and Interior Design. This disciplinary focus reiterates the national bias towards usability-driven inclusion noted in Section 1.2, leaving the fields of strategic or spatial design relatively under-represented (Table 1).
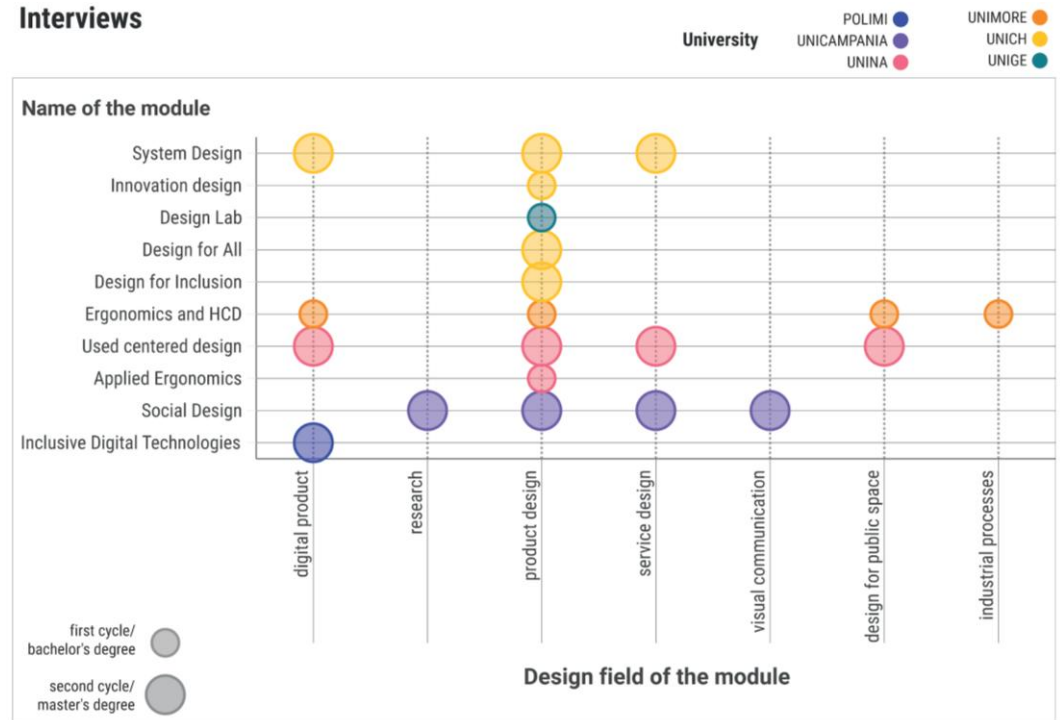
Figure 4. Interviews with Selected Academic Running Modules on Design and/for EDI in Italy. view the interactive table: https://public.flourish.studio/visualisation/24149498/

Table 1: Details of the outcome and results of a selection of modules for teaching EDI topics.

University	Name of the module	Programme	Design field	Module outcome	Result and comments from interviews
Polytechnic of Milan	Inclusive Digital Technologies	Second cycle/master's degree	Digital product	Project	The greatest impact is from a social point of view, because through the course students experience a world they did not know before. They also acquire skills that are particularly useful in the field of Human Computer Interaction. Skills relating to inclusive design which from a professional point of view will be an increasingly requested topic. They acquire a different approach to design.
University of Campania "Luigi Vanvitelli"	Social Design	Master's degree	Research Product Design Service Design Visual Communication	Project	The best result is the advanced skills of the students. Very important are the awards received for the student's work and the possibility to experiment with the project with the communities.
University of Naples "Federico II"	Applied Ergonomics	First cycle/bachelor's degree	Product design	Project-executive design	This module generates a positive impact, to what we might call the "third mission", meaning it has a practical impact on partners and society as a whole.
University of Naples "Federico II"	Used centered design	Second cycle/master's degree	Product design Digital product Service design Design for public space	Project-executive design	This module generates a positive impact, to what we might call the "third mission", meaning it has a practical impact on partners and society as a whole.
University of Modena and Reggio Emilia	Ergonomics and HCD	First cycle/bachelor's degree	Product design Digital product Design for public space Industrial processes	Project	I would say more than a social impact. Specifically, it's a design impact, meaning they must learn to design for inclusivity and to provide the same user experience for different users. I know that sometimes they find calls for some competition, and at times they have brought their ideas, but I'm

University	Course/Lab	Cycle/Degree	Design Area	Type	Impact/Notes
					not sure if they have received any awards or not.
University of Genoa	Design Lab	First cycle/bachelor's degree	Product design	Project	We haven't had awards for students, but some students have spontaneously applied for internships at the company, asking us for information. Sometimes, after a couple of years, we see some of the students' projects being launched on the market.
"Gabriele d'Annunzio" University of Chieti-Pescara	Design for Inclusion	Second cycle/master's degree	Product design	Project	All teaching courses of the "Eco Inclusive Design" master's degree generates a positive impact, both on the students and on the involved companies and local territory.
"Gabriele d'Annunzio" University of Chieti-Pescara	Design for All	Second cycle/master's degree	Product design	Project	All teaching courses of the "Eco Inclusive Design" master's degree generates a positive impact, both on the students and on the involved companies and local territory.
"Gabriele d'Annunzio" University of Chieti-Pescara	Innovation design	First cycle/bachelor's degree	Product design	Project	Students' ability to suggest to companies how to design EDI solutions that don't necessarily require a huge economic or promotional effort and that aren't necessarily designed for a vulnerable user base.
"Gabriele d'Annunzio" University of Chieti-Pescara	System Design	Second cycle/master's degree	Product design Digital product Service design	Project	Students' ability to suggest to companies how to design EDI solutions that don't necessarily require a huge economic or promotional effort and that aren't necessarily designed for a vulnerable user base.

When asked to define their conceptual approach, lecturers converge on a Human Centred/Inclusive Design paradigm that translates human variability into ergonomic, experiential, and technological requirements. Four complementary frameworks recur:

1. Inclusive/Universal Design – designing 'for as many people as possible', anchored in anthropometric and cognitive ergonomics.

2. Co-design and participatory practices, involving stakeholders throughout the process.

3. Design for All toolkit with low/medium/high contact checklists.

4. Problem-finding through empathy, where students experience exclusion (e.g., by navigating interfaces with screen-readers or wearing ageing-suits) before devising solutions.

Several lecturers highlighted that their teaching methodologies—such as user-centred research, co-design with stakeholders, and rapid prototyping—are directly inspired by, and aligned with, practices widely adopted in professional design contexts. While collaborations with external partners are still limited, these experiences are seen as crucial bridges between academic learning and real-world application.

Overall, the interviews frame inclusion less as the production of universally accessible artefacts and more as the construction of conditions of equity - a shift that echoes the ethical appeals discussed by Margolin (2005) and Manzini (2016). At the same time, structural lenses

such as intersectionality or decoloniality remain marginal, confirming Chapter 1.2's finding that Italian curricula privilege technical over socio-political readings of exclusion.

An almost constant "blended" pattern emerges in the ten modules:

1. Introductory lectures on EDI definitions and frameworks (10/10 modules).

2. Field/user research through interviews, observations or questionnaires (9/10 modules).

3. Iterative concept development and rapid prototyping - physical, digital or hybrid (8/10 modules).

4. Targeted co-design workshops with external actors (4/10 modules).

5. Simulation exercises to stimulate empathy (3/10 modules).

6. Occasional hackathons with industries or NGOs to align briefs with real clients (2/10 modules).

The outputs reflect this: six modules conclude with physical product prototypes, three with accessible digital interfaces and two with integrated product-service-system proposals (multiple outputs per module are possible). The prevalence of tangible artefacts highlights a persistent material orientation in Italian laboratories, even in tackling inclusive challenges.

The assessment strategies favour formative and dialogic practices. Eight lecturers rely primarily on oral critiques in which students must demonstrate consistency between user data, design decisions and inclusive outcomes. Formal written quizzes only appear in courses with a strong ergonomic content (2/10 modules), while four modules combine intermediate assignments with a final prototype. Tests with real users - ideal for validating inclusive claims – are reported in only two cases, indicating logistical or time constraints. Teachers highlight the importance of reflective judgment, which is the ability to argue design choices in both ethical and functional terms, despite certain limitations.

Seven of the ten modules are compulsory; six are embedded in "integrated workshops" or micro-credential tracks (e.g., the Milan Polytechnic's Ambassador track), while four function as stand-alone courses. The interviewees generally consider the current placement to be adequate, but nine would like to see a broader vertical alignment, in which EDI fundamentals are introduced in the first year and taken up with increasing complexity. Two explicitly call for a mandatory first-year unit to normalise inclusive mindsets across all cohorts. The almost unanimous desire for diffusion into other courses reveals that EDI remains confined to core studies rather than being woven into the entire undergraduate experience.

Teachers employ a range of resources: expert interventions (6/10 modules), WCAG and anthropometric guidelines (5/10 modules), physical simulation kits (4/10 modules) and community audits (4/10 modules). Prototyping facilities - digital fabrication, AR/VR, or traditional labs - are used in six cases. Crucially, instructors consider simulation tools as empathy triggers; authentic user feedback is deemed irreplaceable for final validation. Nonetheless, the episodic nature of collaborations with NGOs or companies suggests that university-community relationships are temporary rather than structural, consistent with the single-module partnership identified in the documentary study.

Taken together, the interviews outline a methodologically coherent but conceptually biased landscape. Co-design, iteration and ergonomic rigor constitute a solid educational triptych for

functional accessibility. However, the scarcity of critical theory vocabulary, limited engagement with systemic inequalities and sporadic partnerships with stakeholders limit its transformative potential.

Three operational directions emerge:

1. From projects to programmes: Italian design schools could enhance the existing study template by embedding EDI milestones in sequential modules, allowing students to rework inclusive challenges with increasing disciplinary and socio-political complexity.

2. Beyond functional inclusion: Integrating readings and debates on intersectionality, decolonization, and design justice would enrich the current predominantly ergonomic framework, aligning curricula with contemporary European debate and UN Sustainable Development Goal 10.

3. Institutionalized partnerships: long-term agreements with civic organizations would stabilize co-design activities, improve skills testing in real-world contexts and broaden the social impact of students' work.

In summary, the interview data corroborate the quantitative findings of Sections 1.2, adding nuance to the Italian picture: committed educators offer high-quality, user-centred, inclusive design experiences, but these remain geographically and disciplinarily concentrated, episodic in their external involvement and poorly connected to systemic equity debates. Filling these gaps requires both a curricular rethink and a broader institutional commitment so that Italian higher education can achieve the EDIDesK project's goal of a harmonised and comprehensive EDI framework in European design schools. Overall, the Italian dataset is sufficiently broad and diverse to support further investigation and interpretation. The critical discussion that follows will unpack the pedagogical, institutional, and cultural implications of these trends and propose directions for development.

2. CRITICAL DISCUSSION

This critical discussion draws on both the quantitative mapping and the qualitative interviews to identify systemic patterns and propose directions for a more integrated approach to EDI in Italian design education.

The analysis of the data collected in the Italian sample highlights a growing attention to the themes of equity, diversity and inclusion within higher education in design. The evidence, gathered through desk research and interviews with university lecturers, provides a detailed picture. The analysis and study carried out so far led to the formulation of two research questions: RQ1) What is the broader context of EDI principles in relation to the field of Design in Italy? And RQ2) What is the current state of integration of EDI issues in Italian Design higher education?

From the latter question, the teaching of Inclusive Design is not yet homogeneous nor fully consolidated, and it manifests through very heterogeneous forms, intensities and approaches. On the one hand, Italian design schools show a growing interest in inclusive practices; on the other hand, these efforts are uneven, geographically concentrated and conceptually unbalanced. As the data show, the polytechnics in the North stand out for the number and depth of modules dedicated to inclusive design (13 out of 28 modules in all of Italy), while in the universities of the Centre and the South, these initiatives still depend on the isolated

commitment of individual lecturers. This distribution reflects not only historical inequalities in terms of institutional resources and pedagogical investments but also the lack of a cohesive national strategy for the integration of inclusiveness in design education.

These territorial gaps intersect with structural imbalances at the academic pathway level. The clear predominance of postgraduate courses (18 out of 28) confirms that EDI issues are generally addressed as specialised or advanced content, rather than as foundational knowledge. This trend suggests that students' exposure to inclusion themes is often postponed, thus limiting the possibility of developing critical and continuous engagement with diversity issues throughout the entire educational journey. The evaluations attributed to the various modules are a clear indicator of a high potential for EDI integration in university courses, but at the same time, they highlight how it is still far from full realisation, often lacking coherent pedagogical frameworks, systematic methods or adequate tools to effectively address these issues. The educational offer also appears unbalanced from a disciplinary point of view: most EDI activities are concentrated in areas related to product and interface, while fields such as strategic, spatial or fashion design remain still little explored.

This reveals a prevailing tendency to associate inclusion with ergonomic and interface issues, rather than with the broader socio-political contexts in which design operates. Among the urgent frameworks, it is necessary to bring to light integrated studies between inclusion and sustainability, but from the reading of the data, it emerges that only in rare cases is there an integration of these two themes. Also, the typological classification of courses, mostly "Basic of Design" or practical workshops, suggests a functionalist approach to EDI, privileging usability and physical accessibility. This approach is also reinforced by the analysis of the keywords present in the course descriptions. Expressions such as "Design for All", "User-Centred Design" and "Universal Design" appear most frequently, indicating an interpretation of EDI mainly based on the technical dimension of accessibility. Terms such as "Co-design" appear only twice, confirming that collaborative approaches are still an exception. Moreover, only one module reported a structured collaboration with an external stakeholder, indicating a systemic disconnection between academic institutions and the lived realities of marginalised communities.

Overall, these results outline a fragmented picture of the state of EDI in design education in Italy. It is certainly a subject of strong interest, but there is still little awareness of what is meant by Inclusive Design and what the real trajectories of experimentation and research could be. Although efforts are increasing and often driven by motivated lecturers, they remain isolated and highly context-dependent. To better understand the reasons for these imbalances, it is necessary to complement quantitative data with qualitative reflections, drawn from direct interviews with the lecturers involved.

From a pedagogical point of view, however, the picture is encouraging. Lecturers, in almost all institutions, follow a coherent educational structure, ranging from introductory lectures to user research, through co-design activities, iterative prototyping and critical reflection. This path, rooted in human-centred ergonomics and functional accessibility, provides students with solid tools to face the variability of users' physical and cognitive abilities. It is precisely this solidity, however, that, once again, as already demonstrated by the data, highlights its conceptual limits: Italian programmes still tend to frame inclusion mainly as a technical usability issue.

However, these educational practices are not always confined to the academic sphere; in some cases, they mirror and often anticipate trends in professional design practice. For instance, the integration of co-design workshops and user simulation exercises reflects the increasing adoption of participatory and empathic methods in the industry. Interviewees also reported that alumni trained within these modules have gone on to apply inclusive design frameworks in sectors ranging from digital interfaces to public space design, demonstrating the practical relevance of these pedagogical approaches. This alignment between educational content and professional practice suggests that strengthening EDI in curricula has direct implications for shaping socially responsive design practices in the field.

One significant limitation is the lack of structured collaborations with civil society organisations, public institutions, and minority-led enterprises. In the absence of systematic comparisons with lived experiences, workshop briefs may remain speculative. Additionally, evaluations tend to rely more on classroom discussions than on authentic assessments with actual users.

Within the EDIDesK research project, the Italian results confirm a tendency to promote design-for-inclusion issues, but this is mediated by cultural bias. This fragmentation reinforces the need for a shared transnational framework, capable of integrating EDI from the first year of study, fostering collaborations with communities and offering common metrics to monitor progress.

Moving in this direction requires Italian universities to rethink the positioning of inclusive design in their degree programmes. A compulsory fundamentals unit, placed at the beginning of the curriculum, could create a common language; vertically connected workshops would then allow students to tackle inclusive challenges with increasing complexity. Courses focused on service, interior or strategic design should be incentivised, through funding or accreditations, to integrate EDI briefs. Lecturers need structured opportunities to explore critical literature on inclusion, while departments should establish multi-year agreements with external stakeholders so that co-design becomes the rule, and not the exception. Finally, an evaluation rubric that measures not only functional accessibility, but also sociocultural impact would allow programmes to credibly monitor their progress and share good practices.

Despite its limitations, a small number of interviews and the absence of students' perspectives, this research sends a clear message: Italy possesses the pedagogical skills and ethical commitment needed to make inclusive design a distinctive feature of its educational offering. What is still missing is a systemic will capable of transforming widespread excellence into a true national culture of inclusion. By implementing the proposed recommendations, Italian institutions can evolve from an emerging but fragmented practice to a coherent and forward-looking model, aligned with European aspirations and, above all, with the social imperative of designing for inclusion.

3.CONCLUSIONS

The analysis conducted reveals a complex and multifaceted picture of how the principles of equity, diversity, and inclusion (EDI) are integrated into design education at the university level in Italy. Alongside a quantitative and qualitative mapping, the study aimed to offer an accurate snapshot of the national context and an interpretive framework to understand how educational choices, disciplinary traditions, institutional geographies, and cultural postures influence the systemic adoption of an inclusive approach in curricula and design practices.

One of the main findings concerns the emerging yet still fragile character of EDI within design education. Despite growing awareness among teaching staff and the explicit commitment of certain academic institutions, inclusion often appears as an occasional addition, entrusted to the initiative of individuals rather than structured as a core principle of the educational path. The absence of a shared infrastructure, made up of common languages, operational tools, evaluation criteria, and a shared pedagogical model, makes it difficult to consolidate the most virtuous experiences and, more importantly, to turn them into widespread and replicable practices.

At a cultural level, a certain conceptual ambiguity surrounding the notion of inclusion emerges. Too often, it is reduced to a purely technical issue, linked to usability or ergonomics, overlooking its connection to broader social inequalities, cultural diversity, and contemporary societal challenges. This narrow view limits the transformative potential of inclusive design, which should instead be understood as an enabling tool for individuals, communities, and society as a whole. For this to happen, inclusion must be addressed as a subject of critical reflection, capable of questioning the implicit assumptions of design education itself.

Looking ahead, the study strongly highlights the need for a strategic rethinking of the educational offer. Integrating EDI does not merely mean adding specific modules but reorienting the entire design pedagogy toward greater awareness of human diversity, systemic inequalities, and the ethical responsibilities of design. This implies, on the one hand, introducing inclusive principles at the earliest stages of study to make them foundational rather than marginal; and on the other, promoting stable collaborations with external actors able to bring real needs and complex challenges into the academic context.

The interviews revealed that approaching EDI issues within the design disciplines simultaneously requires a holistic view and a personal, reflective attitude. These two aspects, apparently in tension with each other, turn out to be complementary in the educational process. On the one hand, the student is called upon to approach projects not through the mechanical application of single technical solutions, but through a transversal and inclusive understanding of needs. At the same time, inclusive design education must solicit genuine attention to the other, challenging the idea that inclusion means deciding in the user's place. In this sense, the personalised approach is essential to recognise the specificities of individual experiences and to avoid stereotypical or normalising solutions.

To this end, co-design represents an indispensable pedagogical principle, but one that is difficult to apply in the academic sphere. The logistical and organisational conditions of courses - one thinks, for example, of the difficulty of setting up heterogeneous working groups that include people with physical disabilities limit the effective possibility of experimenting with collaboration with real users with specific needs. This difficulty, however, should not be a deterrent, but a further incentive to imagine new modes of interaction, simulation and exchange, capable of bringing didactics as close as possible to the complexity of reality.

Among these solutions, the hosting of testimonials, including from recent graduates or doctoral students with direct design experience on EDI issues, and the application of design exercises to real cases, through collaborations with external partners, prove particularly effective. While these strategies do not replace direct involvement of the users, they represent concrete ways of fostering design empathy, confrontation with diversity and empowerment of the student towards authentic application contexts.

Within this framework, the transnational dimension of the EDIDesK project represents a valuable opportunity. The comparison with other educational systems has made clear not only the specificities of the Italian context, but also the shared European need to build common frameworks that can guide change. The development of shared minimum standards, evaluation rubrics, pedagogical guidelines, and strategies for active community engagement could constitute a first step toward a more robust and conscious educational alliance.

Ultimately, this study does not claim to offer definitive answers, but to open a space for inquiry and responsibility. If design is to be a tool for social transformation, then design education cannot shy away from questioning its role in reproducing or challenging existing inequalities. In this sense, inclusion is not just a content to be added, but a critical posture to be cultivated, an ethical horizon to be shared, and a collective project to be built.

In conclusion, strengthening EDI integration in design education is not only essential for fostering inclusive academic environments but also pivotal for preparing future designers to embed these principles in professional practice. As such, the evolution of curricula directly contributes to reshaping design practices towards greater social and cultural responsiveness.

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REFERENCES

Asojo, A. O. (2001). A model for integrating culture–based issues in creative thinking and problem solving in design studios. *Journal of Interior Design*, *27*(2), 46-58. https://doi.org/10.1111/j.1939-1668.2001.tb00477.x

Boztepe, S. (2007). User value: Competing theories and models. International journal of design, 1(2). Available: https://www.ijdesign.org/index.php/IJDesign/article/view/61/29

DiSalvo, C. (2022). *Design as democratic inquiry: Putting experimental civics into practice*. Cambridge, MA: MIT Press.

Holmes, K. (2018). *Mismatch: How inclusion shapes design*. Cambridge, MA: MIT Press.

Lorentzen, L., & Hedvall, P.-O. (2018). Bringing human diversity into design processes through empathic modelling. In G. Craddock, C. Doran, L. McNutt, & D. Rice (Eds.), *Transforming our World*

Through Design, Diversity and Education (Studies in Health Technology and Informatics, 256, pp. 128–136). Amsterdam, The Netherlands: IOS Press. 10.3233/978-1-61499-923-2-128

Margolin, V. (2005). *Design for the Good Society: Utrecht Manifest 2005–2015*. Rotterdam, The Netherlands: Nai Uitgevers.

Manzini, E. (2016). *Design, When Everybody Designs: An Introduction to Design for Social Innovation*. Cambridge, MA: MIT Press.

Oleson, A.; Solomon, M.; Perdriau, C.; Ko, A. Teaching Inclusive Design Skills with the CIDER Assumption Elicitation Technique. *ACM Trans. Comput. Hum. Interact.* 2023, *30*, 3549074.

Rossi, E. and Brischetto, A. 2024. Contribution of the "Equality, Diversity, and Inclusion" Concept to Design Education: A Systematic Literature Review'. *Sustainability 16(24).* doi: https://doi.org/10.3390/su16198478

Sohoni, A. D. (2009). Cultural diversity and Non-Western course content in interior design education. *Family and Consumer Sciences Research Journal, 37*(3), 329–343. https://doi.org/10.1177/1077727X08330689

Integration of Equality, Diversity, and Inclusion (EDI) in Design Education in Poland

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ABSTRACT

The paper presents the current picture of the introduction of EDI (Equality, Diversity, Inclusion) into design education curricula in Poland. We focused on design programs taught at eight public art universities. Desk research confirmed EDI-related topics in 51 modules taught on undergraduate first-cycle, postgraduate second-cycle, and unified master's long-cycle programs. Further interviews with educators allowed us to identify best practices, activities, and challenges in EDI education across various design disciplines. The findings reveal the specifics and outcomes of EDI in the Polish context. We outline a comprehensive overview of educational practices developed by teachers, revealing diverse, multi-level, and often innovative approaches to EDI-related education. It provides rich data and a detailed picture of the characteristics of Polish design education, which could serve as a foundation for developing more systematic national regulations. These regulations could promote the EDI approach more broadly within society and among institutions, enabling more effective collaboration with Academies.

Keywords: Design Education, Poland, Equality, Diversity, Inclusion

INTRODUCTION

Historical context

In Poland, the role of the contemporary designer has always been defined in the context of social responsibility. Despite the different ideological foundations of a socialist state in post-war Poland, the discussions on the role of designers accentuated their part in shaping the quality of life and its influence on society. In the works of Andrzej Pawłowski, one of the founders of design education in Poland in the 1960s and '70s, the profession was positioned on the border of art and technology, and was focused on creating a new value and orientation on social responsibility. He considered design a fundamentally social activity, which places a moral responsibility on the designer to act ethically and in the public interest (Pawłowski, 2001, p. 56). Reflecting this perspective, Pawłowski firmly believed that design should be taught exclusively within Academies of Fine Arts. He argued that the essence of art lies in its selflessness, and that its core attributes cannot be taught in a conventional sense but must be awakened and developed through an environment that supports artistic growth. Also, design education should balance manual and technical skills with a socially engaged mindset focused on real-world problem-solving, rather than simply producing aesthetically pleasing objects (Pawłowski, 2001).

This interconnection between ethical dimensions and socially responsible design was also visible in the works of Papanek (1984/2012), and is still present in designer debates (Cipolla & Bartholo, 2014; Cooper, 2005; Thorpe & Gamman, 2011). Also in Poland, this narration is continued, and design is perceived as a socially responsible profession. Inclusive designing is also mentioned as one of three pillars of the designers' role, next to sustainable and participatory designing. In a recent Polish research, which involved 51 interviews with designers, social responsibility was confirmed as important and introduced on a practical level, but also perceived as a "mission" or an internalized value. The participants also mentioned that it was an important element in design education (Rojek-Adamek, 2019).

Characteristics of Design Studies in Poland

Polish classification of fields and disciplines of science, which regulates HEIs, recognizes design education within the fine arts and art conservation disciplines. Therefore, the EDI (Equality, Diversity, Inclusion) content is not mentioned in the Polish Qualification Framework (PQF) (Integrated Qualifications System, 2015). Hence, the presence of EDI-related topics is the result of traditions in design education and the general understanding of the role of the designer rather than of legal requirements. Recently, it has also been supported by the impact of numerous EU-funded programs that have helped higher education institutions (HEIs) to integrate universal design principles into their educational frameworks. These programs focused on updating curricula, creating accessible facilities, organizing trainings for teachers, and establishing centers for knowledge development.

In the Polish system of public higher education institutions in design, three main directions of development can be identified. The first one is related to design studies with two main specializations: industrial design and visual communication. Such programs, taught mainly at art universities and originally grounded in the tradition of industrial design, have progressively shifted toward approaches that are more human-centered, service-oriented, and socially responsible. Over time, technical universities have also begun to offer similar programs, often with a stronger focus on engineering aspects and a practical, application-oriented educational profile. The second direction involves interior design, and in some cases, also specialization in furniture or stage design. These programs were usually developed within the faculties of architecture at technical universities. The third trajectory remains in the domain of arts, where traditional visual arts have gradually transitioned toward more utilitarian applications, giving rise to graphic design and new media design programs. Finally, several classical comprehensive universities also developed design-oriented programs within art education faculties. Design programs are also present in private higher education institutions.

Apart from the context of different directions in the development of design education, which are rooted in different traditions and methodological approaches, it is also important to distinguish the two profiles of education offered by Polish HEIs, defined by national regulations. Design study programs follow either a practical or a general academic profile. The practical profile focuses on developing students' practical skills and social competencies, with over half of the ECTS credits coming from hands-on courses, often led by professionals with industry experience. In comparison, the general academic profile is more research-oriented, with over half of the program based on courses connected to the academy's scientific research, aiming to provide students with in-depth theoretical knowledge.

Polish HEIs offer various levels of design education from first-cycle undergraduate (UG), second-cycle postgraduate (PG), and long-cycle five-year unified master's degree programs to a plethora of post-diploma studies and also doctoral-level schools. First-cycle programs are oriented toward building foundational knowledge and practical skills for employment or further study. Postgraduate and master's programs focus on deepening theoretical knowledge, developing advanced creative and research skills, and fostering independent, innovative thinking and interdisciplinary problem-solving.

Table 1 presents, based on ELA (2025), types of design studies offered on two types of Polish public higher education institutions – art academies and universities of technology.

Table 1: Characteristics of Design Studies in Poland

University type	General academic profile	Practical profile	UG	PG	Unified Master Studies	Full-time studies	Part-time studies
Artistic	18	1	8	9	2	18	0
Technical	2	7	6	3	0	9	0

Among public higher education institutions offering design studies, all eight art universities run programs with a general academic profile, where the EDI approach is more visible. Academic profile places greater emphasis on the humanities and the research process. In contrast, technical universities tend to offer programs with a practical profile, which translates into more engineering-oriented education and more practical classes.

1. OVERVIEW OF DATA GATHERED

1.1. Desk Research

The analysis of EDI in the context of design education in Poland focused on public art universities to identify how these principles are addressed in their curricula. Those HEIs offer programs in industrial design and visual communication within undergraduate first-cycle, postgraduate second-cycle, and unified master's long-cycle programs. The curricula of the Academy of Fine Arts in Warsaw, Jan Matejko Academy of Fine Arts in Kraków, Academy of Fine Arts in Gdańsk, Academy of Fine Arts and Design in Katowice, Eugeniusz Geppert Academy of Fine Arts in Wrocław, Strzemiński Academy of Art Łódź, Magdalena Abakanowicz University of the Arts Poznań, and Academy of Art in Szczecin were researched. Based on the programs published on their websites, the courses' content was reviewed to identify EDI-related material.

Table 2: Distribution of Analyzed Modules Across Study Levels

Number of modules	UG modules	PG&UG modules	PG modules	Unified Master Studies
52	25	7	19	1

The collected dataset comprises 52 modules from eight universities: 25 delivered at the undergraduate level, 26 at the postgraduate level, 7 at the postgraduate and undergraduate level, and one representing an integrated five-year master's program. In Polish design education, it is common for design studios to offer joint courses for undergraduate and

postgraduate students. While learning objectives align, expected outcomes differ in complexity, depth, and project scope depending on the study level.

The collected modules were analyzed using a set of categories designed to build understanding of both the approach to EDI and the extent to which EDI themes are embedded in course content and learning outcomes, particularly in relation to module type and its role within the broader curriculum.

The collected information included:

- basic information: level of study, field of study, and module area;

- module characteristics: classification based on a prepared taxonomy of module types;

- module evaluation: the extent to which EDI content is integrated into the course using a 5-level EDI Integration Scale (see Table 5).

The research covered a wide range of design courses, highlighting the integration of EDI content across various domains. These include commercial design, design for public space, digital product design, fashion and textile design, furniture and product design, and interior design. Additionally, the study explored service design, social design, and visual communication, all of which incorporate elements of accessibility, inclusivity, and user-centered approaches. Furthermore, several modules integrate both theoretical and practical elements, such as ergonomics courses, which are evolving to include a stronger focus on physical accessibility. Other courses, like user testing, increasingly address cognitive and perceptual diversity among users.

Table 3: Module Types Across Study Levels

Type of module	UG	PG&UG	PG	Unified Master Studies	Total
Basics of design	4				4
Design studio			2	1	3
Design & diploma studio	16	5	14		35
Diploma studio		2	1		3
Supporting/ Supplementary subject	4				4
Theoretical subject	1		2		3

Note: An additional module type, Design Studio/Diploma Studio, was introduced to serve both undergraduate and postgraduate students within an integrated curriculum.

In terms of specific EDI dimensions covered within the modules:

- Diversity was addressed in 22 modules,

- Accessibility in 18 modules,

- Inclusion in 12 modules,

- Equality, however, was not explicitly covered in any of the analyzed modules.

This distribution suggests that while diversity and accessibility are relatively well-represented within the curricula, the concept of equality remains significantly underexplored or at least underreported in course descriptions and outcomes (see Table 4).

Table 4: Covered EDI Dimensions

Domain	Accessibility	Equality	Diversity	Inclusion
Number of modules	18	0	22	12

The extent to which EDI content was integrated into the course was evaluated using a 5-level assessment scale presented in Table 5.

Table 5 EDI Integration Scale

EDI Contents Level	Description
Level 1	The program covers selected EDI issues
Level 2	The program covers selected EDI issues, and some student work includes EDI issues
Level 3	The program covers selected EDI issues, and the majority of student work includes EDI issues
Level 4	The program covers selected EDI issues, the majority of student work includes EDI issues, and cooperation with an external partner in the area of EDI is carried out
Level 5	The program focuses entirely on EDI, and all student work carried out addresses EDI issues

Table 6 summarizes the evaluation results for all types of modules.

Table 6: Modules Assessment Using EDI Integration Scale

Type of subjects	Level 1	Level 2	Level 3	Level 4	Level 5
Basics of design		1	2		1
Design studio			3		
Design studio, Diploma studio		11	11	7	6
Diploma studio/Diploma seminar			2	1	
Supporting/ Supplementary subject	1	1	1		1
Theoretical subject		1	1		1
Total	1	14	20	8	9

EDI education often begins within basic design modules, four of which were identified and categorized at Levels 2 and 3 of the EDI Integration Scale. One of these modules was even rated at Level 5. The analysis reveals that EDI content is most prominently featured in practice-based modules, particularly design studios and diploma studios. The EDI integration levels for these modules range from Level 2 to Level 5. While some modules are fully dedicated to EDI topics, others only include EDI-related content through selected student projects.

Summarizing the evaluation of various types of modules:

- 20 modules were classified at Level 3, indicating that the module addresses selected EDI issues, and most student work reflects EDI concerns;

- 14 modules were categorized at Level 2, meaning that the module covers selected EDI issues, and some student work demonstrates EDI engagement;

- 8 modules were classified at Level 4, and 9 at Level 5, reflecting deep and comprehensive integration of EDI principles, with all or most student outcomes demonstrating advanced understanding and application;

- 1 module was classified at Level 1, where EDI issues are only marginally present.

This process facilitated the creation of a keyword map illustrating how EDI is integrated into design and design-related education (see Figure 1). The analysis of the themes covered in the modules reveals a broad and multidimensional range of issues related to the EDI approach in design education.
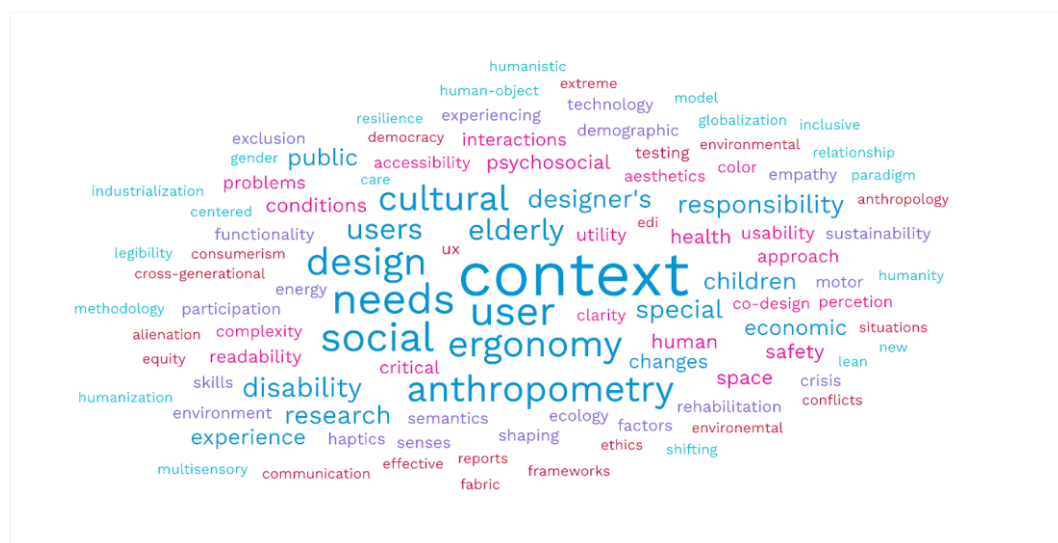

Figure 1. Keyword map of EDI content.

Among the most frequent topics are ergonomics and anthropometry, as well as the needs of users with special requirements, such as elderly people, children, and individuals with disabilities. The presence of inclusive design, universal design, and social responsibility in design is particularly prominent, along with topics related to co-design, participation, empathy, and social changes. Modules often combine practical and theoretical approaches, referring to concepts such as psychosocial factors in use, perceptual processes, legibility, user experience, usability testing, and human-object interaction. There are also references to public health, safety, and social sensitivity. Keywords related to ecology, energy crises, and designer responsibility highlight the growing importance of social and environmental factors in design education.

1.2. Interviews

Upon the completion of desk research, several academics from various art universities were selected for further interviews on how they deliver EDI-related content in order to determine best practices. The participants were identified as leaders, running modules evaluated on Level 3 or higher using the EDI Integration Scale.

The interviews were conducted with 12 academics, the gender ratio was six females and six males. They were holders of varied scientific titles: master's (1), PhD (4), postdoctoral degree (4), and professorship (3 people). All participants have extensive practical experience as designers, and they teach modules in product design, service design, social design, interior design, design for public space, game and VR design, as well as research and visual communication. All participants actively develop their EDI knowledge and skills by participating in various workshops, conferences, and training.

Participants were asked to define EDI, and as a result, some similarities and differences in their answers were identified. All participants recognized that EDI is a multifaceted concept intertwined with principles and practices of design. It was a common recognition that

diversity extends beyond traditional notions of disability, as well as understanding that the concept of the "average person" is limitative, which led to wide and contextualized definitions of special needs and exclusions (e.g., a person with a disability, a mother with a stroller, someone temporarily in an unusual situation). A fundamental agreement is that EDI involves acknowledging and designing for the population's diverse needs, moving away from a one-size-fits-all approach. Some participants noted that we need to extend the accessibility beyond ergonomics and consider equally important cognitive, sensory, and technological capabilities of users. Many see design through an EDI lens as a tool for positive social change and fulfilling the social role of the designer. EDI issues are integral to designers' jobs and shouldn't be separated from other design aspects. There was also a consensus on the importance of educating students about these principles.

There were differences in the explicit versus implicit integration of EDI into curriculum design; for some participants, EDI is something explicitly written into the syllabus. In contrast, others saw it as an obvious and integral part of the designers' job, therefore linked to values and taught more "naturally". Also, the scope of application varied, as some participants focused on specific design challenges (e.g., urban space, specific user groups), while others linked EDI to much broader societal and global issues (e.g., human rights, fair trade, ecology). EDI-related topics covered in these courses include designing for diverse and vulnerable groups, emphasizing social responsibility and impact, and introducing inclusive and universal design principles. Topics are selected by the teacher with a specific aim, sometimes based on an introductory lecture or a brief provided by a partner. While all students may work on the same topic, each develops an individual solution. These are practical projects with the potential for real-world implementation. The graduation project topic is chosen independently by each student and serves as evidence of their maturity and engagement with EDI-related themes.

Although EDI values may not always be explicitly stated in the syllabus, they naturally emerge as an integral part of the design activity. The primary approach is working within real-world contexts, engaging with actual places, users, and stakeholders. Teachers actively facilitate collaboration with external partners such as NGOs, local institutions, public centers, experts, and businesses. Activities include visits to users' environments and maintaining consistent contact with target individuals. This process ensures that design projects are grounded in the genuine needs of users rather than based on abstract assumptions.

Regarding teaching and assessment, tutors often act as facilitators, guiding students instead of suggesting solutions. The methodology encourages a shift from theory to practice through project-based learning (PBL), where students tackle particular problems with real-world implementation potential. Classes combine lectures, discussions, and both structured and ad hoc workshops, tailored to the group's preparedness and the nature of the assignment. Evaluation focuses not only on final outcomes but also on the student's process, depth of research, and learning journey. Assessment methods include teacher evaluations, user feedback, expert reviews, and, in some cases involving implementation, real-life validation. Key assessment criteria include the potential for implementation and social impact. Some tutors also incorporate student self-assessment and peer feedback to foster a culture of mutual support and continuous reflection.

To enhance and make the learning environment more inclusive and engaging, teachers use supportive tools, structured discussion formats, frameworks, collaborative design methods,

and digital platforms that enable asynchronous communication and cooperation (e.g., Google Classroom, Miro). It is especially important for effective collaboration within student teams, with tutors, and external partners, which are key elements of EDI-focused design education.

Another important group of teaching aids focuses on information gathering and analysis, supporting research, data structuring, contextual understanding, and problem identification. Students use tools such as empathy maps, personas, and value proposition canvases to interpret collected data, while frameworks like social service design and the intersectional approach guide contextual analysis. All of these tools aim to present the user's perspective clearly and meaningfully. They also help communicate research outcomes to the public and stakeholders, fostering more constructive feedback. Additionally, narrative tools such as storyboards, diagrams, recordings, and films are used to simulate user journeys and foster empathy. Through scenarios, modelling, and iterative testing, students not only validate the effectiveness of their designs but also gain deeper insight into inclusive, human-centered solutions.

Prototyping and simulation also play a vital role in EDI-focused design education, allowing students to test, refine, and better understand their concepts through experiential methods. These models are evaluated through usability testing and real-life verification in partner facilities or actual user environments. Sometimes, teachers apply tools that simulate various disabilities or user perspectives, such as accessibility standard calculators or vision impairment simulations.

The focus of each module was to develop the skills necessary to define and understand the various needs of individuals. Such "special needs" should be broadly and individually defined; their understanding should not be limited only to disability. It is interconnected with methods and tools of a user-centric approach, helping to overcome stigmas, stereotypes, and averages to move from "all individuals" to "unique individuals" perspective. It is interesting, however, as descriptions of users' needs varied in the interviews. For some participants, avoiding stigmatization was the most important, others emphasized the role of working directly with users, while for some, the broad concept of thinking of all possible individual needs was paramount.

Participants discussed different values, mindsets, approaches, and areas of understanding what they considered crucial for students to be educated in the context of EDI. Development of the moral values and soft-skill competencies associated with them, like empathy, openness, tolerance, and respect, as well as acceptance towards people with diverse needs, were highlighted. Other competences are observational skills, as well as flexibility and openness to challenge students' existing paradigms and blind spots. Communication and organizational competencies were also mentioned as necessary to conduct any project. Several participants highlighted the need for analytical skills and design methodologies to effectively identify problems, understand user needs, and develop solutions. The enlisted methods to achieve inclusive results were workshop exercises, design thinking-based approaches, desk research, and problem-solving.

Table 7 summarizes the key EDI-related approaches identified in the interviews that facilitate its integration into teaching.

Table 7 Key EDI Areas in Teaching

EDI Integration Area	Description
Curriculum	EDI integrated explicitly (syllabi) or implicitly (teaching values).
Teaching methods	Project-based learning, real-world briefs, facilitation over instruction.
Assessment	Focus on process and iteration, depth of research, social impact, and potential for implementation.
Collaboration	Active engagement with users, stakeholders, and institutions.
Focus on soft skills	Empathy, observational skill, critical thinking, analytical skills, communication, and organization skills.
Tools/methods	Participatory and co-design methods, frameworks for contextual understanding, narrative & visual tools, prototyping and testing methods.

2. CRITICAL DISCUSSION OF FINDINGS

2.1. EDI Integration in Curricula

Desk research revealed that while diversity and accessibility were visible in curricula, equality was not mentioned directly. This gap may indicate a need for more explicit framing and inclusion of equality-related content within design education programs. Assessing the levels of EDI integration across modules, mostly clustered around moderate integration, as the majority of them were assessed as Level 3 (20 modules) or Level 2 (14 modules), while fewer demonstrated deeper integration at Level 4 (8 modules) or Level 5 (9 modules). Only one module showed minimal EDI presence and was classified at Level 1. The collected data indicate that EDI content is present across a wide range of module types within Polish design education, at both undergraduate and postgraduate levels. This is particularly evident in design studios and diploma studios, where students often have the freedom to define their own graduation project topics. The fact that many students choose to focus on EDI-related themes suggests that the overall program fosters a mindset that values inclusivity and social responsibility in design practice.

2.2. Institutional Context

In Poland, HEIs must demonstrate how their study programs relate to the socio-economic environment and how this environment influences the content and implementation of the curriculum. These relationships are subject to systematic evaluation by the Polish Accreditation Committee – the Relationship with the Socio-Economic Environment (Quality Assurance Standard 6.2) is one of the assessment criteria. These conditions catalyze the process of involving students in participation and work with real users, allowing for further inclusion of EDI topics into the curriculum. As public services and spaces must meet universal design standards, collaboration with external stakeholders allows students to understand and practice their role in delivering socially responsible products and services. It also helps shape the curriculum to reflect local and regional needs, offering students opportunities to develop practical, real-world skills.

Despite EU-funded programs that support the development of universal design curricula, interviews revealed that curricular changes aligned with EDI values were often driven by the initiative of individual teachers. Many of them actively sought professional development

through specialized conferences and training, and integrated EDI principles (particularly those related to accessibility, which are mandated by law) into their professional practice. While guided by a general skill matrix for fine arts education, teachers can develop the module curriculum with specific course objectives. This flexibility allows for the integration of the latest knowledge, as well as new topics, methodologies, and approaches. They actively use this space to create unique programs that incorporate the EDI approach across various aspects of the design domain they represent.

2.3. EDI and Teaching Methods

The analysis of interviews confirmed that there is an understanding that design has a social role to fulfill and can be used for positive change. It is interconnected with the broader moral values of designing without stigmatization. Empathy is regarded as a skill that must be actively trained and developed through repeated exposure and reflection. This development is also supported by specific exercises involving simulation or direct user observation. One approach involves self-observation, enhanced by physical simulation tools such as age simulation suits, hand paresis simulators, or Tactilus seat pads. Another type of exercise includes research walks through public spaces, which help students identify physical and social barriers faced by different user groups. Other methods involve direct engagement with users through mindful listening, co-design sessions, user observation, and interviews – especially with people with disabilities – students gain valuable, firsthand insight into diverse needs. All those activities aim to deepen emotional understanding and push students to look beyond generalized categories, recognizing the individuality of each experience. However, educators acknowledge that cultivating social sensitivity is a complex process that must account for each student's predispositions.

When considering the broader curriculum, educators note that EDI is directly addressed in specific studios, especially those with a social focus. However, this is mainly achieved through project-based learning, direct user engagement, development of student sensitivity and competencies, and the influence of instructors, rather than through mandatory components in course syllabi.

2.4. Teachers' Needs for Strategic EDI Integration

Some important takeaways from the interviews included the need for a comprehensive, strategic approach to EDI at the institutional level and for broadening its understanding among both designers and non-designers. This involves clarifying and building awareness around the use of various terms (e.g., "inclusive design," "universal design") and promoting more nuanced definitions of exclusion that go beyond disability, taking into account global, social, and cultural differences. This, in turn, highlights the need to raise public awareness of EDI. Education and promotion play a key role in fostering a deeper understanding of EDI across society, as well as among local administrators, stakeholders, and governmental officers. Strengthening this awareness will enhance cooperation with HEIs on joint projects, leading to more meaningful and breakthrough solutions.

Teachers do not perceive a systematic, institution-wide embedding of the EDI approach in curriculum development. Instead, they independently shape their course content to address EDI-related challenges. Although universities participate in initiatives that support the development of competencies in universal design and promote the integration of these

principles into curricula, implementation remains fragmented. A comprehensive approach across all levels – such as curriculum design, delivery, assessment and feedback, learning resources, physical and virtual learning environments, and staff engagement – is still lacking. Similar findings were also outlined by researchers in the field from other countries (May & Thomas, 2010).

While many of these EDI layers are addressed, they typically appear only in selected areas of the curriculum rather than being part of a coherent, holistic strategy embedded across the entire educational environment. Teachers, through experimentation and individual initiative, often take action across these various levels without institutional oversight. This bottom-up approach suggests that EDI-related practices may gradually become common among staff. It is worth noting that Academies of Fine Arts are relatively small institutions, where faculty members are generally familiar with each other's teaching practices and outcomes. Public reviews and final exhibitions play a key role in fostering dialogue about teaching results, often serving as informal mechanisms for reflecting on and improving educational programs. However, a more systematic way of introducing EDI topics into the curriculum might benefit both educators and students, yet it requires forming a universally understood language, procedures, and programs of introduction on institutional and national level (May & Thomas, 2010; McLatchie & Campbell, 2017; Rossi & Brischetto, 2024).

3. DISCUSSION ON EDI AT THE NATIONAL LEVEL

EDI is present in Polish design education and is considered an important element of curricula by educators. The elements of EDI are visible on all levels of education, from undergraduate to postgraduate. The understanding of EDI is nuanced and multifaceted, allowing students to develop empathy and openness. The methods of education blend theoretical and practical approaches, and, what is equally important, are usually user-oriented and account for collaboration or even co-creation with end users. EDI is strongly rooted in the traditional understanding of the role of designers in Poland, and therefore, even without external pressure from law or educational framework demands, it is present in Polish curricula across all design faculties. It also means that designers are very aware of the constantly changing expectations towards them and understand EDI as an integral feature necessary to be considered and implemented in education and professional activity. It also means that continuous training of empathy and sensitivity allows to recognize new areas for EDI, also beyond humans, regarding animals, plants, ecosystems, and the planet itself as important stakeholders in design activities. It is in tune with European and worldwide discussions on paradigm shift and the new role of design that now connects technologies and human activities, and also on blurring the lines among physical, digital, and biological spheres (see Davis and Dubberly, 2023, or Design Council's Systemic Design Framework, 2025).

In recent years, several EU-funded programs have been launched to help adjust Polish HEIs to the universal and more inclusive demands. Apart from funding necessary adaptations and facilities, many of those programs also allowed for the development of knowledge, skills, and competences in the administrative and educational staff, as well as the creation of knowledge centers. Several participants of the interviews mentioned that such programs allowed them to participate in conferences and training necessary for their professional development, which later benefited students. Also, there were programs aimed specifically at financing the development of curricula focused on universal design. The growing awareness and sensitivity on EDI issues are beneficial for all, as they help create an educational environment responsive

to the various needs of different groups. It results not only in universal and friendly spaces, but also opens a possibility for many interventions oriented toward more humanistic and empathetic academic institutions.

On the other hand, there are several areas for improvement. Despite the legal regulations, there is still a lot to do in both physical and mental spheres. It is connected to economic conditions in Polish HEIs; for example, many institutions are situated in historical buildings, which are hard to adapt. Without EU-funded programs, it would be difficult to change those environmental barriers. However, apart from external forces, human attitudes and beliefs are crucial for the common introduction of EDI ideas and activities into public life. The public awareness of EDI is still to be developed, which points to earlier levels of education, as well as public campaigns, as necessary for systematic EDI introduction in social functioning. As in the case of any social change, it is not enough to impose a law; the introduction and maintenance, as well as social acceptance and understanding, are equally important.

Academic training of young designers is focused on developing EDI-aware professionals. When entering the "real world," designers often face challenges while working with clients or institutions that lack awareness of EDI principles or the broader role of design. It is essential to equip designers with the skills to educate clients and the public, but this also requires systemic support from public institutions. Critical discussions about the role of design, along with practical skills gained through training and project work, are well established in design education. However, this knowledge and approach are often not transferred to the national level, neither through legislation nor through broader efforts to disseminate knowledge or influence public attitudes.

4. CONCLUSION

Designers' education in Poland is based on a strong ethical and value-based perspective of social responsibility. This perspective was adopted from the very beginning and has been actively continued through the years. It is also a symbol of grassroots activities as the curricula are constructed and evolve regardless of legal regulations. EDI is considered an important element of designers' education, necessary for them to adjust and to create social change and development.

This research was focused on design programs carried out at public art universities. It revealed not only that EDI-related topics are addressed and taught at each level of designers' education but also has made it possible to compile a comprehensive overview of educational practices developed by teachers, revealing diverse, multi-level, and often innovative approaches. What is particularly important is the effective exchange of these practices between institutions and the need for a more systematic approach to curriculum development based on already prototyped and tested educational methods. We are entering a stage of effective communication and knowledge sharing, where valuable and meaningful experiences can be transformed into systemic actions.

Although several challenges to the systemic introduction of EDI into design education were identified, key issues include the need to unify terminology and to systematize the process of integrating EDI topics into the curriculum. Faculty training in curriculum development, supported by access to high-quality, regularly updated educational resources, could help address these gaps. Finally, social aspects such as community education, public engagement,

and the broader promotion of EDI topics require attention and change at the individual, institutional, and national levels.

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REFERENCES

Cipolla, C., & Bartholo, R. (2014). Empathy or Inclusion: A Dialogical Approach to Socially Responsible Design. International Journal of Design, 8(2), 87–100, from https://www.ijdesign.org/index.php/IJDesign/article/view/1255/633

Cooper, R. (2005). Ethics and Altruism: What Constitutes Socially Responsible Design? *Design Management Review*, *16*(3), 10–18. https://doi.org/10.1111/j.1948-7169.2005.tb00197.x

Davis, M., & Dubberly, H. (2023). Rethinking Design Education. *She Ji: The Journal of Design, Economics, and Innovation*, *9*(2), 97–116. https://doi.org/10.1016/j.sheji.2023.04.003

Design Council. (2025). *Systemic Design Framework*. Retrieved 9 July, 2025, from https://www.designcouncil.org.uk/our-resources/systemic-design-framework/

ELA. (2025). *Ogólnopolski system monitorowania ekonomicznych losów absolwentów szkół wyższych [Nationwide system for monitoring the economic development of university graduates]*. Retrieved 9 July, 2025, from https://www.ue.katowice.pl/jednostki/centrum-karier-i-wspolpracy-z-absolwentami/badanie-losow-zawodowych-absolwentow/ogolnopolski-system-monitorowania-ekonomicznych-losow-absolwentow-ela-szkol-wyzszych-badania-ilosciowe.html

Integrated Qualifications System. (2015). *Polish Qualifications Framework (PQF)*. Retrieved 9 July, 2025, from https://kwalifikacje.gov.pl/en/about-iqs/polska-rama-kwalifikacji-2

May, H., & Thomas, L. (2010). *Embedding Equality and Diversity in the Curriculum: Self Evaluation Framework*. Retrieved 9 July, 2025, from https://www.advance-he.ac.uk/knowledge-hub/embedding-equality-and-diversity-curriculum-self-evaluation-framework

McLatchie, J., & Campbell, L.A. (2017). *Embedding equality and diversity in the curriculum: Developing a train the trainers model*. Edinburgh: Napier University. Retrieved 9 July, 2025, from https://www.advance-he.ac.uk/knowledge-hub/embedding-equality-and-diversity-curriculum-developing-train-trainers-model

Papanek, V. (2012/1984). *Design for the Real World. Human Ecology and Social Change*. Łódź: Recto Verso.

Pawłowski, A. (2001). *Inicjacje. O sztuce, projektowaniu i kształceniu projektantów* [Initiations. On Art, Design, and Designers' Education]. Kraków: Wydział Form Przemysłowych ASP.

Rojek-Adamek, P. (2019). *Designerzy: Rola zawodowa projektanta w oglądzie socjologicznym [Designers: the Professional Role of a Designer in a Sociological Perspective]*. Warszawa: Wydawnictwo Naukowe Scholar

Rossi, E., & Brischetto, A. (2024). Contribution of the "Equality, Diversity, and Inclusion" Concept to Design Education: A Systematic Literature Review. *Sustainability*, *16*(19), Article 19. https://doi.org/10.3390/su16198478

Thorpe, A., & Gamman, L. (2011). Design with society: Why socially responsive design is good enough. *CoDesign*, *7*(3–4), 217–230. https://doi.org/10.1080/15710882.2011.630477

Więckowska, M.; Rudnicka, P. (2024). Integration of Equality, Diversity, and Inclusion (EDI) in Design Education in Poland. *Strategic Design Research Journal*. *Volume 17, number 01, January - April 2024.* 44-57. DOI: 10.4013/sdrj.2024.171.04
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Research and Analysis of Design Education on Equality, Diversity and Inclusion in Slovakia

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ABSTRACT

This article presents research findings from the EDIDesK project: Open Access Contents on Design for Equality, Diversity, and Inclusion (EDI) for Higher Education Programs. The initial phase of the research involved researching the best practices that incorporate EDI contents and methodologies within design-related study programs in Slovakia. In the second phase, the best practices were selected and proceeded for more detailed investigation in interviews with selected groups of academics who coordinate and teach modules on Design for EDI. The Faculty of Architecture and Design at the Slovak University of Technology (FAD STU) in Bratislava has the longest and most extensive coverage of the topic of EDI in Slovakia among the higher education institutions. Most of the courses teach students how to create inclusive environments, services, and products for diverse people. Exercises and on-site surveys help students understand the different needs and requirements of people. The courses aim to teach students more about human-centered design and social sustainability.

Keywords: Body Conscious Design, Inclusion, Humanity, Universal Design.

INTRODUCTION

It is imperative to acknowledge the diversity of individuals to ensure equal opportunities for all people to use the built environment, products, services and information, and to actively engage in society, including education. According to Ostroff (2011) 'Design education must be more inclusive and more diverse, reflecting the range of people who design affects'. Inclusive environments can be achieved by implementing human-centered methods, such as Design for All, Inclusive Design, and Universal Design (Meyrson, Lee, 2011; Vavik, 2011; Froyen, 2012).

The European Union adopted several policy documents concerning the implementation of Universal Desgin (UD), such as Resolution ResAP(2001)1 on the introduction of the principles of universal design into the curricula of all occupations working on the built environment. The importance of UD is also emphasized in the UN Convention on the Rights of Persons with Disabilities (UNCRPD), ratified worldwide and in the Slovak Republic in 2010.

This research was conducted within the EDIDesK project: Open Access Contents on Design for Equality, Diversity, and Inclusion (EDI) for Higher Education Programs. The primary objective of Work Package 2 (WP2) from January to July 2024 was the investigation and examination of study programs and contents on Design for EDI in the participating countries. The Faculty of Architecture and Design STU is one of the partners involved in this project. The objective of this research was to map and analyze 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 programs in Slovakia. This objective was achieved by conducting a desk-based research study and conducting interviews with members of academic staff, the results of which are outlined in this paper.

1. METHODOLOGY

The initial phase involved researching the best practices that incorporate Equality, Diversity, and Inclusion (EDI) contents and teaching methodologies within study programs in design-related disciplines, such as architecture, urban planning, product design, service design, etc. This entailed an analysis of the available contents of study programs and courses or modules on the websites of higher education institutions in Slovakia.

Each course or module was gathered and described using various types of information, then an evaluation was performed on each module, scaling the number of EDI-related contents and methods. This process facilitated the selection of modules for further investigation.

In the second phase, based on collected and analyzed data, best practices were selected and proceeded for more detailed investigation in interviews with academics who coordinate and teach modules on Design for EDI. The module coordinators were also engaged to gather syllabuses and extract teaching materials such as themed content on Design for EDI, reference lists, and details on teaching approaches, experience, and evaluation tools.

Before the interview, participants were provided with a document containing EDI definitions prepared by project staff to provide a common ground of information on which to discuss the topics of the interview. Participants were also asked to prepare a list of recommended literature on EDI, extracted from their modules, and used to teach different subjects. These steps ensured clarity and preparedness, facilitating more productive discussions during the interviews.

After the interview, a collection of examples of student work was initiated. Teachers were requested to send selected projects showcasing the most significant impact of EDI on education (i.e., best projects made by students in a recent academic year).

2. OVERVIEW OF DATA GATHERED IN SLOVAKIA

In Slovakia, there are four higher education institutions that are offering design-related study programmes, including design, interior and furniture design, architecture and urban design (Table 1). 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. All of them are offering study programmes in undergraduate bachelor level (UG) and postgraduate master level (PG).

Table 1: Design-related study programs in higher education in Slovakia

Academic institution	Study program	Degree	Duration (years)
Academy of Fine Arts and Design in Bratislava	Architecture	UG - Bachelor's Degree	4
Academy of Fine Arts and Design in Bratislava	Architecture	PG - Master's Degree	2
Academy of Fine Arts and Design in Bratislava	Design	UG - Bachelor's Degree	4
Academy of Fine Arts and Design in Bratislava	Design	PG - Master's Degree	2
Faculty of Architecture and Design, STU in Bratislava	Architecture and Urban Design	UG - Bachelor's Degree	4
Faculty of Architecture and Design, STU in Bratislava	Architecture	PG - Master's Degree	2
Faculty of Architecture and Design STU in Bratislava	Design	UG - Bachelor's Degree	4
Faculty of Architecture and Design, STU in Bratislava	Design	PG - Master's Degree	2
Faculty of Arts, Technical University of Košice	Architecture and Urbanism	UG - Bachelor's Degree	4
Faculty of Arts, Technical University of Košice	Architecture and Urbanism	PG - Master's Degree	2
Faculty of Arts, Technical University of Košice	Design	UG - Bachelor's Degree	4
Faculty of Arts, Technical University of Košice	Design	PG - Master's Degree	2
Faculty of Wood Sciences and Technology, Technical University in Zvolen	Design of Furniture and Interior	UG - Bachelor's Degree	4
Faculty of Wood Sciences and Technology, Technical University in Zvolen	Design of Furniture and Interior	PG - Master's Degree	2

Based on the desk research and evaluation of design-related study programs and courses on websites of higher education institutions in Slovakia, the courses or modules with the highest potential on Design for EDI were selected for interviews with the university teachers – coordinators of selected modules (Table 2).

Table 2: List of selected courses/modules on Design for EDI in Slovakia for the interviews

Academic institution	Study program	Module/course	Coordinator of the module/course
Faculty of Architecture and Design, STU in Bratislava	Architecture and Urban Design	Universal Design	Zuzana Čerešňová
Faculty of Architecture and Design, STU in Bratislava	Architecture	Humanization of Microenvironment	Veronika Kotradyová
Faculty of Architecture and Design, STU in Bratislava	Design	Body Conscious Design	Veronika Kotradyová
Faculty of Architecture and Design, STU in Bratislava	Design	Interdisciplinary Contexts of Design II - Ergonomics and Universal Design	Mária Šimková
Faculty of Arts, Technical University of Košice	Architecture and Urbanism	Ergonomic design	Peter Wohlfahrt
Faculty of Wood Sciences and Technology, Technical University in Zvolen	Design of Furniture and Interior	Humanity in design	René Baďura

Among the higher education institutions contacted, some of them did not respond. The most detailed information received was primarily from colleagues with whom previous collaborative experience was already established. The Faculty of Architecture and Design STU 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 human-centred design research and teaching, as well as collaborating

with practice in creating inclusive environments. It is thus evident that the subsequent chapters primarily encompass subjects from FAD STU and TUZVO that have been identified as being of significant EDI potential.

3. UNIVERSAL DESIGN COURSE

3.1. Overview of the course

Compulsory course on Universal Design (UD) has been implemented in the bachelor's degree program Architecture and Urban Design at the Faculty of Architecture and Design STU since 1995. The concept of integrating UD principles into architectural education was initially proposed by Mária Samová. The UD course is currently coordinated by Zuzana Čerešňová, based on many years of research experience at CEDA, complemented by a research stay at the Institute for Human Centered Design in Boston.

The UD course interprets the EDI approach as a human-centered approach to creating an inclusive environment including social sustainability, respect for human rights, and public interest. Students in this course see and examine examples of how all people are equal and that people with disabilities can participate fully in society. The course begins with empathic exercises, to simulate the movement and wayfinding of people with various disabilities or limitations. All students can try to move in a wheelchair and navigate themselves with dark glasses in the built environment. Based on experience from empathic exercises, students elaborate different tasks focused on the implementation of Seven principles of universal design (UD) formulated by Ronald L. Mace and his colleagues (Story et al. 1998). The choice of student assignments is often related to the current research projects of the CEDA. Students solve various tasks, such as: (1) audits of accessibility of public buildings based on cooperation with Slovak cities and regions, (2) analyses and proposals of adaptable housing, (3) proposal of inclusive exhibition spaces, or (4) research on wayfinding in public space based on multisensory perception of the environment.

Teaching of UD course is in accordance with the Universal Design for Learning (UDL) method developed by Rose et al. (2006). This method takes into accounts various learning and communication styles, abilities and needs of students by using multisensory ways of presentation, expression, and active engagement of students. The students are actively involved in on-surveys by assessing accessibility of the built environment, including also cognitive accessibility (wayfinding, accessible information, etc.). Great emphasis is also placed on participatory processes with users (Czafík et al., 2019). Students can use questionnaires or interviews with the users to better assess their real needs. Within some tasks, students can use new technological tools, such as virtual glasses, multidimensional model (Hain et al., 2024) and eye-tracker (Kacej, 2019), that measures subconscious eye movement in relation with the inputs. These technologies help to record human responses as people experience their surroundings, as well as to monitor effectiveness of the wayfinding system.

3.2. Critical discussion of findings

The methodology of teaching UD is gradually changing and being improved; it becomes more interesting and stimulating for students. Dujardin (2009) proposes four interactive teaching tools to engage students in UD training courses: (1) awareness training, (2) subjective experiencing of the built environment through simulation exercises, (3) learning from practice

through Post-Occupancy Evaluation (POE) case studies, and (4) research by Design studio work. The methodology of the UD course at the FAD STU is currently formulated in such a manner that students are involved in the creative and educational process, as well as in research activities (Ceresnova, Rollova, 2015).

The UD course should be taught earlier than in the fourth year of bachelor's studies in the Architecture and Urbanism study program. Before this course, students must complete five Atelier Studio projects of various buildings. It would be great if students could apply the knowledge of Universal Design to the subject Atelier Studio from the second year of study, so that Universal Design is encoded in the thinking of students from the beginning of their creative activity (Ceresnova et al., 2023).

3.3. Discussion on EDI potential

The UD course applies inclusive methods for heterogeneous group of students with diverse skills and capabilities, which consider different learning styles and forms of communication by using multiple means of presentation and elaboration of student works, as well as by active engagement of students, for example in the form of empathic exercises, on-site surveys, and discussions. Possibility to choose 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...) 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 environment and products (Ceresnova et al., 2017). The outputs of semester work, which are of practical significance, help students respond to problems occurring in practice.

The UD course equips students with the knowledge and skills to create inclusive environments for individuals with diverse abilities, including those with physical, sensory, intellectual and other impairments. The course syllabus aims to deepen the knowledge in the field of human-centered design of the built environment and social sustainability.

4. HUMANIZATION OF MICROENVIRONMENT AND BODY CONSCIOUS DESIGN

4.1. Overview of the course

At the Faculty of Architecture and Design STU, two analogous courses are taught with a focus on well-being and environmental comfort of people, coordinated and guaranteed by Veronika Kotradyová. These are modules Body Conscious Design aimed at designers and Humanization of Microenvironment dedicated also to students of architecture and urban planning. The courses are taught primarily in master's degree program, but possibly also in bachelor program. The design field of both these modules consists of service design, interior design and research. Body Conscious Design module features product design and visual communication in addition, whereas Humanization of Microenvironment module includes also public space and buildings. However, they are generally closely related in terms of content, which was also emphasised in the interview response by the course guarantor herself, so these modules will often be analysed together in the following text. They are supporting or supplementary subjects, for students of design, the Body Conscious Design module is compulsory, however

the Humanization of Microenvironment is an optional course mainly for students of architecture.

The key themes of the modules are primarily universal design and accessibility which help overcome barriers to achieving functional comfort. Furthermore, the modules are strongly linked to social inclusion and anthropology. 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. There are 11 characteristics of a comfortable environment formulated by Kotradyová (2019): 1. sense of security, 2. view and shelter, 3. contact with the outdoors, 4. personal space, 5. intimacy vs. socialization, 6. appropriate proportions and scale, 7. fit, 8. local identity, 9. according to the human body, 10. fewer stimuli, 11. more natural materials. Every year, at least one guest lecture related to solved themes is included, for example from the Metropolitan Institute of Bratislava, or from various civic associations.

Frequent topics and assignments are related to healthcare design. Students elaborate a research study or research-by-design proposals for e.g. interior of hospital spaces; redesign of a product for healthcare; research of people's behaviour in public interior or exterior space, humanisation of midwifery (ideal layout and design of a room for childbirth with various aids, such as exercise, hang out), etc. Methods used to acquire knowledge and specialist skills include on-site surveys; intervention in a space; testing simulation and observing results, material, ergonomics. The students' results are evaluation of information from field study and application of knowledge gained in a project.

4.2. Critical discussion of findings

The course was established with innovative scientific approach containing inputs from an internship of the professor Kotradyová at the University of California in Berkley, afterwards grant participation in Central European University in Budapest. Solved tasks are strongly connected to actual research and work of the course guarantor and her colleagues. Kotradyová et al. (2016, 623) state: "Environmental simulations are a perspective tool for testing human responses to different environmental settings." Consequently, not only professor and her collaborators implement research testing, but also regular students are involved in related methods. Another topic connecting research and education in these modules are natural materials, especially wood (Kotradyová et al., 2019).

4.3. Discussion on EDI potential

The module focuses on social inclusion, emphasizing the creation of spaces conducive to social interaction, better communication, including sociopetal and sociofugal space arrangements. To deepen their understanding, students analyse human interaction with space, drawing on knowledge from interdisciplinary areas. In the modules, students gain competencies by redesigning product or interior. Many of the students, especially the most involved ones, continue their research activities with studies in the doctoral level. Therefore, scientific potential of students is deeply developed by these modules. On the other hand, when students continue to work in practice, they become capable of preparing better projects for realisation, because they gain better understanding and empathy towards people's needs.

Courses not only educate about inclusion, but also seek to bring inclusion into the classroom, e.g. a student with hearing impairment took one of the modules with translators to sign language assisting her. The student participated also in a workshop and fully cooperated with other students. The modules' guarantor plans to implement even deeper inclusion and discussion methods and less lecturing in the future, so that the courses engage students more actively. The reason for this possible innovation is that nowadays, lectures still constitute a significant part of the courses. To achieve more effective discussions, smaller groups of students are needed, so students could be divided into smaller groups.

Students' assignments are often connected with aging, hospitals, and other vulnerable groups. In this way, the modules support raising awareness of these important issues among young people, who are likely to become more receptive to them in their future careers.

5. INTERDISCIPINARY CONTEXTS OF DESIGN II – ERGONOMICS AND UNIVERSAL DESIGN

5.1. Overview of the course

At the Institute of Design of the Faculty of Architecture and Design STU, the course "Interdisciplinary Contexts of Design II – Ergonomics and Universal Design" is led by Mária Šimková. This course is positioned within a broader curriculum that spans product design, service design, interior design, digital products, and visual communication. Its primary focus is on ergonomics and universal design, targeting students in the first cycle (bachelor's degree) and delivered as a full-time, on-campus course. The module is classified as a theoretical, supporting subject and is compulsory for students in the design program.

The objective of the course is to foster an understanding of Equality, Diversity, and Inclusion (EDI) in the context of design, with a guiding philosophy: "Design solutions that enable, not disable" (EIDD, 2004). This approach is woven throughout the syllabus, emphasizing the creation of products and environments that accommodate the full spectrum of human diversity.

The curriculum 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. Central to the course are the principles of Universal Design, Design for All, and Inclusive Design, with dedicated sessions on designing for older people and persons with visual impairments.

A distinguishing feature of the module is its use of simulation exercises, enabling students to experience the challenges faced by people with various impairments. Tools such as simulation glasses, white canes, and tremor simulators are employed to replicate visual and motor difficulties. These empathic experiences are instrumental in shifting students' perspectives and informing their design decisions.

Student assignments typically involve designing products for wide range of needs, from toys for children with visual impairment to ergonomic tools for older people. The process often involves field research, interviews, and the application of simulation insights to refine design outcomes.

Students are encouraged to critically assess their own biases and assumptions, leading to more thoughtful and user-centred design solutions. Competence verification is multifaceted. The

VARK questionnaire is used to assess students' learning styles, while the Empathic Experience Design (EED) framework guides students through simulation-based exercises. After these exercises, students are prompted to redesign their products, often reporting increased empathy and a deeper understanding of user needs-a finding supported by research (Šimková, 2018).

5.2. Critical discussion of findings

The module's EDI approach is grounded in practical and theoretical expertise. Theoretical contributions include simulation methods in design and a range of articles addressing topics such as "Design for All," ergonomics in product design, and the impact of simulation tools.

The "Interdisciplinary Contexts of Design II" module exemplifies an innovative, research-driven approach to EDI education in design. By combining theoretical instruction with hands-on simulation and real-world projects, the course cultivates both technical skills and social awareness. Students not only learn to recognize and accommodate human diversity but also develop the empathy and critical thinking required to address complex design challenges.

The integration of simulation tools is particularly effective, as it transforms abstract concepts into tangible experiences. This method has been shown to significantly enhance students' understanding of user needs and drive meaningful improvements in their design work.

Moreover, the module's emphasis on universal and inclusive design principles prepares students to contribute positively to society, whether through further academic research or professional practice. Graduates are equipped to design products and environments that are accessible, functional, and responsive to the needs of all users.

5.3. Discussion on EDI potential

The module's approach aligns with broader national and European efforts to promote EDI in higher education and professional practice. By embedding EDI principles in the curriculum and fostering partnerships with external stakeholders, the Institute of Design demonstrates a commitment to advancing social inclusion and accessibility.

The course's impact extends beyond the classroom, as students carry their knowledge and values into their future careers. Many students continue to engage with EDI-related topics in subsequent projects and research, contributing to a culture of inclusion within the design profession.

The module benefits from partnerships with invited speakers and experts who enriching the learning experience with diverse perspectives. These collaborations help bridge the gap between academic theory and professional practice, exposing students to current trends and challenges in EDI.

"Interdisciplinary Contexts of Design II – Ergonomic and Universal Design" stands as a model for integrating EDI into design education. Through a blend of theory, simulation, and practical application, the module equips students with the knowledge, skills, and empathy needed to create inclusive and enabling design solutions. Its ongoing evolution, informed by student feedback and emerging research, ensures that it remains relevant and impactful in addressing the challenges of contemporary design.

6. HUMANITY IN DESIGN

6.1. Overview of the course

The course Humanity in Design is a part of the study program Furniture and Interior Design at the Faculty of Wood Technology, University of Technology in Zvolen (TUZVO). It is coordinated by René Baďura, an academic sculptor and designer (Baďura & Farkašová, 2021). The course focuses on various areas of design, including product and interior design, design for public space, and partly on architecture and visual communication.

The course coordinator approaches the topic of equality, diversity and inclusion (EDI) based on the practical experience he gained even before he began his pedagogical activity in the 1990s. Since 2004, when the course was included in the curriculum, he has regularly been organizing student projects focused on design for people with disabilities. These projects cover the spectrum from theoretical considerations to practical designs and allow students to better understand the needs of diverse groups of people. The publication Design and Ethics is the basis for professional and pedagogical reflection on the course content (Baďura & Baďurová, 2016).

The course Humanity in Design is a compulsory elective and provides an opportunity for a deeper exploration of the topic. The aim of the course is that the results are not only formal or superficial, but that the students approach the topic on a personal and emotional level. The approach to EDI in the course is integrated into the very essence of design, which must be human-centered and respect diversity. EDI is understood as an inseparable part of design, similar to ecological aspects (Baďura & Farkašová, 2021). Within the course, cases of students with disabilities are not common, but there was an instance of a student with color blindness studying interior design, which required adjustments to the teaching process.

The course provides students with a comprehensive view of design, considering ethics, inclusion, and diversity. The course begins with a general lecture, followed by a deeper understanding of the topic and the definition of methods used throughout the semester. These methods cover the entire design process, from small models to more advanced forms, including virtual design.

6.2. Critical discussion of findings

The course combines theoretical and practical education, which includes understanding the issues, team communication, practical applications, and role-playing activities (Humanity in Design, n.d.). These activities allow students to immerse themselves in different roles, thereby developing empathy and gaining a real perspective on problems from various viewpoints. Mutual observation, analysis of real situations and problems are part of the process, where students explore different perspectives, such as how a nurse, teacher, or psychologist perceives a problem. Additionally, simulation methods focusing on limitations, such as immobilizing parts of the body using clothing or inserted elements, are also used, with students working with these limitations during the course to better understand the daily challenges faced by different groups of people.

Students work on a wide range of projects, from product design to spatial elements. Examples of student works include a cane for people with visual impairments, walking aids focusing on safety and comfort, projects supporting memory and orientation, or the design of a colour

structure in the hallways of residential homes for the older people to improve orientation for people with Alzheimer's disease. Students have also worked on designing furniture for kindergartens, as well as chair for older people that makes it easier to get up safely. The projects do not focus on changing the basic structure of the environment but rather on improving its facilities.

Literature plays a key role as the foundation of the theoretical and methodological framework. Students work with publications such as Design (Furniture) for All (Baďura, 2010), and international standards, which provide them with both practical and global contexts for inclusive design. 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 course 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 course, 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. The outcomes of the course depend on the students' ambition and is often driven by personal motivation. Typical outcomes include design solutions focused on helping people with limitations, such as seating furniture that facilitates standing up, a cradle that grows with the user, or upholstered furniture combining aesthetics, technology, and safety. A common feature is the human-centred dimension and adaptation to the needs of people with limitations.

6.3. Discussion on EDI potential

Placing the course in the master's program has the advantage that students already have basic experience and can focus on more complex issues. The disadvantage is that the topic is introduced too late, as they could have integrated it into their solutions earlier. Although the topic is not always attractive, it is important and requires attention in the later years, when students are ready to engage with it more seriously. This course is closely linked to other subjects, building on previous skills and enabling students to continue developing their abilities in broader contexts. By focusing on the human dimension of design and inclusion, it influences other projects and research, helping to integrate new perspectives and apply them in various contexts. Feedback is gathered through evaluation forms and activities in which students experience design in real conditions, leaving a strong emotional impression that fosters empathy and sensitivity, which is reflected in the assessments.

Professional partnerships play an important role in supporting the course, contacts are maintained with institutions focused on equality and inclusion. Most of the collaboration takes place outside the academic environment, such as with the company Myotis and the National Rehabilitation Center in Kováčová, which served as a testing ground for student projects. Students also carry out projects in social care homes and kindergartens. Occasionally, the collaboration extends to regional and local government institutions. The students' competencies within EDI education focus on developing empathy and a sensitive understanding of the social dimension of design. Instead of emphasizing technical skills, the course fosters an awareness of the importance of humanizing design, even though it may not be a commercially attractive topic.

7. CONCLUSION

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. According to Leurs et al. (2011), it is important in design education to develop designer´s attitude to be more sensitive and empathic towards the diversity of human beings. The selected courses prioritize the development of competencies essential for EDI-oriented design: understanding universal design/design for all principles, cultivating empathy, and applying inclusive methodologies. It should be emphasized that a more systematic integration of EDI principles across all design programs is needed. Particularly in core subjects such as studio work, greater attention should be paid to creating an inclusive environment for all.

Interactive methods, such as games and simulations, deepen student engagement and connect theory with practice, reinforcing the perception of design as a tool for improving life. Empathic simulation exercises and on-site surveys help students experience the perception and use of space from the position of diverse users. One of the positive effects of simulation exercises is that students' attention is shifted from visual perception to a more multisensory experience of the environment, including hearing, touching, and smelling (Ceresnova, Rollova, 2015).

Students learn to perceive the needs of vulnerable groups and their surroundings, preparing them to create design solutions that reflect the principles of equality, diversity, and inclusion. The key is to connect theory, personal experience, and practical skills gained in other courses in a broader social context. The aim of the courses is to lead students to awareness of the issue and the ability to implement EDI principles in practice. Design is a human-centered discipline, adapting to different groups of people, and therefore, EDI education should be part of the curriculum so that students view design as an inclusive discipline focused on the needs of various groups (Baďura & Farkašová, 2021).

Understanding the status quo of EDI teaching in Slovakia is very beneficial for the entire academic community, as it will enable the improvement of the curriculum to be proposed in the next phase of the EDIDesK project, so that the transfer of EDI ideas and principles into practice will be as effective as possible.

Design is viewed as a transformative process that satisfies human needs and respects their diversity, thus becoming a tool for inclusion and ethical values. Therefore, the human-centered approach should be an integral part of design education with the aim of creating an inclusive society for all people.

opinion of the European Union. Responsibility for the information and views expressed in the publication lies entirely with the author(s).

REFERENCES

Baďura, R. (2010). *Dizajn (nábytok) pre všetkých* [*Design (furniture) for all*]. In *Nábytok 2010: Emócie v dizajne: 8. sympózium s medzinárodnou účasťou: zborník referátov* (R. Baďura, red.; s.3). Zvolen, Slovakia: Technická univerzita vo Zvolene. ISBN 978-80-228-2109-4

Baďura, R., & Baďurová, B. (2016). *Dizajn a etika* [Design and ethics]. Zvolen, Slovakia: Technická univerzita vo Zvolene. https://www.academia.edu/31271814/Dizajn_a_etika_Design_and_ethics_

Baďura, R., & Farkašová, E. (2021). Understandings of design in circumstances of humanity. *Acta Facultatis Xylologiae Zvolen*, 63(1), pp. 143–150. https://doi.org/10.17423/afx.2021.63.1.13.

Ceresnova, Z., & Rollova, L. (2015). Universal design: Methodology to enhance engagement of students in higher education. In J. Hawkins (Ed.), *Student Engagement: Leadership Practices, Perspectives and Impact of Technology*, (pp. 91-116). USA: Nova Science Publishers, Inc. https://novapublishers.com/wp-content/uploads/2019/03/Universal-Design.pdf

Ceresnova, Z., Rollova, L., & Koncekova, D. (2017, June). Inclusive design of educational environment for diverse people. In *International Conference on Applied Human Factors and Ergonomics* (pp. 431-440). Cham: Springer International Publishing. DOI:10.1007/978-3-319-60597-5_41

Čerešňová, Z., Görner, K., Macháčová, K., & Štefancová, L. (2023). Effectiveness of universal design education in architectural design studios. *Global Journal of Engineering Education*, *25*(2), 135-42. https://www.wiete.com.au/journals/GJEE/Publish/vol25no2/12-Machacova-K.pdf

Czafík, M., Görner, K., Štefancová, L. (2019) Participation as an innovative method in architectural education. *Global Journal of Engineering Education*. 21(3), pp. 227-232 https://www.wiete.com.au/journals/GJEE/Publish/vol21no3/09-Czafik-M.pdf

COUNCIL OF EUROPE (2001): Resolution ResAP(2001)1 on the introduction of the principles of universal design into the curricula of all occupations working on the built environment. https://rm.coe.int/CoERMPublicCommonSearchServices/DisplayDCTMContent?documentId=09000016804c2eee

Dujardin, M. (2009). Designing in the dark: multi-sensorial workshop reconnecting designers with visually impaired end-users. In: J-A. Bichard, J. Myerson (Eds.), Include 2009 Proceedings. London, UK: Helen Hamlyn Centre.

EIDD Stockholm Declaration (2004), Retrieved May 2, 2025, from https://dfaeurope.eu/what-is-dfa/dfa-documents/the-eidd-stockholm-declaration-2004/

Froyen, H. (2012). *Universal Design. A Methodological Approach. A Pathway to Human-friendly and Elegant Architecture*. Boston, USA: IHCD.

Hain, V., Uhrík, M., Kočlík, D., Hajtmanek, R., Kupko, A. (2024). The multidimensional model - an educational and creative tool for designing sustainable reconstructions of urban structures. *World Transactions on Engineering and Technology Education*. 22(3), pp. 156-161. wiete.com.au/journals/WTE%26TE/Pages/Vol. 22, No.3 (2024)/01-Hajtmanek-R.pdf

Kacej, M. (2019). Videookulografia v architektonickom výskume [Eye-tracking in architectural research]. *Architecture Papers of the Faculty of Architecture and Design STU.* ALFA. 24(2), pp. 22-27. alfa.stuba.sk/wp-content/uploads/2020/02/2_2019_Kacej.pdf

Kotradyová, V., Salcer, I., Vavrinský, E. (2016). Environmental Simulations and Their Role in the Research of Human Responses to Environmental Stimuli. *Applied Mechanics and Materials* 861: 618–624. https://doi.org/10.4028/www.scientific.net/AMM.861.618

Kotradyová, V. (2019). Sustainability in Interior Design: Interdisciplinary Research Used for Exploring Relation Between Built Environment and Human. IOP Conference Series: Materials Science and Engineering 603: 042100. DOI:10.1088/1757-899X/603/4/042100

Kotradyová, V., Vavrinský, E., Kaliňáková, B., Petro, D., Janšáková, K., Boleš, M., Svobodová, H. (2019). Wood and its impact on humans and environment quality in health care facilities. *International Journal of Environmental Research and Public Health*. 16(18). https://doi.org/10.3390/ijerph16183496

Leurs, B., Mulder, I. van Waart, P. (2011). Developing a Human-centered Attitude through Experiential Learning. Proceedings of IASDR 2011. Diversity and Unity., Delf, the Netherlands. https://www.researchgate.net/publication/267751965

Meyrson, J. and Lee, Y. (2011). Inclusive Design Research Initiatives at the Royal College of Art. In Preiser, W.F.E. and Smith K.H. (Eds), *Universal Design Handbook*. (2nd Edn) (pp. 36.3-36.13), McGraw-Hill. https://www.academia.edu/19286642/Universal_Design_Handbook

Ostroff, E. (2011). Universal design: an evolving paradigm. In Preiser, W.F.E. and Smith K.H. (Eds), *Universal Design Handbook*. (2nd Edn) (pp. 1.3-1.11), McGraw-Hill. https://www.academia.edu/19286642/Universal_Design_Handbook

Rose, D. H., Harbour, W. S., Johnston, C. S., Daley, S. G., & Abarbanell, L. (2006). Universal design for learning in postsecondary education: Reflections on principles and their application. *Journal of Postsecondary Education and Disability*, 19(2), 135–151. https://files.eric.ed.gov/fulltext/EJ844630.pdf

Story, M. F., Mueller J. L., and Mace R. L. (1998*). The Universal Design File: Designing for People of All Ages and Abilities.* Revised Edition. USA: North Carolina State University, Center for Universal Design. https://eric.ed.gov/?id=ED460554

Šimková, M. (2018). The impact of simulation tools on product design [Vplyv simulačných pomôcok na dizajn produktu]. *Architecture Papers of the Faculty of Architecture and Design STU.* ALFA. Vol. 23(1), pp. 18-29 https://alfa.stuba.sk/sk/vplyv-simulacnych-pomocok-na-dizajn-produktu/

Technická univerzita vo Zvolene. (n.d.). *Humanita v dizajne* [Humanity in Design]: Informačný list predmetu [Course description]. Retrieved May 2, 2025, from https://is.tuzvo.sk/dok_server/dokumenty_cteni.pl?id=48318&dok=45635

UN Convention on the Rights of Persons with Disabilities (UNCRPD). Retrieved May 2, 2025, from https://social.desa.un.org/issues/disability/crpd/convention-on-the-rights-of-persons-with-disabilities-crpd

Vavik, T. (2011). Strategies for teaching universal design. In *DS 69: Proceedings of E&PDE 2011, the 13th International Conference on Engineering and Product Design Education*, London, UK, 08.-09.09. 2011. https://scispace.com/pdf/strategies-for-teaching-universal-design-1o36nedw4l.pdf

Equality, Diversity and Inclusion in Design in Barcelona, Catalonia and Spain

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ABSTRACT

Spain, and particularly Barcelona and Catalonia, have emerged in recent decades as laboratories for EDI practices in urban design, public spaces and policies. However, this institutional and legislative progress has not been equally reflected in Design education, where the integration of EDI remains fragmented and often superficial. This article contextualizes the findings of the EDIDesK project, which investigated the integration of equality, diversity and inclusion (EDI) principles into design education and practice in Spain. Focusing on Barcelona, Catalonia, and Spain, the article uses a historical analysis to show how urban design has served as a primary vehicle for implementing EDI principles, from early accessibility policies to contemporary intersectional feminist approaches. Our research reveals a significant disparity between Spain's progressive EDI achievements in urban design and the limited incorporation of these principles into Design curricula.

Keywords: Design Education, Urban Design, EDI, Policy, Barcelona.

INTRODUCTION

This article was developed as part of the EDIDesK Erasmus+ Cooperation partnerships in higher education (KA220-HED) project, which aims to improve Equality, Diversity and Inclusion (EDI) teaching in Design across the European higher education system (HEIs). Within the context of Design education, we align with the following definitions of EDI proposed by Rossi and Brischetto (2024), which originated from the EDIDesK project. Equality refers to fair conditions and accessible solutions that prevent harm or disadvantage, ensuring that designed artefacts do not perpetuate inequities during or after use (Garay-Rondero, Salinas-Navarro, and Calvo 2020). Diversity involves engaging with the cultural, social, psychophysical and economic differences of end users and recognising their varied needs and perspectives (Dong et al. 2015). Finally, Inclusion requires the adoption of methodological processes and practices that make design solutions universally accessible, thereby fostering socially conscious and empathetic designers who create for people of all backgrounds and abilities (Braga 2017). As part of Work Package 2 (WP2), EDIDesK mapped the current landscape of EDI teaching in Design and related subjects at undergraduate and postgraduate level in the participating countries of Italy, Poland, Slovakia and Spain. This article focuses specifically on the Spanish context, paying particular attention to Barcelona and Catalonia, not only because of being the geographical context of the researchers involved in it but also due to their historical relevance for both Spanish Design culture (Galán et al. 2010; Narotzky 2007) and EDI (Bonet i Martí and Serrano Miguel 2021).

Our desk research for WP2 revealed a lack of EDI-focused modules in Design degree programmes in Spain. Given the number of organisations working on EDI-related issues in

Spain, we had expected these principles to be more widely integrated into Design curricula. This discrepancy prompted us to investigate the context further. This article addresses two key research questions: RQ1) What is the broader context of EDI principles in relation to the field of Design in Barcelona, Catalonia and Spain? and RQ2) What is the current state of EDI integration in Design education in Barcelona, Catalonia and Spain?

The article begins by outlining the historical background to Design in Barcelona, Catalonia, and Spain, examining its relatively late development compared to other European countries, and tracing its particular trajectory through periods of political repression and democratic resurgence, where Design became a strategic cultural force (Narotzky 2007). We found particularly interesting to trace the roots of EDI in Design in Spain back to Urban Design, as it served as the earliest and most visible platform for EDI principles. Following the democratic transition after the end of the Francoist regime, reclaiming public space became a central societal demand. In Barcelona, the redesign of streets, squares, and urban furniture in the 1980s embodied this democratic ethos, reflecting the collective right to shape and inhabit the city (Narotzky 2007). This process of spatial democratisation, driven by progressive legislation and sustained public investment, paved the way for EDI-centred design approaches. From the introduction of early accessibility laws in the 1980s to the development of more recent intersectional feminist urbanism initiatives, Barcelona has become a key testing ground for the design of inclusive public spaces, influencing both local and national urban policy frameworks.

Finally, the article examines EDI in Design education. We first trace the development of Design education in Barcelona, Catalonia, and Spain, from its early institutions to the present landscape of higher education and non-higher education programs. We then assess existing EDI policies in higher education, analysing the presence of dedicated EDI modules across 79 undergraduate and 34 postgraduate design programs using the results of the study conducted within the WP2 of the EDIDesK project. The article concludes by discussing key findings and proposing practical recommendations to ensure Design education actively contributes to building more inclusive, diverse, and equitable futures.

1. DESIGN IN BARCELONA, CATALONIA, AND SPAIN

1.1. History

Spanish Design first emerged during the Modernist period (Campí, Baxauli, and Leslabay 2023). However, it only began to develop a distinctive identity in the 1960s, a late start compared to most other European countries (Campí 2020). Earlier efforts during Modernism (1880-1917) and the Second Republic (1931-1936/39), were marked by discontinuity and political turmoil (Galán et al. 2010). The Second Republic, briefly fostered a promising avant-garde Design movement through groups like GATEPAC, whose modernist approach – actively supported by the government of Catalonia through architectural commissioned projects – started to forged a distinctly Spanish Design identity (Galán et al. 2010). However, it was crushed by the Francoist coup and the subsequent dictatorship, which viewed Design as a subversive, intellectual pursuit. The 1960s marked a turning point, driven by architects and designers who embraced Design culture as a form of resistance. Three pivotal milestones emerged, all originated in Barcelona: the founding of Elisava, Spain's first design school, in 1961 (Narotzky 2007); the establishment of ADI FAD (Industrial Design Association) in 1960; and the launch of the Delta Awards under ADI FAD in 1961, giving visibility to Spanish Design

(Galán et al. 2010). Still, Design remained marginal until the 1980s, when it became central to Spain's post-Franco cultural revival. Catalonia, in particular, adopted Design as an expression of territorial identity. Through landmark exhibitions and urban transformations, design became more democratic and visible (Narotzky 2007). Urban planning, street furniture, and architectural interventions became tools to assert Catalan identity while improving the quality of life across the neighbourhoods. Firms and editors like Santa & Cole and Escofet 1886 began collaborating with renowned designers and architects to create distinctive urban furniture re-shaping Barcelona's public space (Galán et al. 2010).

1.2. Today

Today, the Spanish Design landscape is a dynamic and structured ecosystem. According to a recent report (BCD 2019), it comprises 91 key institutions, alongside 166 design schools and 210 festivals, awards, and museums dedicated to advancing design culture. The most concentrated design resources are found in Catalonia, the Community of Madrid and Valencian Community (Fig. 1, 3), by Catalonia leading by far (Fig 1): it hosts 23% of major design institutions, 13.8% of design education programs, and 19.5% of promotional activities. 60% of them are in the city of Barcelona: it has the highest concentration of design schools, universities, research centres, and promotional initiatives (Fig. 2). Although the Spanish Design sector has made significant progress since the 1960s, certain areas lag behind those of other western countries. Design research, for example, is underdeveloped in Spanish academia, partly due to design's late recognition as a university discipline, with formal accreditation only being granted in 2010 (Galán et al. 2010). Although no comprehensive national studies exist, a preliminary analysis of academic publications reveals significant disparities. Scientific publications indexed in Scopus and featuring the term 'design' appear less frequently and emerged later in Spain (12th country by number of publications) than in countries such as the United Kingdom, the United States, Germany and Italy (Table 1, Fig. 4). This pattern highlights the delayed institutionalisation or evolution of Design as an academic discipline within Spain's higher education system.
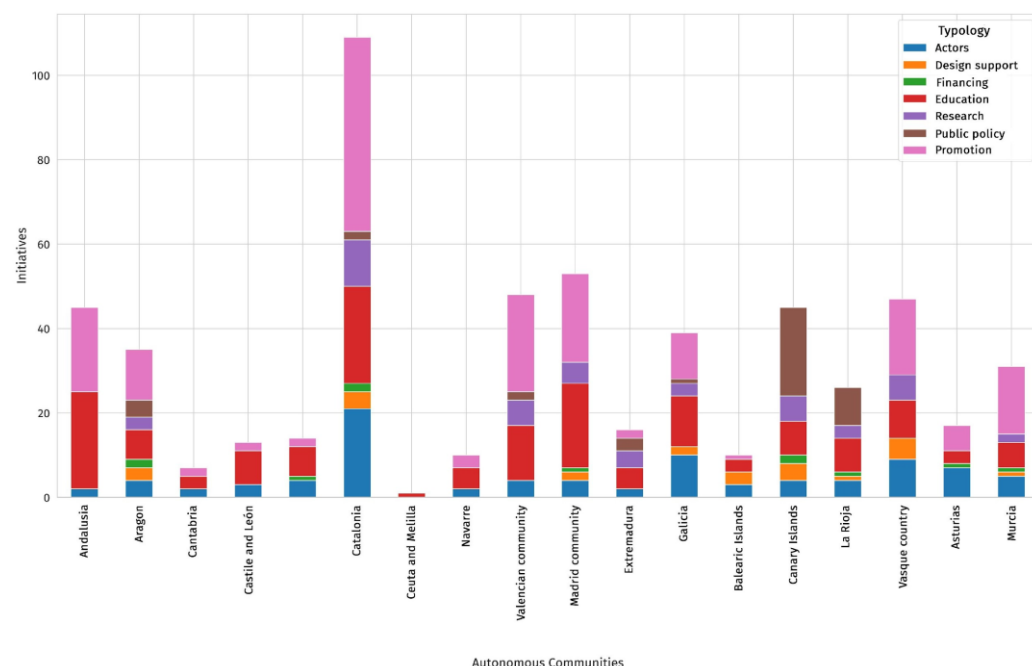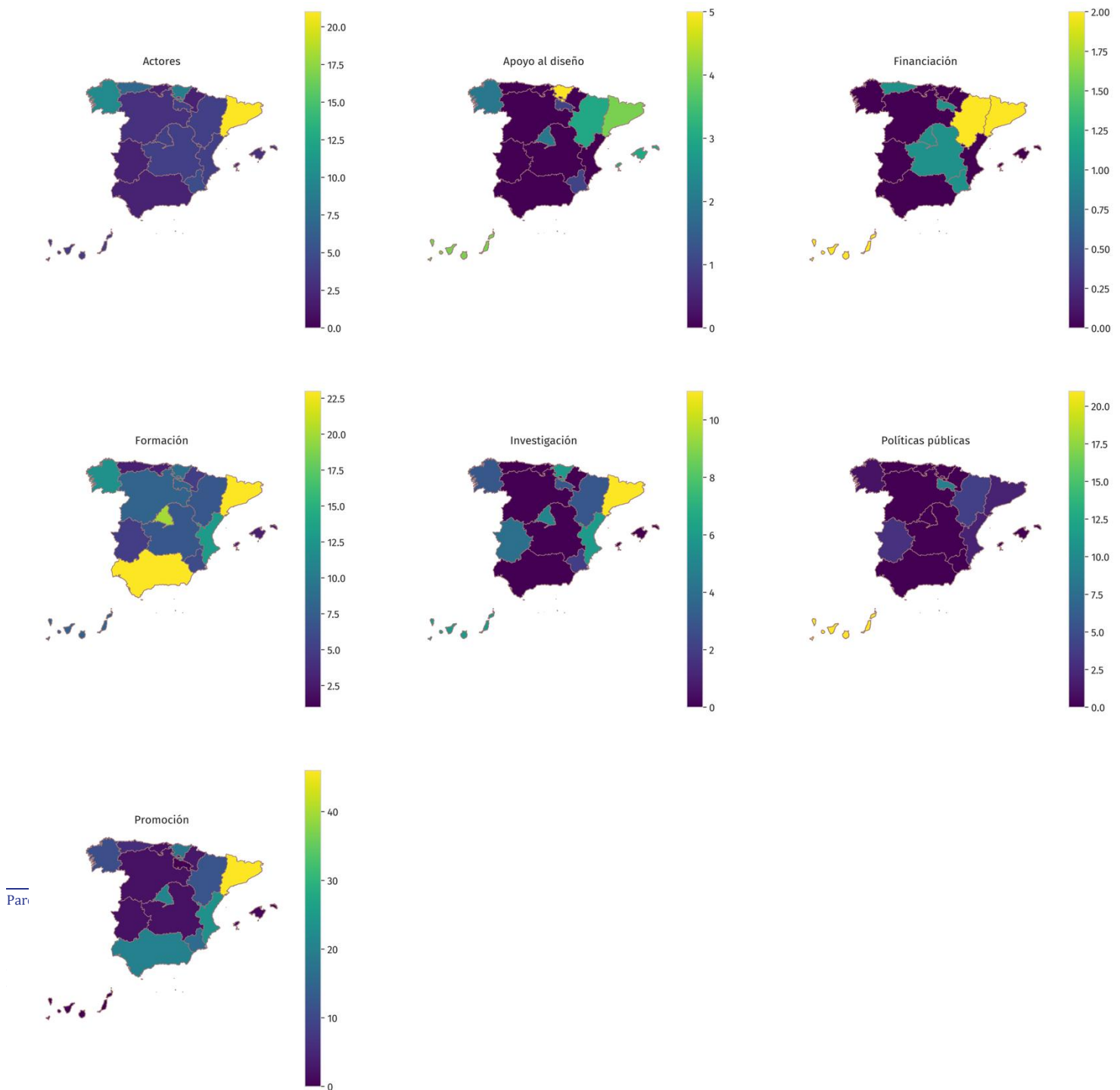
Figure 1. Distribution of the Spanish design ecosystem across its autonomous communities in 2019. Source: (BCD 2019).

Table 1: Scientific publications on "design" in Spain and other western countries (Source: Scopus. Query done on 08/05/2025).

Country	Query	Publications
All countries	TITLE-ABS-KEY (design) AND PUBYEAR > 1849 AND PUBYEAR < 2025	7,704,725
USA	TITLE-ABS-KEY (design) AND PUBYEAR > 1849 AND PUBYEAR < 2025 AND (LIMIT-TO (AFFILCOUNTRY, "United States"))	1,928,985
UK	TITLE-ABS-KEY (design) AND PUBYEAR > 1849 AND PUBYEAR < 2025 AND (LIMIT-TO (AFFILCOUNTRY, "United Kingdom"))	533,788
Germany	TITLE-ABS-KEY (design) AND PUBYEAR > 1849 AND PUBYEAR < 2025 AND (LIMIT-TO (AFFILCOUNTRY, "Germany"))	385,340
Italy	TITLE-ABS-KEY (design) AND PUBYEAR > 1849 AND PUBYEAR < 2025 AND (LIMIT-TO (AFFILCOUNTRY, "Italy"))	257,174
France	TITLE-ABS-KEY (design) AND PUBYEAR > 1849 AND PUBYEAR < 2025 AND (LIMIT-TO (AFFILCOUNTRY, "France")	228,629
Spain (design)	TITLE-ABS-KEY (design) AND PUBYEAR > 1849 AND PUBYEAR < 2025 AND (LIMIT-TO (AFFILCOUNTRY, "Spain"))	186,939
Spain (design, diseño, disseny)	TITLE-ABS-KEY (diseño OR disseny OR design) AND (LIMIT-TO (AFFILCOUNTRY, "Spain"))	187,156

2.EDI PRINCIPLES IN DESIGN IN BARCELONA, CATALONIA, AND SPAIN

2.1. EDI principles in Design 1978-2015

Even before the formal conceptualisation of EDI, Spanish Design aimed to transform society. In the 60s, designers revived ideals from the Republican era, using their work to resist Franco's regime and improve everyday life (Narotzky 2007). Simultaneously, neighbourhood social movements made the "right to the city" their central demand, challenging Francoist urban model and advocating for more democratic and inclusive public spaces (Borja 2010).
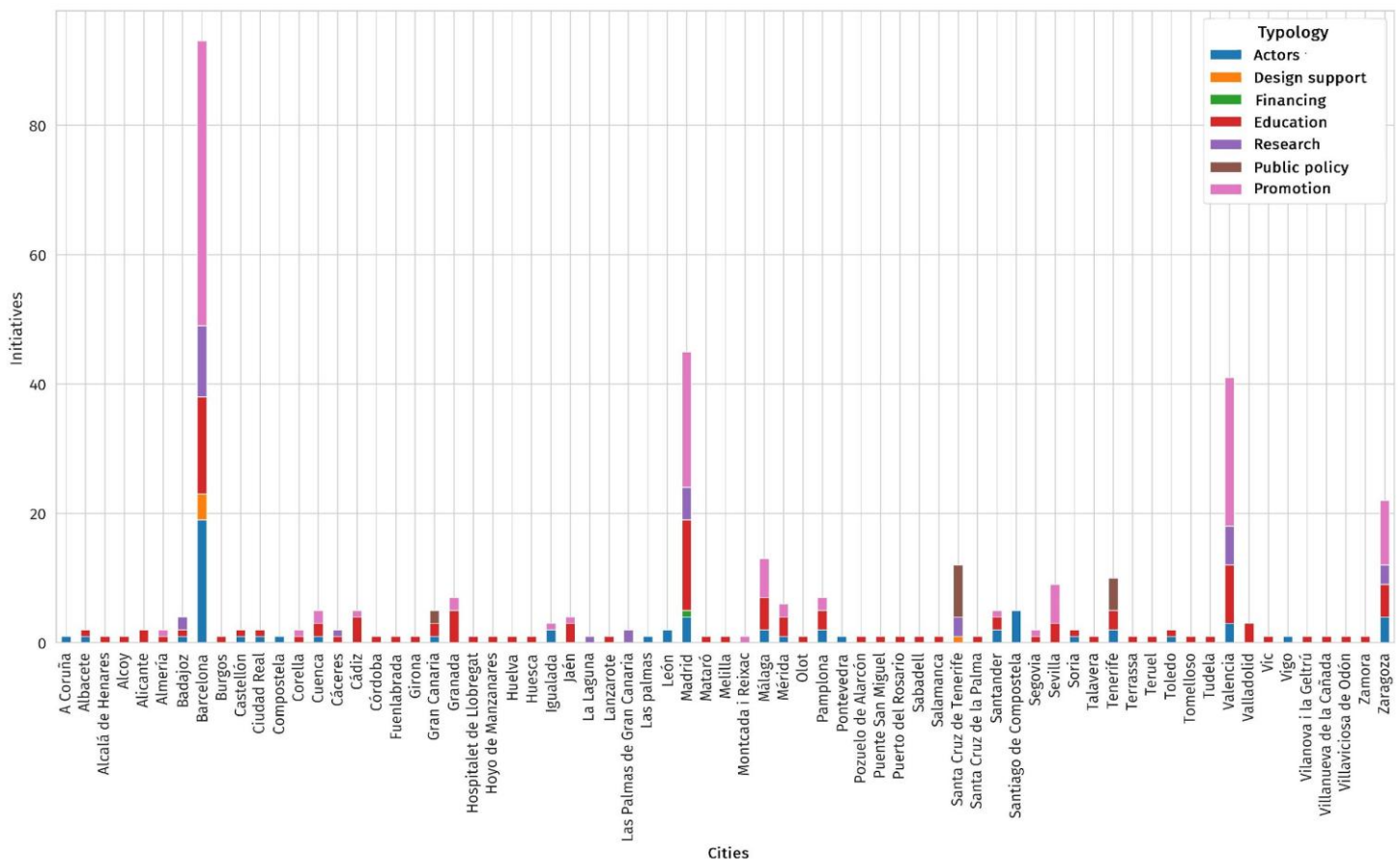
Figure 2. Distribution of the Spanish Design ecosystem across its cities in 2019. Source: (BCD 2019).

These developments in design practice and civic mobilization established critical foundations for later policy reforms and the institutionalization of inclusive design principles.

After years of neglect and repression, the democratic transition turned urban design into a political act, where the rebuilding of public spaces – from pavements to street furniture – became a means of reclaiming the city. As Hughes (2006:43) notes, post-Franco Barcelona sought to reclaim the city as a "space for strolling'" symbolising regained liberty. The newly elected City Council in 1979, led by the Socialist Party, incorporated long-standing civic demands into its urban policies, using public infrastructure as a strategy for "city-making" (Esparza Lozano 2014). The council incorporated principles of inclusivity and accessibility into urban design, reflecting democratic values and collective ownership.

Figure 3. Distribution of the Spanish Design ecosystem across its Autonomous Communities in 2019. Source: (BCD 2019).

The city's 1979 Municipal Ordinance on the Elimination of Architectural Barriers (Ordenanza sobre supresión de barreras arquitectónicas en la vía pública 1979) was among Spain's first local accessibility measures. National progress followed: in 1982, the new socialist government of Spain enacted the Social Integration of Persons with Disabilities Act (Ley 13/1982 de Integración Social de Los Minusválidos 1982) mandating accessible urban and architectural standards across regions. Later, Law 51/2003 on Equal Opportunities, Non-Discrimination, and Universal Accessibility, consolidated these measures, establishing universal design standards across the country (Ley 51/2003 de Igualdad de Oportunidades, No Discriminación y Accesibilidad Universal de Las Personas Con Discapacidad 2003). This legislative progress was shaped by disability rights organizations, including key representative bodies such as FEAPS (Spanish Federation of Organizations for People with Intellectual Disabilities), COCEMFE (Spanish Confederation of People with Physical Disabilities) or ONCE (National Organization of Spanish Blind People), which also played an active role in planning and managing the resulting policy programs (Jiménez Lara and Huete García 2010). The Design for All Foundation, founded in Barcelona in the mid-1990s, played a key role by promoting accessibility in design practice (Calvera 2018).

Feminist architects and scholars (Muxí Martínez and Ciocoletto 2011), highlight Catalonia's pioneering 2/2004 Neighbourhood Improvement Law (Ley 2/2004 de Millora de Barris, Àrees Urbanes i Viles Que Requereixen Una Atenció Especial 2004), which went beyond accessibility to explicitly mandate gender equality in urban space. The law was instrumental in the creation and establishment of key cooperatives for gender-sensitive urban planning, such as Col·lectiu Punt 6 (Colectiu Punt 6 2022). This framework was strengthened in the Spanish context through the Organic Law 3/2007 for the effective equality between women and men (Real Decreto 1393/2007, de 29 de Octubre, Por El Que Se Establece La Ordenación de Las Enseñanzas Universitarias Oficiales 2007), requiring public administrations to incorporate gender perspectives into urban planning and education. These laws marked a major shift in recognising design's role in either perpetuating or challenging inequality.
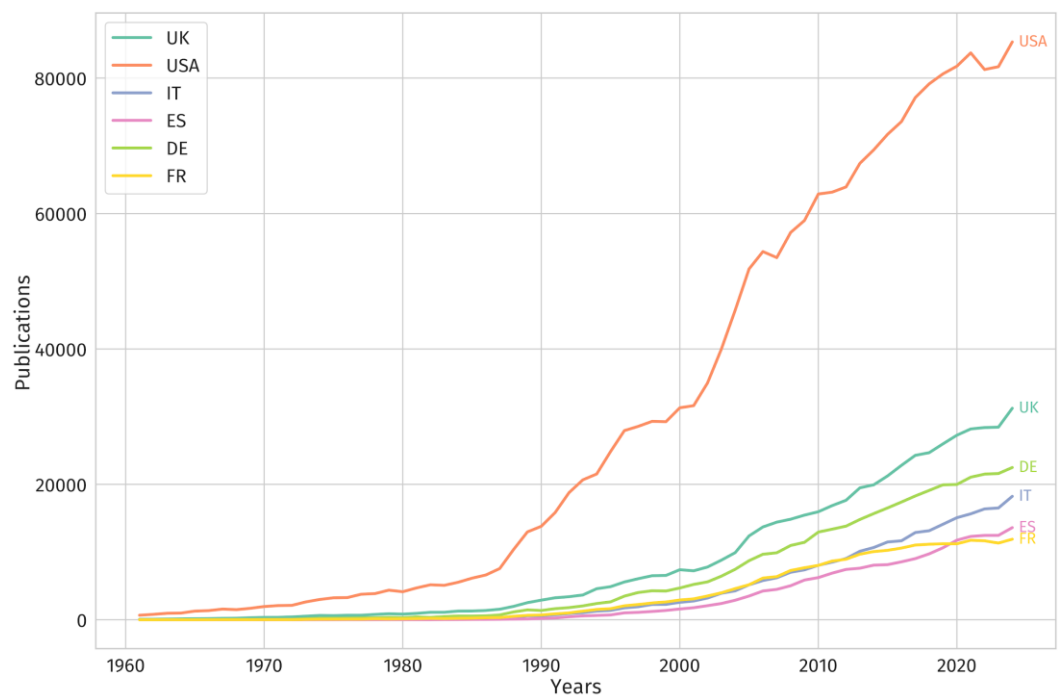
Figure 4. Scientific publications with "design" kewyord in title, abstract and keywords. Source: Scopus.

2.2.   EDI principles in Design 2015-2024

Although EDI legislation has often faced implementation delays due to institutional and academic resistance (Muxí Martínez 2020), the 2010s ultimately marked a turning point in Spanish urban policy. The 15M movement – which emerged from the widespread social distress caused by the 2008 financial crisis and subsequent austerity measures – became a catalyst for reimagining urban governance through demands for social justice and participatory democracy (Bonet i Martí and Serrano Miguel 2021). The occupation of public squares across Spain functioned not only as a form of resistance but also as a site for new modes of politicization that redefined ways of designing and inhabiting shared spaces (Sánchez Criado 2017). In main encampments such as Puerta del Sol and Plaça de Catalunya, commissions focusing on feminist and functional diversity highlighted the role of Design in creating inclusive public spaces.

This paradigm shift crystallized after the 2015 municipal elections, when progressive platforms such as Barcelona en Comú, under Ada Colau's leadership, pioneered a municipalism of the commons that took plurality, diversity and differences in society as a starting point (Aguiló Bonet and Sabariego 2016) embedding EDI principles into urban policy. While various citizen-driven political parties born in the wake of 15M – Ahora Madrid, Marea Atlántica, Compostela Aberta, Zaragoza en Común and Por Cádiz Sí Se Puede – succeeded in winning local governments across Spain, only Barcelona and Cádiz secured sufficient political and electoral support to renew their mandates in the 2019 municipal elections. This continuity was essential for deepening and sustaining transformative policy agendas (Bonet i Martí and Serrano Miguel 2021).

After the EDI policy stagnation that had characterized the 2011-2015 period (Muxí, 2020), Colau's administration in Barcelona (2015-2023) introduced Spain's most ambitious intersectional feminist policies, beginning with the groundbreaking Gender Justice Plans (Área de Derechos Sociales, Justicia Global, Feminismos y LGTBI 2021; Concejalía de Feminismos y LGTBI 2016). These plans established comprehensive, cross-departmental strategies for inclusion from a plural and intersectional perspective (Gerència d'Àrea de Drets Socials, Editorials, and Recursos 2023). The administration's innovative approach manifested in several landmark initiatives: the LGTBI Centre (2019), the Care Democratization Program (2017-2020) addressing gendered labour inequalities, and, crucially, the Gender Perspective Urbanism Measure (2017), which embedded gender mainstreaming into all urban planning. This EDI measures were reinforced by the Universal Accessibility Plan (2018), which expanded accessibility standards to include cognitive, sensory, and communicational dimensions. Accessibility became a core design principle across public space, transport, and the built environment – earning Barcelona international recognition, including its designation as European Capital of Inclusion and Diversity in 2022.

A key feature of these policies was their participatory approach to implementation. While Barcelona's city council had already a history in citizen engagement (Gomà & Rebollo, 2001), this deepened with the 2017 adoption of a new citizen participation framework. For instance, the second Gender Justice Plan was co-created with residents (Gerència d'Àrea de Drets Socials et al. 2023). New tools – such as citizen initiatives and consultations – strengthened civil society's role in municipal decision-making. Notable outcomes included digital platforms like Decidim (Barandiaran et al. 2024) and a rise of citizen-managed facilities, which grew from 14 to over 70 (Bonet i Martí and Serrano Miguel 2021). By institutionalising co-design

with historically marginalised groups, these initiatives embedded community voices in urban policy, establishing Barcelona as a laboratory of EDI-driven urban design politics. Finally, these policies provided Barcelona's Design institutions with a framework to align themselves with societal changes. Over the past decade, the Disseny Hub Barcelona (DHUB) – a multifunctional design centre comprising a museum, archive and design associations – has developed initiatives focused on equal opportunities and diversity, including a festival exploring Design through the lens of disability studies (Guayabero 2018), and exhibition about women in Design (Bastardes, Cedonya, and Fermández del Moral 2023).

3. EDI IN DESIGN EDUCATION IN BARCELONA, CATALONIA AND SPAIN

3.1. Design education in Barcelona, Catalonia and Spain

Barcelona's activism, legislative and urbanistic advances demonstrate how EDI principles can fundamentally reshape design's outcomes, from streets to urban furniture. Yet whether this transformative potential has reached design education remains unclear. Despite Spain's progressive urban policies, the integration of EDI into design curricula requires closer scrutiny. Elisava, Spain's first Design school was finally established in Barcelona in 1961 (Narotzky 2007), despite earlier attempts supressed by Franco's regime and lack of resources. This marked a turning point, as Catalan Design played a pivotal role in shaping Spain's industrial Design history (Galán et al. 2010). Catalonia developed a diverse educational landscape, with both public and private institutions, though private schools emerged as particularly dominant in the region's Design sphere. Beyond Catalonia, until the early 1990s, design education remained fragmented across Spain. Some programs existed as specialties within Arts and Crafts schools, others as specializations in Fine Arts faculties, with additional non-official courses offered by private institutions. A major breakthrough came in 1991 when Jaume I University in Castellón introduced Spain's first official Industrial Design Engineering degree - a milestone that established industrial design as an independent university discipline (Galán et al. 2010). Still, it wasn't until the Royal Decree 633/2010 (Real Decreto 633/2010 Por El Que Se Regula El Contenido Básico de Las Enseñanzas Artísticas Superiores de Grado de Diseño Establecidas En La Ley Orgánica 2/2006 2010) that full Design degrees were formally stablished, reflecting a long struggle to legitimise design both as a profession and as a field of study.

3.2. EDI in Higher Education in Barcelona, Catalonia and Spain

While in the Spanish context the Royal Decree 1393/2007 established foundational requirements for universal accessibility and Design for All principles in university curricula, the explicit mandate for the integration of gender equality principles across academic programs originates from Royal Decree 1393/2007 (Real Decreto 1393/2007, de 29 de octubre, por el que se establece la ordenación de las enseñanzas universitarias oficiales 2007). In Catalonia, Law 17/2015 (Ley 17/2015, de 21 de julio, de igualdad efectiva de mujeres y hombres 2015) reinforced this by requiring a transversal gender perspective in all higher education degrees. Organic Law 2/2023 (Ley Orgánica 2/2023, de 22 de marzo, del Sistema Universitario 2023) further strengthened this framework by requiring universities to establish dedicated equality and diversity units that evaluate gender mainstreaming across institutional activities and adopt inclusion and non-discrimination plans, that address

multiple dimensions of diversity including racial and ethnic origin, nationality, religion, age, and socioeconomic status. To support this, training manuals through the collaboration with different public and private entities were developed: from the "Libro Blanco del Diseño para Todos en la Universidad" (Rovira-Beleta Cuyás 2003) that aimed to embed Design for All principles into university curricula to the General Frameworks for incorporating a gender perspective in university studies from AQU (Agency for the Quality of University studies in Catalonia) to Xarxa Vives' gender mainstreaming guides in HEIs, including one focused on architecture studies (Agència per a la Qualitat del Sistema 2019). Despite these efforts, studies reveal a persistent gap between policy and practice. For instance, regarding gender mainstreaming in higher education, Xarxa Vives (2021) found that only 16% of undergraduate and 7% postgraduate programmes in Catalonia included gender-related content, mostly as electives. One of the key challenges identified was the need for faculty training in this area.

Progress in accessibility and Design for All, however, appears more encouraging. In 2020, around 47% of degree programmes in priority disciplines include dedicated modules on accessibility and Design for All (Madrid López, García Fernández, and Campo Blanco 2020). In architecture, this figure rises to 86%, reflecting legislative advancements in built-environment accessibility in Spain. However, the approach remains outdated and is still rooted in the elimination of architectural barriers rather than embracing the more holistic and universal understanding of accessibility that is prevalent today.

3.3.   EDI in Design education in Barcelona, Catalonia and Spain

To assess the gap between institutional EDI rhetoric and activism and its professional and curricular implementation, this study adopts the standardized methodology of the EDIDesK project. It begins with an extensive desk analysis of 79 undergraduate and 34 postgraduate design programs to identify courses containing explicit EDI components, enabling a broad assessment of EDI implementation across Spanish Design education (Więckowska, Chmielarz, Lorenc, Piątek, Rzenno, Pawlik, Rudnicka, D'Onofrio, Massacesi, Čerešňová, Klára, et al. 2024). Following the project's established framework, all identified EDI modules were documented and categorized according to their specific characteristics: module type, particular EDI themes addressed and the depth of EDI integration (Table 2).

The analysis revealed significant gaps in the incorporation of EDI principles across Spanish Design programs, where only 24% undergraduate programs (19) showed any evidence of EDI content (Fig. 5), with most offering just a single module. Only 1 program included 2 EDI modules, and another included 3. An additional 6 undergraduate degrees may have contained EDI-related content, but insufficient documentation prevented verification. At the postgraduate level, examination of 34 design programs demonstrated similar deficiencies, where only 17.6% (6 programs) incorporated any EDI components (Fig. 5), 4 of which structured their entire curriculum around EDI concepts. As with the undergraduate findings, 5 additional postgraduate programs could not be confirmed to include EDI modules due to limited available information.
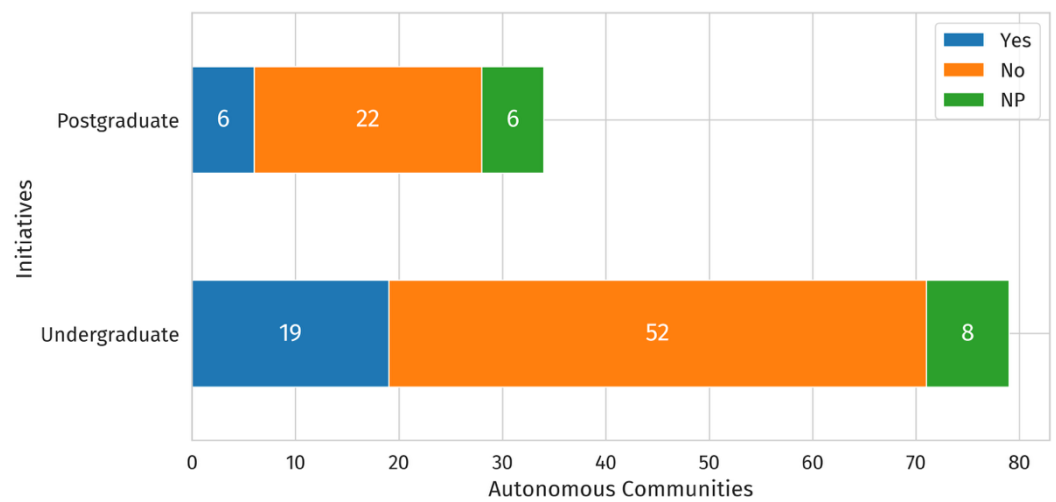
After excluding modules with insufficient documentation, the study identified 22 EDI-focused courses across 16 Spanish universities. These included 17 undergraduate modules, 3 postgraduate ones, and 2 non-degree courses. Among these, 9 were non-compulsory subjects, all at the undergraduate level. In contrast, no postgraduate EDI courses were optional. The dominant thematic focuses among EDI modules were accessibility (9 modules covering ergonomics, design for all, and users with disabilities), inclusion (9 modules addressing user participation, inclusive design, ergonomics, user-centred design, adaptability, design for disabilities, wellbeing, and health), and diversity (4 modules engaging with gender, race, identity, culture, care and common good, design for diversity, inclusive design, and design for disabilities) (see Table 2). Notably, only one module explicitly tackled racial, cultural or gender diversity.

The depth of EDI integration varied across modules. Only 4 modules were classified as Level 1, covering selected EDI issues superficially; 7 modules reached Level 2, addressing selected EDI issues with some student work reflecting EDI principles. Another 6 modules met Level 3 criteria, where most student work engaged with EDI themes. Finally, 5 modules achieved Level 4 or 5 integration, characterized by extensive student engagement with EDI issues, often including external partnerships (Level 4) or complete curricular focus on EDI principles (Level 5).

Table 2: Design-related study programs with EDI modules in higher education in Spain.

Academic institution	Study program	Degree	Main domain	Level
Universidad de La Laguna	Design	UG- Bachelor's degree	Diversity	2
Escola Massana	Design	UG- Bachelor's degree	Inclusion	2
EINA, Centro Universitario de Diseño y Arte de Barcelona (UAB)	Design	UG- Bachelor's degree	Accessibility	3
ESDi	Interior design	UG- Bachelor's degree	Inclusion	1
UNIBA	Design	UG- Bachelor's degree	Accessibility	3
UDIT	Product Design	UG- Bachelor's degree	Accessibility	3
University of Navarra	Design	UG- Bachelor's degree	Inclusion	4
UOC Universitat Oberta de Catalunya	Design	UG- Bachelor's degree	Inclusion	1
Universitat Politècnica de Catalunya	Product Design	UG- Bachelor's degree	Inclusion	3
ELISAVA Barcelona School of Design and Engineering	Design	PG - Master's degree	Diversity	4
ELISAVA Barcelona School of Design and Engineering	Design	UG- Bachelor's degree	Accessibility	2

ELISAVA Barcelona School of Design and Engineering	Design	PG - Master's degree	Inclusion	4
ELISAVA Barcelona School of Design and Engineering (Shifta)	Design	Short Course	Diversity	3
ELISAVA Barcelona School of Design and Engineering (Shifta)	Design	Short Course	Diversity	5
ELISAVA Barcelona School of Design and Engineering (Shifta)	Industrial Design	UG- Bachelor's degree	Inclusion	2
Universitat Politècnica de Valencia	Architecture	UG- Bachelor's degree	Accessibility	3
Mondragon Unibertsitatea	Product Design	PG - Master's degree	Inclusion	2
Universitat Jaume I	Product Design	UG- Bachelor's degree	Accessibility	5
Universitat Politècnica de Valencia	Product Design	UG- Bachelor's degree	Inclusion	2
Universidad de Cádiz	Product Design	UG- Bachelor's degree	Accessibility	2
Universidad de Málaga	Product Design	UG- Bachelor's degree	Accessibility	1
Universidad de Málaga	Product Design	UG- Bachelor's degree	Accessibility	1

Following the desk research, semi-structured interviews were conducted with educators from 6 Spanish design modules (4 undergraduate, 1 postgraduate, and 1 short course) identified as exemplary cases (Levels 4-5 in EDI integration). While their broader insights have been documented in the D2.1.1 (Więckowska, Chmielarz, Lorenc, Piątek, Rzenno, Pawlik, Rudnicka, D'Onofrio, Massacesi, Čerešňová, Macháčová, et al. 2024), we can highlight some key responses that provide deeper understanding of the implementation of EDI in the modules and the whole curricula.

Firstly, we need to point out that most subjects adopted a combination of theoretical and practical approaches, where theory was put into practice through the development of design projects: although all subjects included a project as an outcome, only one was fully project-based. Most modules had a strong research component, and three incorporated user participation, which made students learn from who they design for and engage directly with the communities affected by design exclusion. Users participated through testimonials or co-design methods. In 5 out of the 6 cases, students collaborated with associations, foundations, art collectives, health consultants and companies, integrating external expertise to the design projects and expanding the project's value. Project outcomes ranged from exhibitions and card games to apps, industrial objects, fashion collections, toolboxes, and protocols. In terms of the relation with the whole curricula, just one course could say that it was formally linked to other modules with EDI components. A recurring theme among the interviewed professors was the belief that EDI should not be treated as a standalone subject but rather as a transversal dimension integrated throughout the entire curriculum.

4. DISCUSSION

The empirical evidence reveals a striking paradox in Spanish Design education. While activism, practice and progressive EDI policies have been extensively developed and implemented in Barcelona, Catalonia and Spain, the study shows that they remain weakly reflected in Design curricula. Our analysis of 113 programs shows only 19.5% include identifiable EDI content, with just 4.4% reaching advanced integration levels (4-5). This disparity suggests that Design education lags significantly behind professional practice and public policy outside of academia in addressing equality and inclusion.

Three key findings emerge from the data. Firstly, the strongest EDI implementations (all Level 4-5 modules) share common methodologies: participatory design approaches, community partnerships, and strong research components. This aligns with Barcelona's successful urban policies that similarly emphasize co-creation with marginalized groups. Secondly, accessibility dominates EDI content (40.9% of modules), while intersectional approaches addressing race, gender or class remain rare (4.5%). This disparity reflects historical trends in public space design, where accessibility was the primary initial concern. Thirdly, the optional nature of 40.9% of undergraduate EDI modules shows that EDI is still thought as an add-on, rather than a foundational and transversal design perspective.
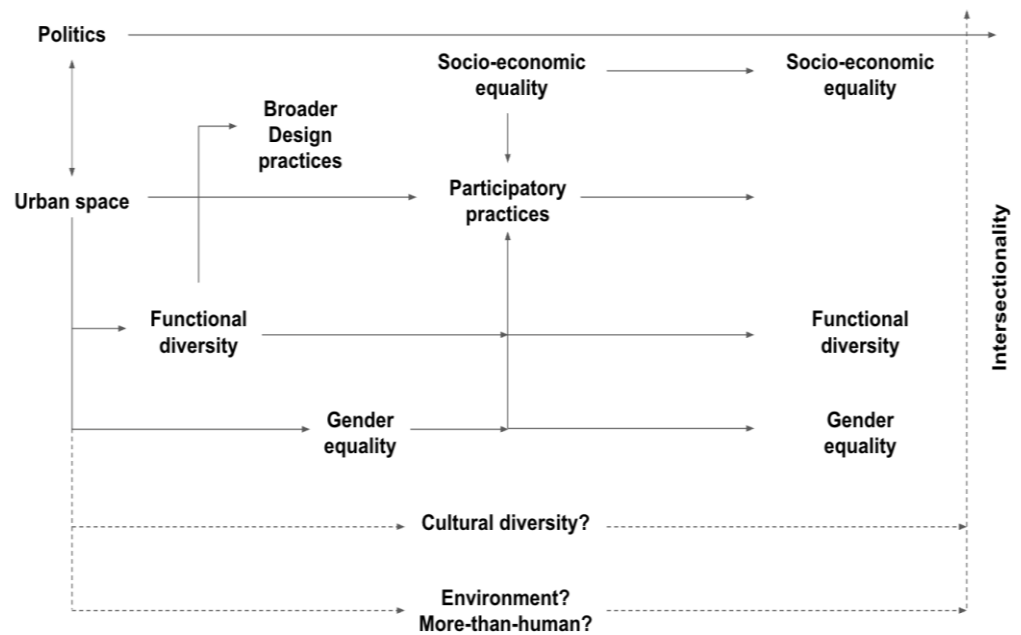
Figure 6. The evolution of EDI in Spanish Design: from accessibility to urban spaces to participation and EDI.

We acknowledge potential underreporting, as some educators likely integrate EDI principles in their teachings without explicitly referring to it in modules title and description. Our interviews revealed cases where professors adapt pedagogies for inclusion without formal curriculum recognition. However, even accounting for such instances, the overall integration of EDI in Design education remains alarmingly low compared to Spain's legislative framework and its urban policy and practice achievements. As the next generation of designers will confront growing inequality and diversity challenges, their training must equip them with more than technical skills – it must cultivate the ethical frameworks and participatory methodologies that Spain's own urban laboratories have proven effective.

5. CONCLUSION

Spain, and particularly Barcelona and Catalonia, has emerged in recent decades as a laboratory for EDI practices in urban design, public spaces and policies. From pioneering accessibility legislation in the 1980s to the intersectional feminist urban policies of Barcelona en Comú (2015-2023), Spanish urban design has progressively institutionalized EDI principles in the built environment. However, this institutional and legislative progress has not been equally reflected in Design education, where the integration of EDI remains fragmented and often superficial. Despite the Royal Decree 633/2010 explicitly recognizing Design as a driver of social equality and inclusion – stating that graduates should "value the dimension of design as

a factor of equality and social inclusion, and as a transmitter of cultural values" (Real Decreto 633/2010 Por El Que Se Regula El Contenido Básico de Las Enseñanzas Artísticas Superiores de Grado de Diseño Establecidas En La Ley Orgánica 2/2006 2010) – these principles have not been systematically embedded in Design curricula. Our analysis of 79 undergraduate and 34 postgraduate programs reveals that only a minority include dedicated EDI modules, with most offering minimal or optional content. Even when present, EDI is frequently treated as a supplementary rather than a foundational concern, reinforcing the gap between Spain's urban policies and its Design pedagogy.

This disconnect raises critical questions about the role of Design education in sustaining and advancing EDI principles. If Design is to function as a true agent of social transformation – as demonstrated by Barcelona's urban policies – its educational institutions must move beyond tokenistic inclusion and embrace EDI as a core disciplinary framework. To bridge this gap, we propose the following pathways for reform:

- Expanding university-community collaboration: Spanish Design schools should deepen engagement with grassroots organizations, civic centres, maker laboratories or public bodies that have been at the forefront of participatory and EDI design practices. By fostering partnerships with these entities, universities could integrate these experiences into Design pedagogy.

- Reclaiming the public legacy of Spanish Design: The 1980s-90s established Spanish Design's distinctive focus on public spaces – areas that have seen significant advances in EDI in recent years. However, while this approach has been more widely applied in architectural education, likely due to its collective and spatial nature, it has yet to be fully embraced in Design disciplines. This legacy should inform contemporary Design education. Rather than treating inclusion as an imported concept, curricula must reconnect with Spain's tradition of designing public infrastructures that inherently promote EDI and expand it to other Design disciplines.

- Formalizing non-institutional Design education: many inclusive Design practices currently thrive outside formal academia, such civic centres, maker laboratories, and community-led initiatives. Universities should recognize and formalize these alternative pedagogies, integrating their methods into accredited programs.

- Strengthening Design research and funding: as a relatively young academic discipline in Spain, Design research remains underdeveloped, with most EDI-driven initiatives relying on European-funded projects. Greater investment – both national and European – is needed to support long-term research into inclusive Design methodologies.

The persistence of EDI as a marginal concern in Design education underscores a broader tension: while Spain has positioned itself as a leader in inclusive urban policy, its Design institutions have yet to fully internalize these values. Addressing this misalignment requires more than curricular adjustments; it demands a reimagining of Design education as a fundamentally political and social practice.

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REFERENCES

Agència per a la Qualitat del Sistema. 2019. Marco General Para La Incorporación de La Perspectiva de Género En La Docencia Universitaria [General Framework for the Incorporation of the Gender Perspective in University Teaching]. AQU-4-2019. *Barcelona: Agència per a la Qualitat del Sistema Universitari de Catalunya.* Retrieved August 22, 2025, from https://www.aqu.cat/es/Universidades/Metodologia/Marco-general-para-la-incorporacion-de-la-perspectiva-de-genero-en-la-docencia-universitaria.

Bonet, A. J. A., & Sabariego, J. (2016). Epistemologies of the south and local elections in Spain: towards politics based on the commons?. *Historia Actual Online*, (40), 95-111. Retrieved August 22, 2025, from https://dialnet.unirioja.es/servlet/articulo?codigo=5678198.

Área de Derechos Sociales, Justicia Global, Feminismos y LGTBI (2021) *II Plan Para La Justicia de Género 2021-2025* [II Plan for Gender Justice 2021-2025]. Gerencia Municipal – Dirección de Servicios de Género y Políticas del Tiempo. https://ajuntament.barcelona.cat/dones/sites/default/files/documents/plan-para-la-justicia-de-genero-2016-2020_0.pdf

Àrea d'Ecologia, Urbanisme i Mobilitat (2017) *Mesura de Govern. Urbanisme Amb Perspectiva de Gènere* [Government Measurement. Urbanisme Amb Gender Perspective]. Àrea d'Ecologia, Urbanisme i Mobilitat. https://ajuntament.barcelona.cat/dones/sites/default/files/documentacio/mesuradegovernurbanismeigenere_220317.pdf

Barandiaran, X. E., Calleja-López, A., Monterde, A., & Romero, C. (2024). *Decidim, a technopolitical network for participatory democracy: philosophy, practice and autonomy of a collective platform in the age of digital intelligence*. SpringerBriefs in Political Science. Cham: Springer Nature Switzerland.

Bastardes, T., Cedonya, I., & Fernández del Moral, I. (2023). *Dones x disseny x Dones*. Barcelona: Museu del Disseny de Barcelona, Ajuntament de Barcelona.

BCD. 2019. Ecosistema Del Diseño Español [Spanish Design Ecosystem]. Barcelona, Spain: *BCD Barcelona Centro de Diseño*. Retrieved August 22, 2025, from https://www.ciencia.gob.es/dam/jcr:0640da56-c2f6-426c-9feb-4e69de95b120/07-DOCUMENTO-ECOSISTEMA-DEL-DISE%C3%91O.pdf.

Bonet-Martí, J. , & Serrano-Miguel, M. (2021). Barcelona como laboratorio de innovación democrática (2015-2020) [Barcelona as a laboratory for democratic innovation (2015-2020)]. *Revista Internacional de Comunicación y Desarrollo (RICD),* 4(15), 18-35.

Borja, J. (2010). Luces y sombras del urbanismo de Barcelona [Lights and shadows of Barcelona's urban planning]. Barcelona, Spain: *Editorial UOC*.

Braga, C. (2017). *How Design Can Help with Inclusion*. Medium. Retrieved August 22, 2025, from https://uxdesign.cc/how-design-can-help-with-inclusion-9d71a60d6359.

Calvera, A. (2018). The End of History: the Barcelona Design System Handed Down to the Twenty first Century. In *Barcelona Design System (1914-2014): Essays on Local History* (p. 2). Publicacions i Edicions de la Universitat de Barcelona.

Campí, I. (2020). *¿Qué es el diseño?* [What is Design?]. Barcelona: Gustavo Gili Editorial S.A.

Campí, I., Baxauli, M., & Leslabay, M. (2023). *Línea Cronológica Del Diseño* [Design Timeline]. Retrieved August 22, 2025, from https://www.ciencia.gob.es/dam/jcr:3b831a48-f623-49d0-be80-fc5634d78397/Linea_Cronologica_Diseno.pdf.

Colectiu Punt 6. 2022. Urbanismo feminista. Por una transformación radical de los espacios de vida [Feminist urbanism. For a radical transformation of living spaces]. Barcelona, Spain: *Virus Editorial* i Distribuïdora. Retrieved August 22, 2025, from https://www.punt6.org/wp-content/uploads/2022/04/libro_Urbanismo-feminista_ES.pdf.

Concejalía de Feminismos y LGTBI (2016). *Plan Para La Justicia de Género (2016-2020)* [Plan for Gender Justice 2016-2020]. Departamento de Transversalidad de Género. Gerencia de Recursos CIRD. ajuntament.barcelona.cat/dretssocials/sites/default/files/arxius-documents/plan-para-la-justicia-de-genero-2016-2020.pdf

Dong, H., McGinley, C., Nickpour, F., Cifter, A. S., & Inclusive Design Research Group. (2015). Designing for designers: Insights into the knowledge users of inclusive design. *Applied ergonomics*, 46, 284-291. DOI: https://doi.org/10.1016/j.apergo.2013.03.003.

Esparza Lozano, D. 2014. *El diseño del suelo: el papel del pavimento en la creación de la imagen de la ciudad* [Floor design: the role of pavement in creating the image of the city]. (Unpublished doctoral thesis), Universitat de Barcelona.

Galán, J., Gual, J., Marín, J. M., Olucha, J., Torrent, R., & Vidal, R. (2010). *El diseño industrial en España* [Industrial design in Spain]. Manuales Arte Cátedra.

Garay-Rondero, C. L., Salinas-Navarro, D. E., & Calvo, E. Z. R. (2020, July). Design for inclusion and diversity: developing social competencies in engineering education. In International Conference on Applied Human Factors and Ergonomics (pp. 85-92). Cham: *Springer International Publishing*. DOI: https://doi.org/10.1007/978-3-030-51194-4_12.

Gerència d'Àrea de Drets Socials, Justícia Global, Direcció de Serveis Editorials, and Gerència de Recursos. 2023. Feminismes i LGTBI+: Barcelona 2015-2023 [Feminisms and LGTBI+: Barcelona 2015-2023]. Barcelona, Spain*: Ajuntament de Barcelona.* Retrieved August 22, 2025, from https://bcnroc.ajuntament.barcelona.cat/ jspui/handle/11703/131586.

Guayabero, O. (2018, November 21*). 3as Jornadas Diseño Para Vivir. Diversidad Funcional, Prótesis y Cyborgs* [3rd Design for Living Conference: Functional Diversity, Prosthetics, and Cyborgs]. DHUB [Conference presentation], Barcelona, Spain.

Hughes, R. (2006). *Barcelona*. Editorial Anagrama.

Instituto Municipal de Personas con Discapacidad. (2018). *Plan de Accesibilidad Universal 2018-2026*. [Universal Accessibility Plan 2018-2026]. Ayuntamiento de Barcelona.

Jiménez Lara, A., & Huete García, A. (2020). Políticas públicas sobre discapacidad en España. Hacia una perspectiva basada en los derechos [Public policies on disability in Spain: Towards a rights-based perspective]. *Política y sociedad*, 47(1):137–52.

Ley 13/1982, de 7 de abril, de integración social de los minusválidos [Law on the social integration of people with disabilities]. *Boletín Oficial del Estado*, 103, 30 April 1982. https://www.boe.es/eli/es/l/1982/04/07/13

Ley 51/2003, de 2 de diciembre, de igualdad de oportunidades, no discriminación y accesibilidad universal de las personas con discapacidad [Law on equal opportunities, non-discrimination, and universal accessibility for people with disabilities]. Boletín Oficial del Estado, 289, 3 December 2003. https://www.boe.es/eli/es/l/2003/12/02/51/con

Ley 2/2004, de 4 de junio, de mejora de barrios, áreas urbanas y villas que requieren una atención especial [Law on the improvement of neighborhoods, urban areas, and towns requiring special attention] [Repealed]. Boletín Oficial del Estado, 163, 7 July 2004. https://www.boe.es/eli/es-ct/l/2004/06/04/2/con

Ley 17/2015, de 21 de julio, de igualdad efectiva de mujeres y hombres [Law on effective equality between women and men]. Boletín Oficial del Estado, 215, 8 September 2015. https://www.boe.es/eli/es-ct/l/2015/07/21/17

Ley Orgánica 2/2023, de 22 de marzo, del Sistema Universitario [Organic Law on the University System]. Boletín Oficial del Estado, 70, 23 March 2023. https://www.boe.es/eli/es/lo/2023/03/22/2/con

Madrid López, R. I., García Fernández, M. C., & Campo Blanco, I. (2020). *Inclusión de la accesibilidad universal en los currículos formativos de las universidades en España* [Inclusion of universal accessibility in the training curricula of universities in Spain]. Informe final. Síntesis de resultados y recomendaciones. Retrieved August 22, 2025, from http://riberdis.cedid.es/ handle/11181/6092.

Muxí Martínez, Z. (2020). Aplicación de la perspectiva de género al urbanismo y la arquitectura: experiencias a escala regional y municipal en Cataluña [Applying the gender perspective to urban planning and architecture: experiences at the regional and municipal level in Catalonia]. *Ciudad y territorio, estudios territoriales*, 52(203), 57-70. DOI: https://doi.org/10.37230/ CyTET.2020.203.05.

Muxí Martínez, Z., & Ciocoletto, A. (2011). La ley de barrios en Cataluña: la perspectiva de género como herramienta de planificación [The neighborhood law in Catalonia: the gender perspective as a planning tool]. *Feminismo/s* (17):131–53. DOI: http://dx.doi.org/10.14198/ fem.2011.17.07.

Narotzky, V. (2007). *La Barcelona del diseño*. [The Barcelona of design]. Barcelona: Santa & Cole.

Ordenanza sobre supresión de barreras arquitectónicas en la vía pública [Ordinance on the removal of architectural barriers in public spaces]. Ajuntament de Barcelona, 27 March 1979. Published 1980. https://bcnroc.ajuntament.barcelona.cat/jspui/handle/11703/88840

Real Decreto 1393/2007, de 29 de octubre, por el que se establece la ordenación de las enseñanzas universitarias oficiales [Royal Decree establishing the organization of official university education] [Repealed]. Boletín Oficial del Estado, 260, 30 October 2007. https://www.boe.es/eli/es/rd/2007/10/29/1393/con

Real Decreto 633/2010, de 14 de mayo, por el que se regula el contenido básico de las enseñanzas artísticas superiores de Grado de Diseño establecidas en la Ley Orgánica 2/2006, de 3 de mayo, de Educación [Royal Decree regulating the basic content of higher artistic education in Design established in Organic Law 2/2006, of 3 May, on Education]. Boletín Oficial del Estado, 137, 5 June 2010. https://www.boe.es/eli/es/rd/2010/05/14/633/con

Rossi, E., & Brischetto, A. (2024). Contribution of the 'Equality, Diversity, and Inclusion'Concept to Design Education: A Systematic Literature Review. Sustainability, 16(19), 8478.. DOI: https://doi.org/10.3390/su16198478.

Rovira-Beleta Cuyás, E. (2003). *Libro blanco del diseño para todos en la universidad* [White Paper on Design for Everyone at the University]. Edicions UPC.

Sánchez Criado, T. (2017). Functional Diversity as a Politics of Design?. *Diseña*, (11), 148-159. Retrieved August 22, 2025, from https://revistalatderechoyreligion.uc.cl/index.php/Disena/article/download/87/95.

Więckowska, M., Chmielarz, A., Lorenc, A., Piątek, M., Rzenno, J., Pawlik, K., Rudnicka, P., D'Onofrio, A., Massacesi, R., Čerešňová, Z., Macháčová, K., Filová, N. B., Suláková, L., Rollová, L., Menichinelli, M., & Elizondo Nieva, E. (2024). Research and Analysis of Teaching Contents on Design and EDI. D2.1.1. *EDIDesK*. EDIDesK. Retrieved August 22, 2025, from https://www.edideskproject.com/files/ugd/58ed62440e2 6827b2540cab8f3bea684445864.pdf.

Mapping Inclusive Teaching Methodologies in Design Education: A Benchmarking Study on Digital and Traditional Tools for Equality, Diversity, and Inclusion

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ABSTRACT

In the context of the growing emphasis on Equality, Diversity, and Inclusion (EDI) within higher education, this study explores the current landscape of digital and traditional teaching methodologies in Design and Design-related programmes. Developed within the EDIDesK Erasmus+ project, the research presents a structured benchmarking of tools, toolkits, and pedagogical approaches with EDI potential or application. Drawing from a non-systematic literature review and a structured comparative analysis, three comprehensive databases were created to map existing resources: (1) Toolkits and methodologies, (2) Teaching methodologies and guidelines, and (3) Digital environments and tools. The results reveal a fragmented yet promising scenario where inclusive practices are often embedded within broader human-centred or universal design approaches. This article discusses the implications of such findings for the development of inclusive design education and outlines pathways for future integration and innovation.

Keywords: Design education, Digital tools, EDI into Design Education, Higher education, Inclusive Design Toolkit, Teaching methodologies

INTRODUCTION

The integration of Equality, Diversity, and Inclusion (EDI) principles into higher education has gained increasing prominence in international academic discourse, emerging as both an ethical and strategic priority for educational institutions (AdvanceHE, 2020). However, their systematic implementation within design education remains an underexplored area, despite the discipline's inherent characteristics that are conducive to inclusive approaches, such as multidisciplinarity, user-centeredness, and a propensity for creative problem-solving (Buchanan, 1992; Norman, 2013). The epistemological and applicative complexity of design makes it particularly challenging to structure teaching practices that integrate EDI values organically. This complexity is reflected in the variety of existing approaches, including Inclusive Design, Universal Design, Human-Centred Design, which offer valuable conceptual frameworks but are often adopted inconsistently and in a fragmented manner across educational contexts (Clarkson et al., 2013; Pullin, 2009). Furthermore, the integration of EDI into design curricula aligns with the broader framework of the United Nations' Sustainable Development Goals, in particular Goal 4 of the 2030 Agenda, which aims to "ensure inclusive and equitable quality education and promote lifelong learning opportunities for all" (UN, 2015). Despite this international framework, the operational translation of these goals within

design disciplines remains limited, lacking consolidated methodological and pedagogical tools (Ghosh & Coppola, 2024; Wang, 2025).

The EDIDesK project – "Open Access Contents on Design for EDI in Higher Education Programmes" – aims to address this gap by developing teaching contents and methodologies that foster genuinely inclusive design education in higher education programmes. In particular, Activity A2.2, titled "Digital and traditional teaching and learning methodologies for Design and Design-related programmes" (part of Work Package 2, Research and analysis of teaching contents on Design and EDI), is the focus of this contribution. Its objective was to identify and map both digital and analog teaching tools that are explicitly – or potentially – aligned with EDI principles. While in Anglophone contexts, particularly in the United Kingdom, EDI policies are formally integrated into university curricula (AdvanceHE, 2020), in other regions there is greater terminological and methodological heterogeneity. It often leads to overlap between related but non-equivalent concepts, such as accessibility, usability, empathy, and participation (Sanders & Stappers, 2014; Bason, 2010). In light of these considerations, the present study aims to:

1. Define the extent to which analog and digital methodologies and tools are applied in the design process and within higher education.

2. Understand how and when these tools are used in various learning contexts.

3. Explore the potential of new technologies in supporting learning and collaborative design activities within higher education.

4. Identify issues related to content accessibility.

5. Examine the limitations and future trajectories of methodologies and tools for content creation and distribution in support of inclusive education.

Accordingly, this paper critically examines key theoretical frameworks on EDI in design education, analyses current methodologies and tools for inclusive teaching, and proposes an integrated theoretical-methodological model for EDI-oriented design pedagogy (Rossi and Brischetto, 2024). It also offers practical guidelines to support the systemic implementation of EDI principles at the institutional level, fostering a more equitable, accessible, and representative educational ecosystem that reflects the diversity of students and design communities.

1. METHODOLOGY

The methodology employed in this study is based on an integrated qualitative approach aimed at thoroughly exploring and defining the principles of Equality, Diversity, and Inclusion (EDI) within the educational context of design. This methodology combines a review of academic literature, a systematization of existing teaching materials, and a critical analysis of emerging practices. The following sections describe the key phases and analytical strategies adopted, integrating the theoretical framework with practical benchmarking of inclusive design materials and tools.

The literature review was conducted using major academic databases (Scopus, Google Scholar), focusing on open-access publications. Keywords related to EDI, design education, and inclusive design were used to search for peer-reviewed articles [TITLE-ABS-KEY (equality AND diversity AND inclusion) AND TITLE-ABS-KEY (design AND method OR tools) AND TITLE-ABS-KEY (design AND education) AND TITLE-ABS-KEY (digital OR traditional AND teaching AND learning)], white papers, and institutional reports published between 2010 and 2024. The focus was on higher education design disciplines (e.g., architecture, industrial design). Exclusion criteria ruled out K–12 and unrelated disciplines. The aim was to identify theoretical and normative references on inclusivity in design education, as well as emerging methodologies and tools.

The limited number of articles retrieved hindered a traditional literature review, due to the focus on recent, open-access publications and the interdisciplinary nature of the topic, combining EDI principles with design education. The available sources were too narrow in scope and depth to support a comprehensive review.

The second methodological approach involved a critical systematization of existing inclusive teaching materials and toolkits. This phase analyzed analog, digital, and hybrid tools that support inclusivity in design education. The objective was to understand the variety and distribution of accessible educational resources, identifying the most effective practices and areas for improvement. The collection of data on existing toolkits enabled the definition of their common characteristics, as well as the identification of existing gaps and development needs. This work contributed to building a solid knowledge base for the future design of inclusive teaching materials.

The next phase involved a qualitative benchmarking procedure, which examined three main sets of information. These sets were organized into specific thematic databases to enable comparison and categorization of the most relevant EDI approaches. The three benchmarking areas are:

- **Toolkits and Teaching Methodologies (Database 1):** This database includes analog, digital, and hybrid tools used to foster inclusivity in design education. Comparing these resources allowed for the identification of the most commonly used methodologies and their practical applications.

- **Guidelines and Educational Resources (Database 2):** This section compiles teaching materials, guidelines, and educational resources designed to promote inclusive learning environments. The objective was to identify best practices for creating learning spaces that cater to the diverse needs of students with varying abilities and backgrounds.

- **Digital Environments and Educational Technologies (Database 3):** This section examined tools and digital platforms designed to support inclusive teaching and learning. Particular attention was given to collaborative and open-source tools that facilitate active student participation and improve accessibility within learning platforms.

The final phase of the methodological process focused on critically analyzing emerging teaching practices and the practical implementation of EDI strategies in university-level design education. It examined how academic institutions and research bodies apply EDI methodologies, identifying both challenges and opportunities within educational settings.

Particular attention was given to teaching methods and available resources to identify transferable models that are adaptable to diverse learning contexts. This analysis also considered practical barriers, such as limited resources, insufficient faculty training, and resistance to change.

This process led to the development of a comprehensive overview of educational practices and tools that support the integration of EDI principles into design teaching. The benchmarking outcomes of the EDIDesK project were synthesized into a structured, user-friendly database intended to facilitate access to inclusive teaching resources and support their continuous evolution.

2. BENCHMARKING

The benchmarking component involved the analysis of over 120 tools, of which 64 were selected and categorized into three thematic databases:

- (Database 1) EDI Toolkits and Methodologies – Analog, Digital, and Hybrid (31 cases);

- (Database 2) Tools and Guidelines for Inclusive Teaching (11 cases);

- (Database 3) Environments and Tools (22 cases).

The selection was guided by criteria such as accessibility, usability of teaching tools, scientific validation, and relevance to higher education design contexts. A benchmarking matrix was developed based on key indicators, including:

- Accessibility (e.g., WCAG compliance, plain language use);

- Openness (e.g., open-source availability, Creative Commons licensing);

- Collaborative potential (e.g., co-design workshops, remote teamwork support);

- Adaptability to design process phases (e.g., research, ideation, prototyping, evaluation).

A dashboard of indicators was created to ensure the benchmarking process was both objective and comprehensive. These indicators supported the mapping of critical areas for the development of EDI-aligned tools, inclusive teaching methodologies, and digital learning environments.   The results of this analysis were structured into three main sections, with a fourth section dedicated to links and useful references. The datasets were organized using the Airtable web platform and archived in Google Sheets for transparency and ease of access. The following paragraphs provide an overview of the three databases developed through this process.

2.1. Database 1: Toolkits, Methodologies, Approaches, and Instruments for EDI (Analog, Digital, and Hybrid)

Database 1 "EDI Toolkits and Methodologies – Analog, Digital, and Hybrid" includes a total of 32 deliverables and case studies, subdivided into 26 entries directly related to EDI (Equality, Diversity, and Inclusion), and 5 focused on emerging methodologies and potential tools relevant to the objectives of the EDIDesK project. This database represents a key resource for identifying the range of methodologies and tools that support the design of inclusive

educational environments and practices. The indicators used to categorize the resources in Database 1 are described in Table 1.

Table 1: Database 1 indicators

(a) Typology Toolkits/methods	(b) EDI Goals	(c)Scientific sector/approach	(d) Design subjects/sectors	e) Reference target / Target domain
Methodologies Sub-tools Single methods	Equality Diversity Inclusion All (EDI) Accessibility Usability	Ergonomics Human factors Human Centered Design Design Thinking Interaction design Human Computer Interaction Inclusive Design Design for All Universal design (And others)	Design Field: Product Design, Product-service system, Digital Design, Interior Design, Graphic Design, Communication Design, Healthcare Design, Physical Products, Research & Design, Service Design, UI/UX design, Built environments, Urban design, Web design, Web develop, Digital Economy / ICT, Engineering, Architecture	HE (Higher Education) P/HE (Potential for Higher Education) PS (Professional Sector) FO (For Organization) PB (Professionals and Business) VT (Vocational Training) RS (Research Sectors)
(f) Toolkit/Tool Typologies	(g) Phase of design the process	(g) Phase of design the process	(i) Open access	(f) Toolkit/Tool Typologies
Analogic Digital Hybrid Potentially digital Presence of collaborative virtual environment Accessible Tool/s	Collaborative Individual Both	Evaluation, Ideation, Validation, All	Yes > have been audited No> no scientific evidence has been found Cited by other > publications or institutional pages have been found that cite or have analyzed and applied the toolkit/tool	Analogic Digital Hybrid Potentially digital Presence of collaborative virtual environment Accessible Tool/s

Brischetto, A.; Iacono, E. (2024). Mapping Inclusive Teaching Methodologies in Design Education: A Benchmarking Study on Digital and Traditional Tools for Equality, Diversity, and Inclusion. *Strategic Design Research Journal. Volume 17*, number 01, January - April 2024. 87-106. DOI: 10.4013/sdrj.2024.171.07

The selection process for the toolkits considered not only resources explicitly addressing EDI, but also those rooted in broader domains such as accessibility, usability, and human-centered design, as these fields are progressively integrating EDI principles into their frameworks. This methodological choice ensured the inclusion of tools that, while not explicitly labelled as EDI-focused, nonetheless support the principles of equality and inclusion within design practices.

Beyond evaluating specific tools and methodologies, Database 1 also categorizes resources according to their applicability across various design fields, including graphic and product design, service design, and healthcare design. The database indicators offer a detailed overview of the types of tools, their intended target audience (e.g., students, professionals, or organizations), and their stage of application in the design process, ranging from ideation to evaluation and validation.

The decision to include toolkits and methodologies not directly connected to EDI stems from findings in the literature review, which highlight that EDI remains insufficiently integrated into scientific design methodologies. The concept of EDI is primarily present in the UK within the fields of Social/Political Sciences and Organizational Studies, Instructional Design, and Inclusion Policies, mostly at a macro-institutional level (e.g., student support services, communication and management strategies, gender and language inclusion, support for people with disabilities).

For this reason, the scope of research was extended to include Inclusive Design, Human-Centred Design, and related fields (see column c). The objectives of each toolkit/methodology (column a) were then analyzed about EDI goals (column b). This association was based on the descriptive summaries and abstracts of the analyzed toolkits. Toolkits explicitly referring to EDI were tagged with the "EDI" label. In other cases, where terms such as "equality,"

"diversity," and "inclusion" appeared in the documentation, the corresponding individual tags were applied. Subsequently, the tags "accessibility" and "usability" were also added, as these areas increasingly incorporate equity-related principles in their methodological backgrounds (e.g., equitable access to information and services, including gender-responsive design).

Column (d) categorizes the toolkits/tools based on design themes or sectors, using the same logic as for indicators (a) and (b). For indicator (e), the analysis also extended to related fields beyond higher education (HE) design, broadening the research scope and identifying potentially valuable toolkits for the EDIDesK project.

Indicator (f), "Types of toolkits and tools," categorizes resources into analog, digital, and hybrid formats, with additional sub-indicators specifying whether tools are "Collaborative," "Individual," or "Both." Additional parameters include collaborative virtual environments and accessible tools/resources (e.g., multimodal usage modes and personalized content access).

Indicator (g), "Design Process Phase," was included to clarify the application stage of each tool in the design process. Three phases were defined to support database readability: Idea Evaluation, Idea Generation, and Idea Validation (see Figure 1).
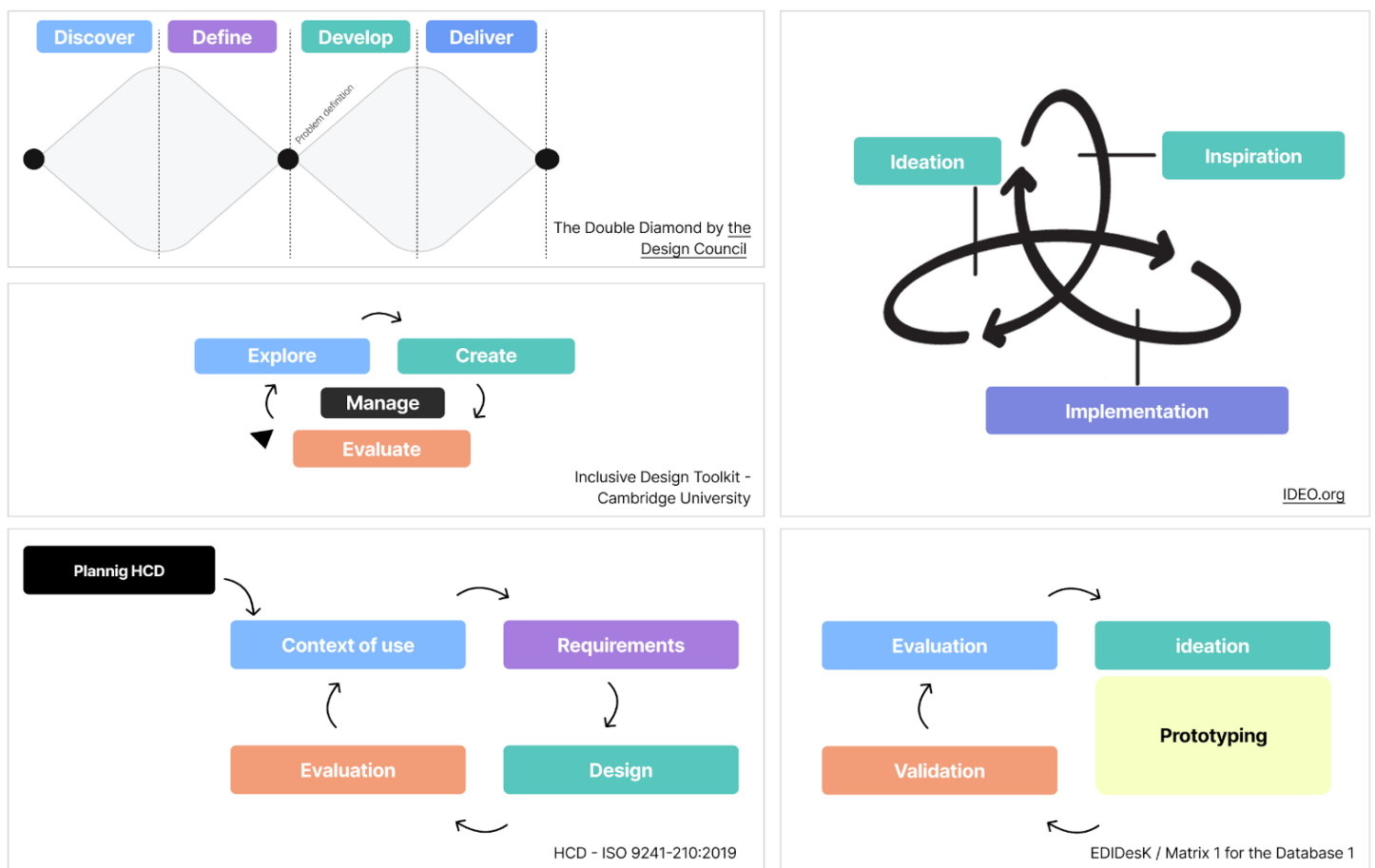
Figure 1. Analysis and development: Indicator (g) Phase of the design process.

Figure 2. EDIDesK Database "AIRTABLE"

The final indicators relate to scientific validation (h) and open access (i). Indicator (h) also encompasses tools and methods cited by others and/or recognized by the international scientific community.

The database is organized using the AirTable platform (see Figure 2), which provides an intuitive and searchable interface where resources are categorized according to the previously described indicators. The interface also includes additional features for viewing detailed deliverables and scheduled timelines for ongoing projects.

To facilitate the assessment of the relevance and effectiveness of the tools, the pros and cons of each toolkit were also analyzed, providing insights into the advantages and potential limitations of each resource (Table 2). These pros and cons consider aspects such as accessibility, scientific validity, ease of use, and applicability in higher education contexts.

Table 2: Database 1 Indicators – Pro and Cons

Pros	Cons
Complexity: (low/simple)	Complexity: (high)
Complexity: (medium)	Not applied/used in the education sector HE,
Open access	Partially open access
Applied in the education sector/HE	Methodology absent (not clearly and directly explained)
Clear methodology	Concise methodology
Digital material	Non-downloadable tool
Analog material	Uneditable tool
Potentially digital	Absence of digital materials
Web-based application	Absence of collaborative tools
Collaborative tool(s)	Absence of collaborative virtual environment
Collab. virtual environment	Absence of supporting material: case studies and/or exercise/tutorial
Supporting material: case studies and/or tutorials	Absence of scientific references
Supporting material: video/podcast	User experience (ULX) to be improved,
Accessible tool/s (vision-listening)	Complex website navigation
Scientific evidence (peer review)	Cited by others
Accredited by the academic/scientific community	Other
Developed in the academic field	
Potentially suitable for the HE field (design and correlated)	
Presence of a research network	
Potential for EDI (medium/high)	
Explore the dimension of EDI	
Multidisciplinary	
Accessible website	
Other	

2.2. Database 2: Tools/Teaching Methodologies and Guidelines for EDI (Potential for EDI)

Database 2 focuses on methodologies, guidelines, and related educational tools that promote inclusive education (Table 3). This database is organized in a less structured manner than the previous one, due to the heterogeneous nature of the data. However, particular attention has been given to tools that directly align with the EDI dimension, especially those applicable in the higher education sector.

The resources in Database 2 were selected to highlight best practices and frameworks for inclusive learning, with a particular focus on open educational resources (OER) and guidelines for educators. Many of the materials are intended for use in higher education, although there is also a growing body of work in primary and secondary education that can serve as a useful reference.

This database features a range of tools and materials, including guidelines for inclusive teaching, workshop resources, and specific methodologies for teaching inclusive design.

As with Database 1, Database 2 is hosted on AirTable, featuring an organized layout that facilitates the exploration of the available resources. This database offers a clear overview of resources, enabling users to explore various teaching strategies and methodologies that incorporate the principles of EDI.

Table 3: Database 2 indicators

(a) Tags	(b)Topics	(c) Typologies	(d) Tools/materials
- Inclusive Learning Classroom - Accessible Education Material - Accessibility Toolkit - Learning Design Handbook - Open Educational Resource - Inclusive Learning - Universal Design - Universal Design for Learning - Individual variability - Workshop Resources - Guides for educators - Mental health - Tools for action, - STEM subjects - Design Thinking for Educators - Inclusive Learning Classroom, - Accessible Education Material	- Understand equality, diversity, and inclusion (EDI) - Accessible Learning, - Learning Environments - Open Educational Resource - Framework for Inclusive Education - Collection of lecture and workshop resources - STEM subjects, Design & Technology - Alternative vs. Accessible formats	- Guide - Guidelines - Toolkit - Workbook - Best Practices - Approaches, perspectives, and techniques for inclusive learning	Description of tools and identification/cataloguing of material useful for EDIDesK project objectives (in particular open access material)

2.3. Database 3: Digital Environment and Digital Tools

Database 3 collects tools related to digital environments and technologies specifically designed for inclusive education (Table 4). This database focuses on tools and platforms that support flexible and inclusive learning in digital contexts, with particular emphasis on open-source software and collaborative web platforms.

The tools in Database 3 are categorized based on their use in creating inclusive educational materials, designing accessible user interfaces, and supporting collaborative learning environments. The database includes detailed descriptions of digital tools, such as Realtime Board and other open-source platforms, which facilitate the co-creation and management of inclusive learning environments.

Together, these three databases provide a comprehensive and structured view of the tools, methodologies, and resources available for integrating EDI principles into design education. The structure and functionality of the databases allow for continuous updates, supporting the goals of the EDIDesK project and promoting inclusive design practices in educational contexts.

Table 4: Database 3 indicators

Tags	Topics	Typologies	Tools / materials
Tools, Guidelines, Database, Open education resources, Guideline and inclusive learning technologies, User Interface Options, Inclusive Classroom, Inclusive education, Accessible Information, Pilot projects and case studies, Practical Teaching tips, Inclusive teaching tactics, open-source software and plugin, collaborative web platform, Realtime Board, Classroom management tools, Co-creation tools.	Create teaching materials. CSS and JavaScript feature Flexible Learning for Open Education Realtime Board Design of inclusive user interfaces Web Usability Inclusively Designed Resources-Multimodal model	Guideline Tools: Digital Materials, Open educational resources, open-source software, and plugin Management tools Co-creation tools User Interface Options	Description of tools (in particular open access tools)

3. RESULTS

Given the complexity and breadth of the reference framework, activity A 2.2 was divided into two main areas. The first relates to the teaching of EDI within the higher education (HE) sector. The second focuses on the pedagogical and operational dimensions of inclusive learning, as well as the related tools, strategies, and application areas. Desk research was conducted across various areas, highlighting important considerations and aspects that will be further mapped and explored within the EDIDesK project. The first consideration regards the application of EDI, which remains underrepresented in the design sector, both geographically and operationally. The EDI approach is more rooted in the United Kingdom, particularly in the disciplinary areas of pedagogy/educational design, as well as social sciences. The second aspect concerns the pedagogical dimension of inclusive learning, which should be more integrated within the design education sector.

3.1. Database 1: "Toolkit, Methodologies, and Tools for EDI (Analog and Digital/Hybrid)"

This involved the collection of much data (about 80), from which 31 deliverables/case studies were selected, 26 of which are directly related to EDI. The selection was made by qualitatively analyzing the coherence with EDI, scientific relevance, and the open-access nature of the content/information (see Appendix, Table Database 1).

During the analysis phase, it emerged that only 2 toolkits and 2 sub-tools explicitly declared EDI as one of their goals: the IDEA Toolkit – Inclusion, Diversity, Equity, Accessibility, and related tools, as well as the EDI by Design Cards (see Line 6, 7, 8, and 14 of Appendix, Table Database 1). Other toolkits were selected based on individual objectives, such as "inclusion, diversity, and equity," as well as related areas including "empathy, understanding of diversity, cognitive and social/personal needs, prevention of exclusion, ensuring usability, and equal access to information and participation." These variants were further classified based on the typology of the toolkits, which consisted of 16 hybrid, 9 digital and 6 Analog Toolkits respectively, and their scientific relevance within the design discipline.

At the methodological level, the scientific framework of the toolkits shows a strong presence of Human-Centered Design, User-Centered Design, Inclusive Design, Design Thinking, Universal Design/Design for All, Human Factors, Social Inclusion, and System Thinking (see Figure 3).

Further noteworthy insights emerged regarding the usage patterns, collaborative dynamics, and educational potential of the tools identified. Among the total of 31 tools analyzed, 64.5% support both individual and collaborative use, 22.6% are exclusively collaborative, and 12.9% are designed for individual use. This distribution underscores the flexibility of many tools in accommodating diverse design contexts and team structures.

Moreover, the analysis highlighted the value of these tools not only in supporting design processes but also as vehicles for learning inclusive design strategies. Many incorporate innovative educational components aimed at enhancing design literacy through practice-based, inclusive methodologies.
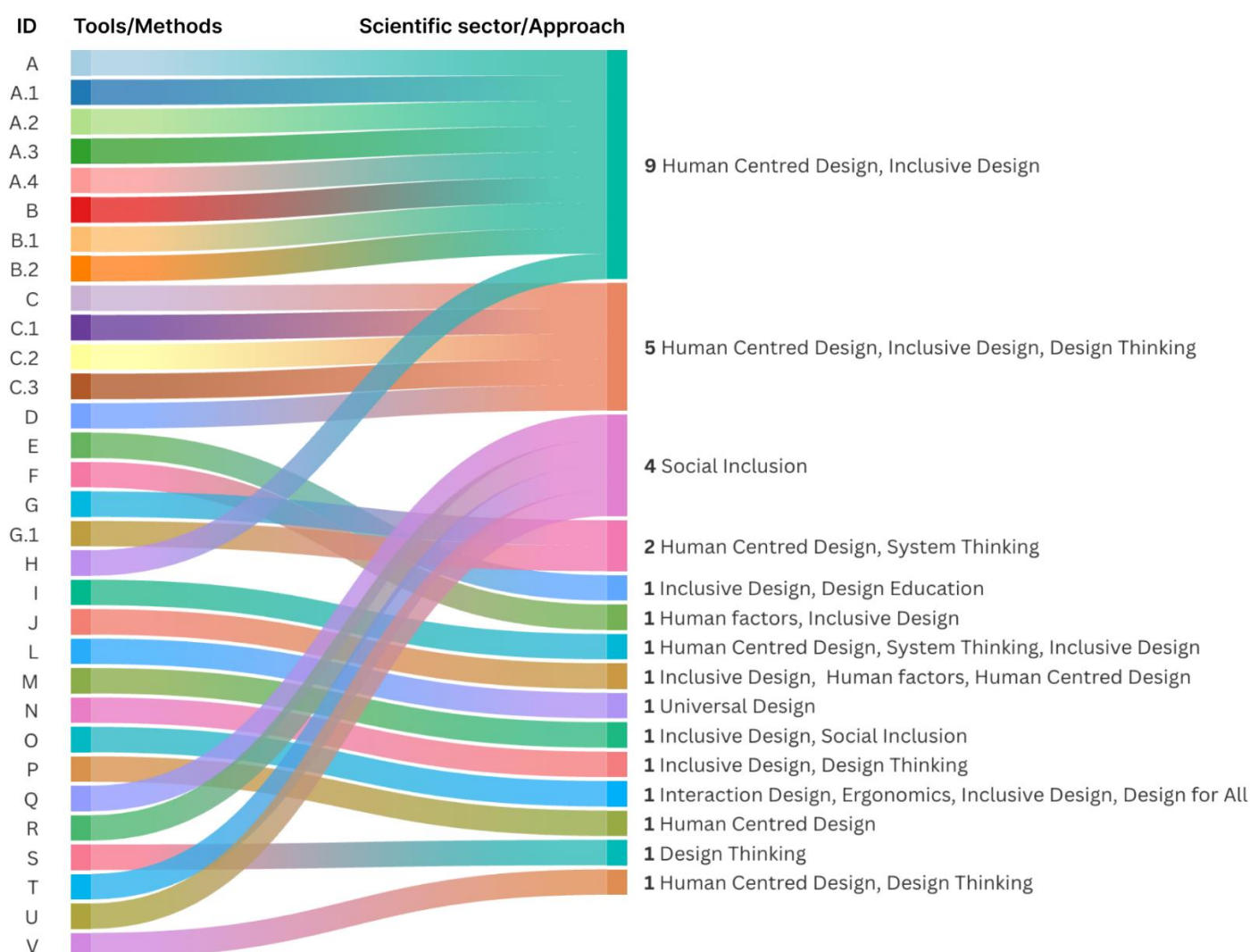
Figure 3. Diagram illustrating the relationship between tools/methods and the corresponding scientific sectors or approaches (Indicator C). For the complete list and detailed descriptions of the tools and methods, see Appendix, Table Database 1.

Crucially, the study also identified a persistent need to ensure equitable access to these tools and the learning environments in which they are applied. In response, tools explicitly designed for accessibility were mapped, including Community-Led Co-Design methods and resources equipped with accessibility-focused features. These include web-based plugins and adaptable toolkits compatible with assistive technologies across iOS, Microsoft, and Android platforms. Such considerations are essential to fostering truly inclusive design education ecosystems.

The analysis revealed a heterogeneous distribution of inclusive tools across different phases of the design process. Out of the 11 tools examined, the majority (n = 6) were specifically designed to support the Idea Generation phase. Three tools were found to address both Idea Generation and Idea Evaluation, while two supported Idea Evaluation and Idea Validation. An additional two tools focused exclusively on the Idea Evaluation phase. Beyond the primary design stages, some tools also contributed to broader process-oriented activities, including Process Management, Recruiting Co-creators, and aspects of Meta-design.

Regarding the fields of application, the tools mapped span a wide spectrum of design domains, including Product Design, Product-Service System Design, Digital Design, Interior Design, Graphic Design, Communication Design, Healthcare Design, Physical Product Design, Research & Design, Service Design, UI/UX Design, Built Environments, Urban Design, Web Design, Web Development, Digital Economy/ICT, Engineering, and Architecture. It highlights the cross-disciplinary relevance and applicability of inclusive, diversity-aware methodologies in both traditional and digital design contexts.

Figure 4. Distribution of "pros" identified across the evaluated resources.

The graphical analysis (Figure 4) provides an overview of the frequency with which key indicators relate to the "pro" indicator (e.g. Table 2). The most frequently represented dimensions include open access (29 occurrences), medium complexity (21) and the use of

collaborative tools (20), along with the availability of analog (19) and digital (17) materials. Additionally, 17 tools are web applications and 15 demonstrate medium-high potential for Equity, Diversity and Inclusion (EDI). Despite these strengths, several critical dimensions are significantly underrepresented: only 3 tools are part of a research network, while the exploration of the EDI dimension, the inclusion of case studies and multimedia supporting materials, such as videos or podcasts, appear in only 6 or fewer instances. These findings suggest a clear trend toward open, digital and moderately complex tools, but also highlight the need for greater integration of research-based validation, accessible content formats and explicit engagement with inclusivity frameworks.

The "Other" category in the chart, regarding the "pros", referred to cross-cutting aspects such as the presence of best practices, tools aimed at raising awareness, interest in ethical design approaches, and the integration of alternative formats (e.g., tools accessible to blind users, templates adaptable through common platforms). Although not classified under standard indicators, these elements make a significant contribution to the overall value of the evaluated resources.
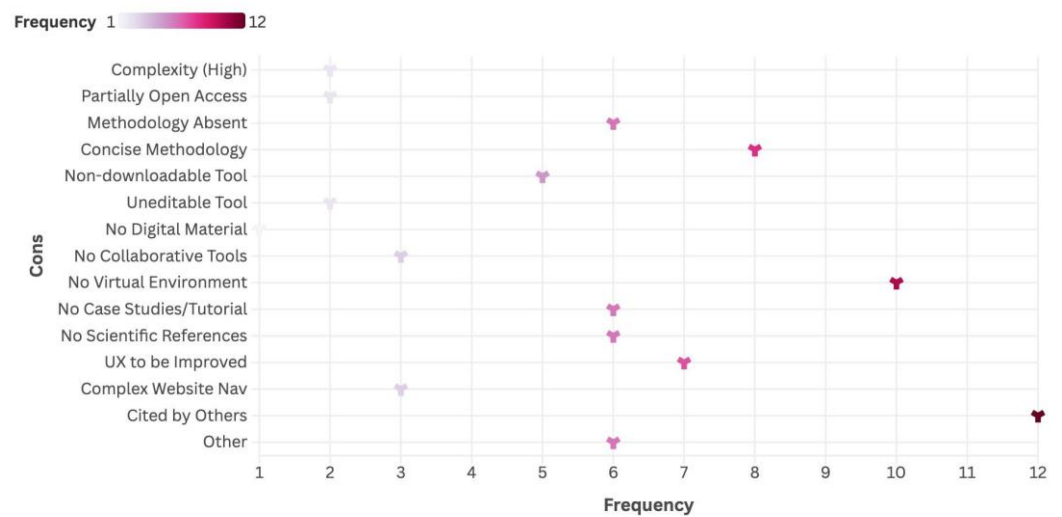
Figure 5. Distribution of limitations "cons" identified across the evaluated resources.

Figure 5 presents the distribution of feature presence among the evaluated resources regarding the "cons" parameter (see Table 2). In particular, the item "Concise Methodology" was present in 8 cases, while "Cited by Others" appeared in 12. The absence of a virtual environment was identified as the most common limitation in 10 resources, followed by the need to improve user experience (UX), observed in 7 cases. Other recurring issues include the absence of a clear methodology and the lack of case studies or tutorials, both reported in 6 instances. Additionally, barriers such as non-downloadable tools (5 cases), high complexity (2), and uneditable or partially open-access formats (2 cases each) further reflect usability and accessibility challenges that persist across several of the assessed tools.

The analysis of the "cons" revealed recurring issues affecting the effectiveness, accessibility, and educational relevance of the resources. Common limitations include the lack of collaborative virtual environments, poor user experience, unclear methodologies, and limited supporting materials. Additional concerns involve non-downloadable or uneditable tools, partial access, and high complexity. While some resources are cited elsewhere, this does not necessarily imply a structured scientific validation.

Brischetto, A.; Iacono, E. (2024). Mapping Inclusive Teaching Methodologies in Design Education: A Benchmarking Study on Digital and Traditional Tools for Equality, Diversity, and Inclusion. *Strategic Design Research Journal. Volume 17*, number 01, January - April 2024. 87-106. DOI: 10.4013/sdrj.2024.171.07

3.2. Database 2: "Teaching Tools/Methodologies and Guidelines for EDI

This phase involved the collection of around 30 deliverables/case studies, of which 11 were selected as EDI-related. Again, the selection was based on a qualitative analysis of coherence with EDI, scientific relevance, and the open-access nature of the content/information (see Appendix, Table Database 2). The selected data were used to establish a methodological framework relating to best practices and recommendations in education, both from the teacher's and the student's side. The investigation highlighted that most tools and guidelines aim to develop curricula, materials, and resources designed to incorporate flexibility, adaptability to individual variability, equity in the learning experience, creation and sharing of open educational resources (OER), and attention to accessibility vs. alternative formats of content.

Curriculum design resources include the UDL Guidelines (CAST, 2018), the FLOE Inclusive Learning Design Handbook (IDRC), the EDI Toolkit for Researchers (Newcastle), and Design Thinking for Educators (IDEO, 2009). These tools focus on designing flexible curricula and adaptive educational materials. The Universal Design for Learning (Rose et al., 2006) framework is a key reference. However, many of these resources are developed for K-12 education, with limited adaptation to higher education contexts.

Another significant case study is the CAST Universal Design for Learning (UDL), a methodology promoting inclusive, accessible, and flexible learning environments. UDL has been successfully applied in graphic design courses at the Massachusetts Institute of Technology (MIT). In this context, teachers used multimodal resources and adaptable materials (such as videos, texts, and interactive e-learning) to address students' variability, particularly those with cognitive or sensory disabilities. The results were positive, with improved student participation and academic outcomes, demonstrating how accessibility principles can enhance the educational experience without compromising content quality (CAST, 2018).

3.3. Database 3: "Digital Environment and Digital Tools"

This phase involved analyzing approximately 60 deliverables and case studies, with 22 selected for in-depth review based on their relevance to inclusive digital education (see Appendix, Table Database 3). Building on Database 1, the analysis focused on digital tools and environments that enable flexible, accessible, and participatory learning experiences.

The catalogue includes technologies for accessible interface design, the use of front-end web languages (CSS, JavaScript), and a variety of open-source tools supporting adaptive learning. A key example is the FLOE project (Inclusive Design Research Centre, OCAD University), where the Community-led Co-Design Kit is integrated into design studios. These courses engage students in creating inclusive applications, from web accessibility solutions to AR/VR environments tailored to diverse sensory and cognitive needs. Collaborative platforms like Miro and Mural were also identified for their ability to support real-time interaction, hybrid teamwork, and inclusive co-design. Many of these tools apply Universal Design for Learning (UDL) principles, offering alternative content formats, screen reader compatibility, and customizable interfaces to accommodate learner diversity.

However, the widespread adoption of these tools in institutional learning environments remains limited. To advance digital inclusion, strategic priorities should focus on: (1) embedding inclusive technologies within Learning Management Systems (LMS); (2) providing

targeted faculty training; (3) using student feedback and engagement data to guide implementation; and (4) fostering partnerships with open-source communities for ongoing development.

Database 3 serves not only as a reference repository but also as a strategic framework for integrating digital inclusion into design education. It underscores the transformative potential of digital tools in enhancing accessibility, collaboration, and learner empowerment—cornerstones of a more inclusive and future-ready academic environment.

4. DISCUSSION

This research offered an in-depth exploration of the current integration of Equity, Diversity, and Inclusion (EDI) in higher education, with a specific focus on the Design field. Through the structured desk-based analysis of three thematic databases – Toolkits, Teaching Methodologies, and Digital Environments and Tools – it was possible to identify both critical gaps and promising directions for inclusive and interdisciplinary pedagogical innovation.

The study confirms that the explicit and systemic adoption of EDI frameworks in design education remains limited, especially outside Anglophone contexts. Nonetheless, implicit EDI values emerge through the application of participatory approaches such as Inclusive Design, Design Thinking, and Human-Centered Design, which emphasize co-creation, empathy, and attention to social complexity. These practices, however, often lack the critical and theoretical grounding needed to address EDI as a structural issue. Strengthening this connection requires targeted strategies, including faculty training, the development of inclusive assessment models, and the integration of EDI as a cross-cutting pedagogical principle.

From a methodological perspective, the study highlights a convergence toward frameworks centered on the user and oriented toward social sustainability, such as Design for All and Systems Thinking. However, this convergence does not always correspond with a deep awareness of the political, cultural, and ethical implications of EDI. There is a pressing need to equip educators and students with tools that bridge design practice and EDI theory, fostering a more reflective and critical engagement with inclusion.

In terms of digital infrastructure, the research shows a growing availability of open-source tools, collaborative platforms, and accessibility-oriented technologies, including assistive plugins and inclusive content frameworks. However, the fragmented implementation and limited institutional embedding of these tools remain key limitations. Initiatives such as UDL (Universal Design for Learning), the FLOE project (IDRC), and Community-led Co-Design provide valuable best practices that demonstrate how digital environments can support flexible and inclusive learning experiences.

Ensuring designed-in accessibility – not as an afterthought but as a core design principle – is essential to achieving lasting transformation. This means embedding accessibility from the initial stages of curriculum development, platform selection, and learning design.

5. CONCLUSION

This study underscores the pressing need for a comprehensive, cross-sectoral commitment to integrating Equity, Diversity, and Inclusion (EDI) at the core of design education and academic practice. While offering a foundational step, it emphasizes the importance of collective

innovation, critical reflection, and interdisciplinary collaboration in reshaping pedagogical models and institutional cultures.

We urge educators, researchers, institutions, and policymakers to engage in the co-creation of inclusive educational ecosystems actively. It includes refining pedagogical tools, validating emerging practices, and developing open-access resources and methodological frameworks. The practical implementation of EDI requires sustained interdisciplinary dialogue and the courage to challenge traditional models of teaching, learning, and governance.

Rather than proposing a fixed solution, this study introduces a living framework—an evolving platform for experimentation and shared responsibility. Fostering inclusive academic environments will better prepare future designers and professionals to navigate the complexity and diversity of contemporary societies. Building on the EDIDesK project and looking beyond it, we recommend the following strategic directions for future development:

- Embed EDI concepts early in design education through progressive learning pathways;

- Form interdisciplinary teaching teams with expertise in inclusive pedagogy;

- Integrate inclusive tools into both instruction and assessment practices;

- Implement monitoring processes using feedback and data to evaluate EDI outcomes;

- Develop flexible guidelines for embedding EDI in curricula and learning design;

- Co-create open-access methodologies validated by empirical research;

- Design hybrid, multimodal, and accessible learning environments that promote participation and autonomy;

- Foster an academic culture grounded in ethical commitment to diversity, equity, and social justice.

This work represents an initial step toward building educational infrastructures that recognize diversity as a structural asset, rather than an exception. Dissemination of the findings will be essential to advance EDI as a shared responsibility across educational, research, and professional spheres.

Nevertheless, this study has limitations. Based on desk research and secondary data, empirical validation is required through qualitative fieldwork, interviews, and case studies. The heterogeneity of the data also necessitated simplifications, which future iterations—ideally co-developed with experts and stakeholders—should address to enhance accuracy and relevance.

Ultimately, the evolving nature of EDI necessitates the ongoing refinement of frameworks and practices. A sustained institutional commitment is crucial to ensure that inclusion is not treated as a symbolic ideal but as a dynamic and operational foundation of design education.

This trajectory invites broader interdisciplinary and transnational reflection, opening new avenues for research, pedagogical innovation, and institutional transformation towards a more just, inclusive, and responsive educational paradigm.

ACKNOWLEDGMENTS

REFERENCES

AdvanceHE. (2020). *Equality, Diversity and Inclusion Strategy 2020–2024.* AdvanceHE. Retrieved August 22, 2025, from https://www.advance-he.ac.uk.

Bason, C. (2010). *Leading public sector innovation: Co-creating for a better society*. Policy Press.

Buchanan, R. (1992). Wicked problems in design thinking. *Design Issues*, 8(2), 5–21. Retrieved August 22, 2025, from https://www.jstor.org/stable/1511637.

CAST. (2018). Universal Design for Learning guidelines version 2.2. Retrieved August 22, 2025, from https://udlguidelines.cast.org.

Clarkson, J., Coleman, R., Hosking, I., & Waller, S. (2013). *Inclusive design: Design for the whole population*. Springer.

Costanza-Chock, S. (2020). *Design justice: Community-led practices to build the worlds we need*. MIT Press.

Ghosh, S., & Coppola, S. (2024). This class isn't designed for me: Recognizing ableist trends in design education, and redesigning for an inclusive and sustainable future. *arXiv Preprint*. https://doi.org/10.48550/arXiv.2403.15402

IDEO. (2009). Human centered design toolkit. Retrieved August 22, 2025, from https://www.ideo.com/journal/design-kit-the-human-centered-design-toolkit.

Norman, D. A. (2013). *The design of everyday things: Revised and expanded edition*. MIT Press.

Pullin, G. (2009). *Design meets disability*. MIT Press.

Rossi, E., & Brischetto, A. (2024). Contribution of the 'Equality, Diversity, and Inclusion'Concept to Design Education: A Systematic Literature Review. *Sustainability*, 16(19), 8478. DOI: https://doi.org/10.3390/su16198478.

Rose, D. H., Meyer, A., & Gordon, D. (2006*). Universal design for learning: Theory and practice*. CAST Professional Publishing.

Sanders, E. B. N., & Stappers, P. J. (2014). Probes, toolkits and prototypes: Three approaches to making in codesigning. CoDesign, 10(1), 5–14. DOI: https://doi.org/10.1080/15710882.2014.888183.

United Nations. (2015). Transforming our world: The 2030 agenda for sustainable development. Retrieved August 22, 2025, from https://sdgs.un.org/2030agenda.

Wang, Y. (2025). Advancing Sustainable Development Goal 4 through a scalable tool for monitoring progress in education. *Sustainability, 17*(10), 4369. https://doi.org/10.3390/su17104369

APPENDIX

Table Database 1 - toolkits, methodologies, approaches, and tools for EDI (analog and digital); Tot. Products mapped: 31 (16 ToolKit - 10 sub-Tool - 5 extra Toolkits)

ID	Tools and Methods	Author	References/Sources	EDI goals and others
A	Inclusive Design Toolkit	Cambridge University	Clarkson et al., 2007; Dong & Clarkson, 2005; Cassim & Dong, 2007; Dong et al., 2012 Clarkson et al., 2013; Herriott, 2013; Coleman et al., 2016; Wilson et al., 2019 Website	Diversity, Inclusion, Exclusion, Accessibility
A.1	Inclusive Design Toolkit - Sub tool: Exclusion Calculator Lite v2.1	Cambridge University	Combe et al., 2011; Waller et al., 2010 Website	Diversity, Inclusion, Exclusion, Accessibility
A.2	Inclusive Design Toolkit - Sub tool: Digital personas	Cambridge University	Goodman-Deane et al., 2021 Website	Diversity, Inclusion, Exclusion, Accessibility
A.3	Inclusive Design Toolkit - Sub tool: Family set of personas	Cambridge University	Goodman-Deane et al., 2021 Website	Diversity, Inclusion, Exclusion, Accessibility
A.4	Inclusive Design Toolkit - Sub tool: Design process checklist	Cambridge University	Clarkson & Eckert, 2010 Website	Diversity, Inclusion, Exclusion, Accessibility
B	IDEA Toolkit - Inclusion, Diversity, Equity, Accessibility	Cambridge University	Zallio & Clarkson, 2022 Zallio & Clarkson, 2021 Website	All EDI
B.1	IDEA Toolkit - Sub tool: Design with the Inclusive Design Canvas	Cambridge University	Source	All EDI
B.2	IDEA Toolkit - Sub tool: Toolkit - Sub tool: Understand people with the IDEA audit	Cambridge University	Zallio & Clarkson, 2022 Website	All EDI
C	Microsoft: Inclusive design toolkit	Microsoft	Fraga Viera et al., 2020; Gilbert, 2019; Holmes, 2020 Website	Diversity, Inclusion, Accessibility
C.1	Microsoft: Inclusive design toolkit - Sub Tool: Inclusive activity cards	Microsoft	Source	Inclusion, Diversity, Equality, Accessibility, Empathy, Cognitive Needs, Exclusion
C.2	Microsoft: Inclusive design toolkit - Sub Tool: Inclusive Design for Cognition: Worksheet	Microsoft	Source	Inclusion, Diversity, Equality, Empathy, Cognitive Needs
C.3	Microsoft: Inclusive design toolkit - Sub Tool: Inclusive Design for Cognition Screeners	Microsoft	Source	Inclusion, Diversity, Equality, Cognitive Needs
D	Operationalizing Inclusive Design	Google	Source	Diversity, Inclusion
E	EDI by Design Cards	Research Consulting by Nottingham University	Craigon et al., 2023 WebSite	All EDI
F	The Inclusive Design Guide	Inclusive Design Research Centre (IDRC); OCAD University	Godin, 2017; May, 2022; Treviranus, 2018; Vala-Webb, 2017 Website	Inclusion, Diversity, Accessibility
G	Community-Led Co-Design	Inclusive Design Research Centre (IDRC) at OCAD University	Costanza-Chock, 2020 Website	Inclusion, Diversity
G.1	Inclusive Cities Co-design Kit	Inclusive Design Research Centre (IDCR)	Source	Inclusion, Diversity
H	Inclusive Co-design Toolkit	Hitomi Yokota - Bridgeable	Source	Inclusion, Diversity
I	Inclusive Design toolkit (POLIMI)	POLIMI & Tangity - Authors: Grillo, Gupta, Yu	Source	Inclusion, Diversity
J	Inclusive design toolkit (ONTARIO)	Co-created by Ontario Digital Service and Accessibility Centre of Excellence for the Ontario Public Service	Piro, 2023 Website	Inclusion, Diversity, Equality
L	Inclusive Digital Mobility Toolbox	by INDIMO - Horizon 2020 project	Basu et al., 2023; Di Ciommo et al., 2023 Website	Inclusion, Diversity, Equality, Usability, Accessibility

M	Inclusive Signs	Lincoln University - Author: Rossi E.	Rossi, 2023 [Website]	Inclusion, Diversity, Equality, Empathy
N	Cards for Humanity	FROG Design	Omar et al., 2023 [Source]	Inclusion, Diversity, Equality, Empathy
O	Inclusive Design Works	Google I/O, Grace Hopper, SF Design Week	Patrick & Hollenbeck, 2021; Oleson et al., 2023 [Source]	Inclusion, Diversity, Equality, Accessibility, Empathy
P	18F Method Cards	GSA's Technology Transformation Services	Khalid et al., 2019; Hsieh et al., 2023 [Source]	Usability, Accessibility, Inclusion, Diversity
Q	Digital Ethics Compass Toolkit	Danish Design Centre	Islind & Willermark, 2022 Bason, 2022 [Source]	Inclusion, Equality, Diversity
	Extra			
R	Liberatory Design Toolkit	Stanford University's d.school and National Equity Project	Flood, 2023; Pal, 2023; Udoewa & Gress, 2023; Fridman et al., 2022 [Website]	Equality, Equity
S	Actionable Futures Toolkit v 1.0	NORGKAPP	PSI–OECD [Source]; Canina et al., 2021; Kurze & Berger, 2022; Bisson et al., 2020 [Website]	Equality, Inclusion
T	UNaLAB Toolkit: Tools for Co-creation	UNaLAB - Horizon 2020 project	EU Project UNaLab [Website]	Inclusion, Diversity, Equality
U	Social Impact Design SID Toolkit	Kentsel Strateji for the World Bank, in collaboration with the Ministry of Environment and Urbanization	World Bank et al., 2014; Durmaz & Atila, 2015; Volpi et al., 2019 [Website]	Inclusion, Diversity, Equality
V	Service Design Tools (Platform)	POLI.design	Tassi et al., 2018; Diana et al., 2010 [Website]	Diversity, Usability

Table Database 2 - Tools/teaching methodologies and guidelines for ED (Tot. Products mapped: 11)

ID	Name	Tags	Topics	References/Sources
1	EDI Toolkit for Researchers (teachers) by Newcastle University	EDI ToolKit, Equality Act 2010, Lead research teams	Understand equality, diversity, and inclusion (EDI)	**NCL Toolkit** – [Source]
2	EDI Faculty Toolkit (Humber College's)	EDI ToolKit, Identity-Responsive Instruction, Inclusive Instruction	Inclusive and Identity-Responsive Instruction	Humber Belonging (2022) **-** [Source]
3	Accessibility Toolkit – 2nd Edition	Accessibility Toolkit, Learning Environment, Universal Design	Accessible Learning, Environments	**BC Accessibility Toolkit** - [Source]
4	The FLOE Inclusive Learning Design Handbook (IDCR)	Learning Design Handbook, Open Educational Resource, Inclusive Learning	Open Educational Resource	**FLOE Handbook** – [Source]
5	Universal Design for Learning (UDL) - CAST	Universal Design for Learning, Individual variability	Framework for developing curricula, materials and resources intentionally built to incorporate flexibility, accommodating individual variability	**CAST UDL** - [Source]
6	Tools for taking action (Stanford University)	Workshop Resources, Human-centerd design, Guides for educators, Mental health, Tools for action	Collection of lecture and workshop resources	**d.school – Stanfors Resources** – [Source]
7	Designing Our Tomorrow (DOT) - University of Cambridge	STEM subjects, Inclusive Learning	STEM subjects, Design & Technology	**DOT Toolkit** – [Source]
8	IDEO - Design Thinking for Educators	Design Thinking for Educators	For the K-12 sector (however interesting for EDIDesK).	**IDEO Educators** – [Source]
9	Inclusive Learning Design - Author: Virna Rossi	Inclusive Learning Design, Guides for educators	For HE	**InclusiveLD** – [Source]
10	SNOW Inclusive Learning & Education- Inclusive Design Research Centre at OCAD University	Inclusive Learning Classroom, Accessible Education Material	Alternative vs. Accessible formats	**DRC SNOW** – [Source]
11	Agency's Voices into Action (VIA) [EUROPEAN AGENCY for Special Needs and Inclusive Education]	Guidelines, Inclusive education	Framework for Meaningful Participation in Inclusive Education	**VIA Toolkit** (EU) – [Source]

Table 2 – References

ID	References/Source – Table Database 2
1	Newcastle University. (n.d.). *EDI Toolkit*. Retrieved from https://www.ncl.ac.uk/research/culture/edi-toolkit/
2	Humber College. (2022). *Teaching for Belonging*. Retrieved from https://humber.ca/innovativelearning/wp-content/uploads/2022/06/TeachingForBelongingJune22.pdf
3	BCcampus. *Accessibility Toolkit*. Retrieved from https://opentextbc.ca/accessibilitytoolkit/
4	Floe Project. *FLOE Handbook: Approaches*. Retrieved from https://handbook.floeproject.org/approaches/
5	CAST. *CAST: Universal Design for Learning*. Retrieved from https://www.cast.org/
6	Stanford d.school. *Resources*. Retrieved from https://dschool.stanford.edu/resources
7	Designing Our Tomorrow. (n.d.). *Home*. Retrieved from https://www.designingourtomorrow.com/
8	IDEO. *Design Thinking for Educators*. Retrieved from https://designthinking.ideo.com/resources/design-thinking-for-educators
9	Inclusive Learning Design. *Home*. Retrieved from https://inclusivelearningdesign.com/
10	Inclusive Design Research Centre. (n.d.). *Inclusive Design for Learning: Creating Flexible and Adaptable Content with Learners*. Retrieved from https://snow.idrc.ocadu.ca/articles/inclusive-design-for-learning-creating-flexible-and-adaptable-content-with-learners/
11	European Agency for Special Needs and Inclusive Education. (n.d.). *VIA Online Toolkit*. Retrieved from https://www.european-agency.org/via-online-toolkit

Table Database 3 – Digital environment and digital tool (Tot. Products mapped: 22)

ID	Name	Tags	Topics	References/Sources
1	Clusive® (UDL – CAST)	Tools	To create teaching materials	**CAST Clusive** (2022) – Source
2	UDL Studio™ (UDL – CAST)	Tools	To create teaching materials (UDL)	**UDL Studio** – Source
3	UDL Exchange™ (UDL – CAST)	Tools	It is a place to browse and build resources, lessons, and collections. You can use and share these materials to support instruction guided by the UDL principles	**UDL Exchange** – Source
4	CAST Figuration® (UDL-CAST)	Tools	CSS and JavaScript feature package that can be used as a starting point for building an accessible, interactive, multi-device Web site.	**CAST Figuration (2024)** – Source
5	(A) The FLOE project "Flexible Learning for Open Education" (by Inclusive Design Research Centre -IDRC)*	Tools, Guidelines, Database	GL and inclusive learning technologies – Flexible Learning for Open Education	FLOE Project, 2024 – Source
6	(A) FLUID Project (by Inclusive Design Research Centre -IDRC)*	Tools, Guidelines, Database, Open Education Personalization Open Education Resources	Design of inclusive user interfaces; User Experience and inclusiveness of open-source software	**Fluid Infusion** – Source
7	(A)User Interface Options (UI Options) "FLOE" (by Inclusive Design Research Centre -IDRC)	Tools, Guidelines, User Interface Options	User Interface Options – Web Usability	**FLOE – UI Options** – Source
8	(A) Weavly > "FLOE" (by Inclusive Design Research Centre -IDRC)	Tools, Coding	Non-HE sectors (however interesting for digital design/interaction design)	**Weavly Workshop Guide** (2022) – Source
9	5 Microsoft Education tools for an inclusive classroom	Guidelines, Tools, Inclusive Classroom, Inclusive Education	Guide for Microsoft software	**Microsoft Inclusive Tools (2022)** – Source
10	ToFIE – Tools for Inclusive Education [EU project]	Guidelines, Tools, Inclusive Classroom, Inclusive Education	Specific learning disorders in Higher education	**ToFIE (2023)** – Source
11	Guidelines for Accessible Information (ICT4IAL)	Guidelines, Accessible Information	Guidelines for Accessible Information are an open educational resource to support the creation of accessible information for learning	**ICT4IAL (2015)** – Source
12	(B) Country Resources collected during the ICT4I project [EU project]	Database, Guidelines	Examples of innovative ICT for inclusion in practice	**European Agency – Tools** – Source
13	(B)ICT as a tool for promoting equity [EU project]	Database, Pilot Projects, Case Studies	Key Tool for promoting Equity in Educational	**European Agency – ICT for Equity** – Source
14	EID Toolkit for Teaching	Toolkit, Practical Teaching Tips, Inclusive Teaching Tactics	Inclusive teaching tactics; Syllabi, assignments, classroom interactions and accessibility;	**VCU Inclusive Learning Resources** – Source
15	Inclusively designed PhET (University of Colorado Boulder)	Toolkit, Open-Source Software Architecture, Open Education Personalization Open Education Resources, Inclusive Education	Inclusively Designed Resources, Multi-modal model, open-source software architecture, open-source software architecture	**PhET Accessibility Prototypes** – Source
16	Gamestorming	Database, Design/Toolkit And Template, Co-Creation Tools	Editable Tools – Used in the HE sector/ Process Facilitation and Co-Design	**Gamestorming** – Source
	Collaborative environments			

17	MIRO - Inclusive Design Toolkit by @Tangity	Web Collaborative Platform, Realtime Board	Supports and can support tools and method models for Design and related fields (up to 3 projects use of the platform is free – many universities have active licenses)	MIRO - ID toolkit by Tangity Source
18	FIGMA Template (by (Inclusive Design for Cognition by @microsoft)	Web Collaborative Platform, Realtime Board	Supports and can support tools and method models for Design and related fields (up to 3 projects use of the platform is free – many universities have active licenses)	**Figma – Inclusive Design for Cognition –** Source
19	MURAL (EDI and ID template)	Web Collaborative Platform, Realtime Board	Supports and can support tools and method templates for Design and related fields	**Mural** – Source
20	Maker's Empire	Web Collaborative Platform, 3D Design Tool	Not open access – Interesting for 3d modeling	**Makers Empire** – Source
21	Minecraft – Education Edition	Web Collaborative Platform, Classroom Management Tools	Also used in educational settings for Special Educational Needs	**Minecraft Education** – Source
22	StoriumEDU	Collaborative Writing Game	Unused in the HE sectors – interesting because of the game dimension (card instrument) – addresses social issues	**StoriumEdu** – Source

Table 3 – References

ID	References/Sources
1	CAST. (2022). *Clusive*. https://www.cast.org/resources/products/clusive
2	CAST. *UDL Studio*. http://udlstudio.cast.org
3	CAST. *UDL Exchange*. https://udlexchange.cast.org/home
4	CAST. (2024). *Figuration*. https://www.cast.org/resources/digital-tools/cast-figuration
5	FLOE Project. (2024). *About the FLOE Project*. https://floeproject.org/about/
6	Fluid Project. (n.d.). *Infusion*. https://fluidproject.org/infusion.html
7	FLOE Project. (n.d.). *UI Options*. https://floeproject.org/ui-options/
8	Weavly. (2022). *Facilitating a Weavly coding workshop (beginners)*. https://weavly.org/learn/resources/facilitating-a-weavly-coding-workshop-beginners/
9	Microsoft Education. (2022, October). *5 Microsoft Education tools for an inclusive classroom*. https://educationblog.microsoft.com/en-us/2022/10/5-microsoft-education-tools-for-an-inclusive-classroom
10	ToFIE. (2023). *Tools for Inclusive Education*. https://tofie.eu
11	ICT for Information Accessibility in Learning (ICT4IAL). (2015). *Inclusive education and accessibility*. https://www.ict4ial.eu
12	European Agency for Special Needs and Inclusive Education. (n.d.). *Resources – Tools*. https://www.european-agency.org/resources/tools
13	European Agency for Special Needs and Inclusive Education. (n.d.). *ICT tool promoting equity*. https://www.european-agency.org/activities/ict-tool-promoting-equity
14	Virginia Commonwealth University. (n.d.). *Tools and resources for inclusive learning*. https://intranet.chs.vcu.edu/equity-inclusion-and-diversity/tools-and-resources-for-inclusive-learning/
15	PhET Interactive Simulations. (n.d.). *Accessibility prototypes*. https://phet.colorado.edu/en/accessibility/prototypes
16	Gray, D., Brown, S., & Macanufo, J. (n.d.). *Gamestorming*. https://gamestorming.com
17	Tangity. (n.d.). Inclusive design toolkit: A modern approach to design. https://medium.com/tangity/inclusive-design-toolkit-a-modern-approach-to-design-7906004a7455
18	Figma Community. (n.d.). *Inclusive design for cognition* [Figma file]. https://www.figma.com/community/file/1228462824287168966/inclusive-design-for-cognition
19	Mural. *Visual collaboration for teams*. https://www.mural.co/
20	Makers Empire. *Empowering students through 3D design*. https://www.makersempire.com/
21	Minecraft Education. *Learning with Minecraft*. https://education.minecraft.net/
22	StoriumEdu.. *Interactive storytelling for education*. https://storiumedu.com/

Advancing Global Design Education Through Strategic Internationalization

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ABSTRACT

This position paper, jointly developed by the Cumulus Association and EIDD – Design for All Europe, articulates a shared vision to advance global design education through strategic internationalization. In the face of climate change, technological disruption, and social inequality, design education must equip future professionals to operate across cultural, social, and geographic boundaries. The paper outlines key strategies that extend beyond traditional mobility programs, advocating inclusive, sustainable, and culturally responsive curricula, collaborative research, and community-building practices. By integrating the principles of "Design for All" with Cumulus's global network of institutions, it promotes equitable access, interdisciplinary cooperation, and ethical responsibility. The paper ultimately frames design education as a transformative force to address global challenges while fostering creativity, diversity, and social well-being.

Keywords: Internationalization of Design Education, Inclusive Design, Global Collaboration, Sustainability, Cultural Diversity.

INTRODUCTION

With an era of unprecedented world interdependence and increasing challenges – from climate change to technological disruption, from social inequality to cultural heritage – design education has perhaps never been more critical. As we grapple with complex planetary issues that disregard borders, the call for internationally skilled designers who can transcend cultures and contexts has become exigent.

This common position paper by the Cumulus Association and EIDD Design for All Europe states a shared vision to carry forward internationalization in design education. The two organizations, although varying in their respective missions, come together on a set of fundamental values: facilitating worldwide cooperation, enabling design for all, and training designers to address worldwide challenges through innovative, culturally relevant, and universally accessible solutions.

Cumulus Association, representing over 400 institutions of art, design, and media in 71 countries across five continents, is the global leader in collaborative education in design. EIDD Design for All Europe is committed to universal design and accessibility values that form the basis of design solutions serving all individuals regardless of age, ability, or origin. Both associations together promote complementary yet essential features of the worldwide mission of design education in the contemporary world.

As design education increasingly addresses worldwide issues, both organizations recognize that traditional, locally oriented school models may require additional help so that students can thrive in an increasingly interconnected world. The COVID-19 pandemic, accelerating technological advancements, and unsustainable challenges have all validated the need for design solutions that work best across cultural, geographic, and access divides.

The following position paper outlines strategic internationalization strategies that move beyond the regular mobility programs to encompass a radical reimagining of curricula, research culture, and institutional settings. It lays out a framework for inclusive, sustainable, and culturally responsive international engagement to address the needs of diverse global publics, both respecting the specificities of local contexts and addressing universal human needs.

1. THE CUMULUS APPROACH TO GLOBAL DESIGN EDUCATION

1.1. Historical foundation and evolution

Cumulus Association itself began in 1990, shortly after the Berlin Wall fell, with the objective of forming networks for collaboration across institutional and national borders. Initially intended as an EU project to facilitate scholarly exchange in harmony with the new Erasmus program, Cumulus has evolved into a global association encompassing the full spectrum of international design education.

This evolution from a European network to a global platform reflects broader transformations in the practice and education of design. From its inception as a facilitator of student and academic mobility, it has evolved into a system that encompasses research collaboration, knowledge sharing, and the education of globally competent designers. Cumulus now spans the five continents, bringing together institutions ranging from large universities to specialist academies, from public to private, to provide unparalleled cross-cultural learning and collaboration opportunities.

1.2. Strategic pillars of internationalization

The Cumulus model of internationalization relies on specific fundamental pillars that have been the cornerstones of our growth and expansion throughout the years:

- Communication: developing multi-channel, holistic communications strategies that leverage digital technologies to unite our global community. This involves providing platforms for knowledge exchange, facilitating virtual collaboration, and ensuring information crosses linguistic and cultural divides successfully. Cumulus's communications infrastructure supports everything from everyday coordination between member institutions to large international initiatives.

- Collaboration: building substantial, two-way partnerships that go beyond transactional relationships in pursuit of long-term collaborative partnerships. This pillar encompasses joint research projects, collaborative curriculum development, international working groups, and collective responses to global design problems. Our collaboration model is founded on mutual benefit and cultural exchange rather than one-way knowledge transfer.

- Community: building a sense of shared identity and belonging among our global diversity networks. This pillar involves the development of inclusive spaces for interaction, serving underrepresented regions and institutions, and ensuring that every member feels like a respected contributor to our collective mission. Our community-building efforts recognize that effective internationalization requires not just professional relationships but also personal ones.

- Student-Centric Internationalization: at the heart of Cumulus's identity is our commitment to being a student-centred association. We understand that students are not merely recipients of internationalization efforts, but also active agents in shaping the global design culture. This philosophy is manifested in a series of flagship initiatives:

- Student Ambassador Program: the merit-based Student Ambassador Program has been honouring excellent student talent in member institutions since 2015, offering chosen students the opportunity to serve as representatives of global ambassadors at Cumulus conferences. These ambassadors interact with our worldwide design community, develop leadership skills, and support association activities through social media promotion, documentation, and peer networking. The program offers opportunities for emerging designers to engage with the global design education community, introducing fresh perspectives into our practice.

- Cumulus Student Talent Camp: this new program brings together students from around the world for intensive week-long workshops that create unique spaces for collaboration across disciplinary and cultural boundaries. The geographical path of Talent Camps – from Jaipur, India (2023) to Pordenone, Italy (2024) to Cotonou, Benin (2025) – demonstrates our commitment to making these opportunities truly global, exposing students to varied design contexts while making international experience accessible to those who would otherwise be excluded from global mobility.

- Cumulus PhD Network: recognizing the growing importance of doctoral education in design, we established this network to connect PhD students, supervisors, and programs in our global network. The network fosters specialist tracks in conferences, discussions in research methodology, and connects emerging researchers with senior researchers across institutional boundaries. This initiative has been particularly valuable for members in regions where doctoral education in design is still in its early stages.

- Working Groups – Communities of Practice: Working Groups are Cumulus' intellectual force, vibrant communities of practice where members collaborate based on shared interests and competence. Beginning with the pioneering X-Files Working Group, set up to facilitate international exchanges, the Working Groups have evolved to encompass a broad range of design research and practice areas. Our Working Groups are semi-autonomous but networked communities within the overall Cumulus context. They organize thematic sessions at conferences, generate collaborative research activities, publish research, and offer opportunities for ongoing interaction between our biennial conferences. Recent changes have enabled the launch of new Working Groups in emerging areas,

provided structural support for activities, and fostered publication and dissemination of outcomes. The Working Groups are among our most successful models of long-term international cooperation, demonstrating how intellectual interests can stretch across geographical and institutional boundaries to create fruitful professional alliances and build knowledge in specific fields.

- Biennial Conferences – Uniting the World Community: biennial conferences remain the most visible expression of Cumulus's internationalism and intellectual vibrancy. The conferences bring together thousands of members of our global network to engage with the newest research, share best practices, and form new collaborations. This recent set of conferences testifies to both our geographical reach and thematic responsiveness to emergent issues: Detroit's exploration of "Design for Adaptation" (2022), Antwerp's examination of "Design for Diversity, Equity, and Inclusion" (2023), Beijing's exploration of "Design Education in the Age of Artificial Intelligence" (2023), Budapest's investigation of "Design for Resilient Communities" (2024), and Monterrey's exploration of "Design Futures: Innovation for Societal Transformation" (2024). Finally, our latest conference in Nantes Atlantique (June 2025) marked our 35th anniversary while tackling "Ethical Leadership: A New Frontier for Design". These conferences play several roles in our internationalization strategy: they serve as forums for academic and professional exchange and networking, provide insights into various approaches to design education and practice, generate new collaborative projects, and strengthen the bonds of community that sustain our global network.

- Regional Meetings: Localised Global Engagement: to complement our large conferences and internationalization, which makes it more accessible to members of various types, Cumulus introduced the Regional Meetings initiative. This initiative addresses specific regional concerns while maintaining connections to our international network. Such small-scale events reduce the barriers of travel, strengthen local networks, and provide podiums for members who do not often participate in global conferences. The strategic focus on the Far East has witnessed successful activities in China and Japan, which have strengthened our presence within this dynamic region and forged new partnerships. These regional actions demonstrate how successful internationalization can simultaneously respond to local needs and global networks.

- Research and Knowledge Exchange: Cumulus has increasingly prioritised research collaboration at the heart of internationalization, offering the potential for meaningful academic exchange while addressing global challenges through design research. Cumulus supports members with research project applications, coordinates participation in international consortia, and leverages our network to form more effective multi-institutional partnerships. Cumulus' involvement in collaborative research consolidates its position as a key player in shaping design, creativity, and innovation research agendas. The Reveda Research Working Group was established to this end, to structure activities, refine models of international research collaboration, and develop mechanisms for sharing best practices within the membership (Di Lucchio et al., 2023).

- Publications and Academic Recognition: Cumulus has made significant strides in enhancing the academic quality and recognition of its publications, including the introduction of DOI certification for conference proceedings, improvements to peer review processes, and the consolidation of quality control mechanisms. The "Think Tank" publication series offers valuable platforms for disseminating knowledge, while digital accessibility improvements ensure a broader audience for our scholarly works.

1.3. Sustainable internationalization and global advocacy

While recognizing environmental concerns with traditional mobility-based internationalization, Cumulus has pioneered sustainable approaches that maintain the benefits of international exchange without increasing environmental impact. Cumulus's approach includes hybrid programs that combine physical and virtual learning opportunities, regional clusters of activities, investment in web-enabled collaboration platforms, and the development of "slow internationalization" models that emphasise deeper, longer-term collaborations (Dutta et al., 2016).

Over the past three years, Cumulus leadership has disseminated internationalization materials to over 40 international conferences on four continents, spanning 15 countries, thereby establishing the association as a leading global voice for design education and research. All this work of advocacy has raised awareness, created significant contacts between prospective members and partners, and outlined a vision of design education as a tool for international cooperation and sustainable development.

1.4. From Kyoto to Nantes: Evolving our foundational principles

One of our recent significant activities has been our participatory process to revisit and enhance the Kyoto Design Declaration. Our foundational document, drafted in 2008 by Cumulus founder Yrjö Sotamaa, has served as a foundation for our association's values. Recognizing more profound changes in our world since 2008, the association launched an extensive two-year participatory process involving over 250 participants to co-create a new Cumulus Design Declaration.

This collaborative evolution signals the commitment to shared governance and continuous responsiveness. The upcoming declaration is a step towards planet-oriented design rather than human-centred design, acknowledging the intrinsic interdependence of humans and non-human actors in our shared home. It refers to sustainability beyond the SDGs frameworks, promotes inclusiveness, and positions designers as powerful agents in leveraging change towards preferred futures.

1.5. Challenges and future directions

Forward thinking, Cumulus faces several key issues to deal with that will shape our future growth: how to respond to the challenge of artificial intelligence in design education; how to address the climate crisis through regenerative design strategies; how to ensure equal access to design education globally; how to navigate geopolitical competition that affects global cooperation; and how to reconcile growth with social coherence.

How the association responds to these challenges will determine its success in preparing designers with the competencies to address a volatile but opportunity-rich future and developing models for international cooperation that are inclusive, sustainable, and responsive to multiple global contexts without sacrificing openness and the spirit of creativity that has propelled its evolution from an EU network to a global community.

2. EIDD – DESIGN FOR ALL EUROPE: AN INCLUSIVE AND INTERNATIONAL VISION FOR THE FUTURE OF DESIGN

In the European panorama of design culture, the international association EIDD – Design for All Europe (later simply called EIDD) represents one of the most significant entities in promoting inclusiveness through design. Born as a response to emerging social, political and cultural needs, the association supports a design approach that places human diversity at the center as a resource, rather than an obstacle. The following outlines the vision, founding principles, historical evolution, prevalent activities and current impact of EIDD, highlighting its central role in promoting a design culture oriented towards well-being, equity and the inclusion of human diversity.

2.1. Origins and development of the concept of Design for All

The concept of "Design for All" has its roots in the Scandinavian functionalism of the 1950s and in the applied ergonomics of the 1960s. In Sweden, the concept of "society for all" emerges as an expression of welfare policy, placing accessibility at the center as a fundamental right. These ideological developments led, between the end of the 1960s and the 1990s, to an ever-increasing focus on the role of design in building inclusive environments, culminating in the foundation of EIDD in 1993 in Dublin. EIDD is an acronym for European Institute of Design for Disability, but the founders immediately realized that it was necessary to overcome the pressing issue of disability, to embrace a broader vision of accessibility and inclusion, extended to the entire human race (Gheerawo, 2022). Since its inception, in fact, EIDD has had the objective of promoting a culture of design that is not limited to responding to the functional needs of certain categories, but that starts from the valorization of human diversity in all its forms. Thus, "Design for All" was born, which, according to the definition proposed by the association, is "the design of environments, products, services and systems that can be used by all people in the widest possible range of situations, without the need for adaptations or special designs" (Accolla, 2009).

2.2. Design for All: A cultural paradigm beyond disability

One of the most innovative aspects of the work of EIDD is having overcome the reduction of inclusive design to the sole issue of disability. Design for All is not only concerned with eliminating physical barriers, but with developing environments and relational systems capable of welcoming a plurality of users. This implies the ability to read contexts, to anticipate emerging needs and to include multiple points of view in the design process.

In this sense, Design for All becomes a cultural paradigm, which concerns urban policies as well as education, communication, cultural heritage, health and technological innovation. Inclusion thus becomes a transversal principle, capable of orienting design choices towards more equitable and sustainable models.

2.3. The EIDD – Design for All Europe association: Structure and mission

EIDD – Design for All Europe is today a European network composed of universities, professional organizations, public bodies and non-governmental organizations, which share the commitment to inclusive design. The association currently has over 40 organizations in more than twenty countries, both European and non-European, it is federated with similar organizations such as Cumulus and IcoD, collaborates with European bodies such as the EDF (European Disability Forum) and promotes projects, publications, conferences and training activities aimed at raising awareness and training designers, administrators and citizens.

One of the main tools through which EIDD spreads its principles is the "Stockholm Declaration" (2004), which represents a milestone in the formal recognition of Design for All as a fundamental strategy for a sustainable, inclusive and democratic society. This document underlines the importance of design as a tool for promoting quality of life, well-being and participation, regardless of age, ability or cultural background.

Twenty years later, in 2024, EIDD has produced a new declaration, the "Gaia Declaration", in which the same principles are updated in relation to the main contemporary social, economic, environmental and cultural challenges, such as climate change, the aging of the global population, wars and social conflicts, the exponential development of new technologies. The name "Gaia" that was attributed to the Declaration is the result of a fortuitous coincidence between the name of the city that hosted the event, Vila Nova de Gaia, and the name of the mythological Greek goddess Gaia who gave the first name to our planet Earth.

2.4. Main activities of EIDD – Design for All Europe

The activities are divided into different areas of intervention, which define its strategic role at European and international level.

- Advocacy and cultural awareness: EIDD is actively involved in promoting Design for All as a tool for equity, citizenship and well-being. As mentioned, it collaborates with European and national institutions to promote the integration of the inclusive approach in public policies, supporting the dissemination of regulations, strategies and tools oriented towards people's rights. Its campaigns and initiatives contribute to making visible the importance of inclusive design in contemporary challenges: from active ageing to disability, from sustainable mobility to digital inclusion.

- Research and theoretical-methodological development: the association promotes and participates in applied and theoretical research projects on a national and European scale, working in synergy with universities, public bodies and third sector organizations. It produces policy documents, guidelines and position papers, contributing to the evolution of design practices and models. The research activity is aimed at promoting a deep understanding of the relationships between matter, space, body and culture, in a multidisciplinary perspective.

- Training and skills development: one of the most significant areas of EIDD's action is training. The association promotes the integration of Design for All in academic courses, especially in the disciplines of design, architecture and social sciences. It participates in Erasmus+ programs and European educational projects,

supporting seminars, courses, workshops and summer schools. The aim is to spread knowledge and skills useful for designing for human diversity, involving students, professionals, teachers and policy makers.

- Events, exhibitions and public communication: EIDD organizes and supports numerous international conferences, thematic and itinerant exhibitions and cultural events, aimed at disseminating good practices and activating public debate. Among these are the Design for All Europe Conferences (mainly organized during the General Assembly of the Association), the annual promotion of an international conference on "Design for Inclusion" (which takes place mainly in the United States), or the traveling exhibition "Cities for All", as well as numerous study days promoted in collaboration with local authorities and academic partners. These moments constitute meeting spaces between scientific communities, institutions and active citizenship.

- Networking and transnational cooperation: the associative structure of EIDD, which now extends across all continents, serves above all as a platform for exchange, also between institutions and organizations of a different nature, facilitating the transversal sharing of experiences, tools and replicable models. This is also thanks to the collaboration with other European and international networks, such as Cumulus, IcoD, Zero Project, and with organizations committed to the promotion of human rights and sustainable development.

- Production of strategic documents and cultural references: as mentioned, EIDD is the author of one of the founding documents of Design for All: the Stockholm Declaration (2004), a cultural and political manifesto that helped redefine the paradigms of European design for inclusion. Since then, the association has continued to develop or promote the drafting of reference texts, including operational manuals, recommendations and teaching materials, also through internationally prestigious editorial series, positioning itself as a qualified interlocutor in the dialogue between institutions, academia and civil society.

- The role of the Inclusive Project for Cultural Heritage: a particularly significant area for the application of the principles promoted by EIDD – Design for All Europe is that of cultural heritage. As underlined by Pete Kercher, ambassador of EIDD-Design for All Europe, "the evolution of the museum from a place of conservation to a space of participation requires a review of the role of the project. Heritage can no longer be thought of as a resource intended for a few but must be made accessible and meaningful for all" (2024). In this perspective, Design for All provides theoretical and operational tools to build inclusive cultural experiences: comprehensible signage, multisensory paths, accessible digital interfaces, flexible exhibition spaces. These are interventions that do not simply correct a deficit, but that increase the overall quality of the experience for each visitor, strengthening the social value of heritage.

2.5. Training, awareness and future challenges

For Design for All to truly become a widespread practice, it is necessary to intervene in the field of training. EIDD-Design for All Europe has been promoting workshops, summer schools and university programmes for years that introduce future designers to the principles of

inclusiveness. The challenge is not only technical, but cultural: it is about developing a new design sensitivity capable of reading complexity and transforming it into a resource. In the current context, marked by ecological crises, migration, population ageing and growing inequality, Design for All takes on a strategic function. It is not just about designing better, but about rethinking the relationships between individuals, communities and environments in terms of equity, participation and well-being.

The contribution of EIDD – Design for All Europe to the European debate on inclusive design is fundamental. Its action has made it possible to build a shared lexicon, to network skills and to promote an ethical and responsible vision of design. Today more than ever, it is necessary to strengthen this culture, recognizing the value of the project not only as a tool for solving problems, but as a means to build more just, welcoming and plural societies.

3. RECOMMENDATIONS FOR ADVANCING INTERNATIONALIZATION

Given the experiences described here, there are several central strategies for promoting internationalization in design education: investing in digital infrastructure for worldwide collaboration; creating equity models taking account of particular requirements of under-resourced regions; building regional networks within world frameworks; creating enhanced strategic partnerships with complementary institutions; establishing sustainable funding models for worldwide initiatives; and creating overall sustainability plans guaranteeing ethical and environmental values to be at the heart of all activity.

Effective internationalization in design education requires constant commitment, participatory decision-making, and adaptability. The shift from being an exchange network for Europeans to a global platform indicates the potential and challenges of developing truly international learning communities. As world associations advance to the subsequent phases of growth, there must be adherence to the initial vision of design education as a force for global cooperation, cultural awareness, and social improvement.

It is also essential not to consider education on inclusion issues in isolation, but to find continuous opportunities for meeting and relating between the various stakeholders of design, of which those involved in training certainly play an important role, but together with all the stakeholders of the world of work (professional associations, companies, public and private bodies) and institutions (local bodies, NGOs, international institutions).

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REFERENCES

Accolla, A. (2009). *Design for All*. Milan: Franco Angeli.

Di Lucchio, L., Giambattista, A., Imbesi, L. (ed.) (2023). *ReVeDa Think Tank Available Online – An Investigation of Research by Art, Design and Media in Cumulus Association (Vol. 4).* Cumulus Association ry, Cumulus the Global Association of Art and Design Education and Research.

Dutta, A., Aasma, M., Kolste, Y. (ed.) (2016). *Bearers of Internationalisation (Vol. 2)*. Helsinki: Aalto University School of Arts, Design and Architecture.

Gheerawo, R. (2025). *Creative leadership*. London: Penguin Books.