STRATEGIC DESIGN RESEARCH JOURNAL

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

Alessia Brischetto [a*] | Ester Iacono [a]

a University of Florence, Department of Architecture: Florence, Italy.
* Corresponding author: alessia.brischetto@unifi.it

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.

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 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.

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

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.

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

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

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,"

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

"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).

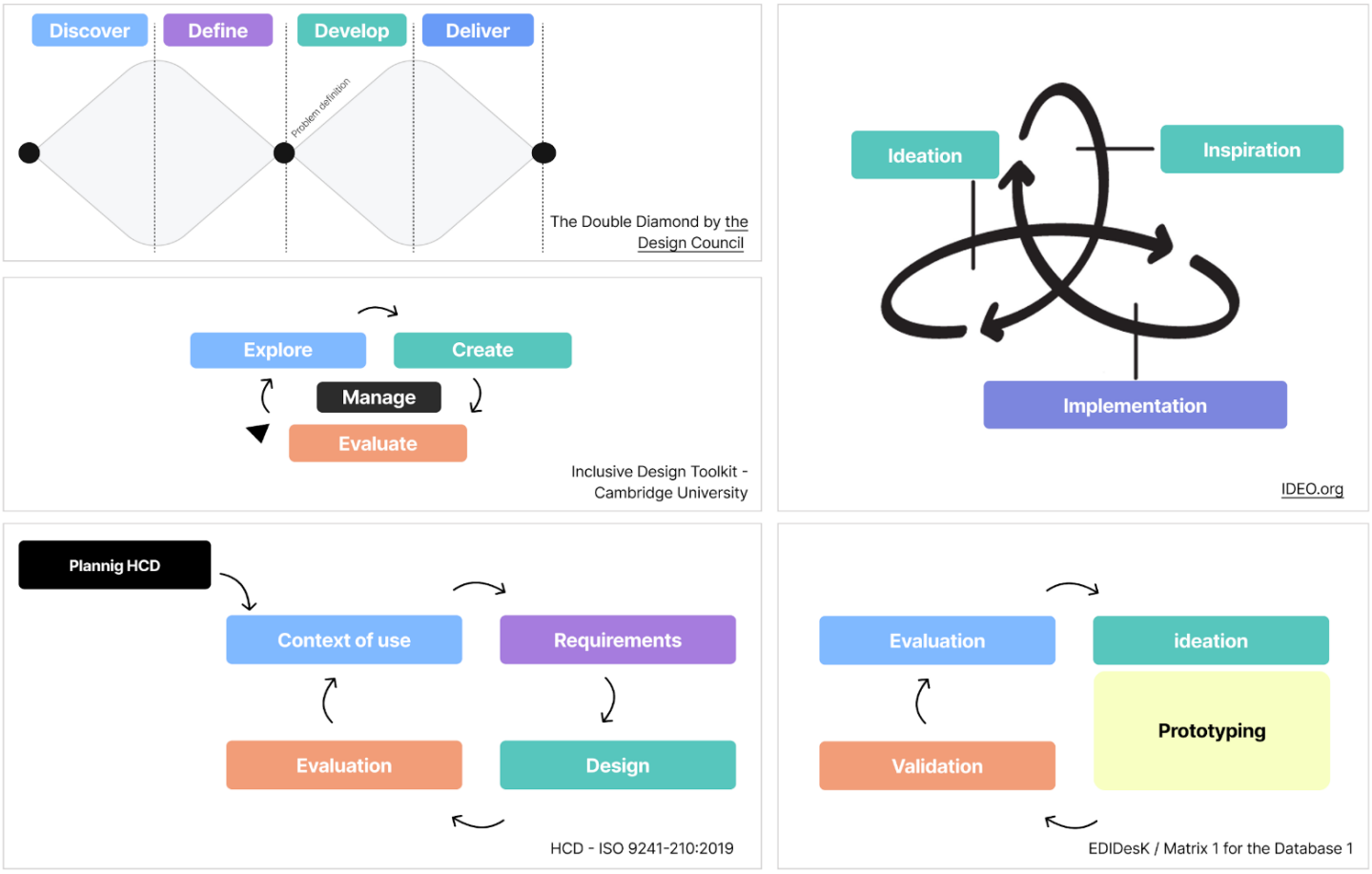

Figure 1. Analysis and development: Indicator (g) Phase of the design process.

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

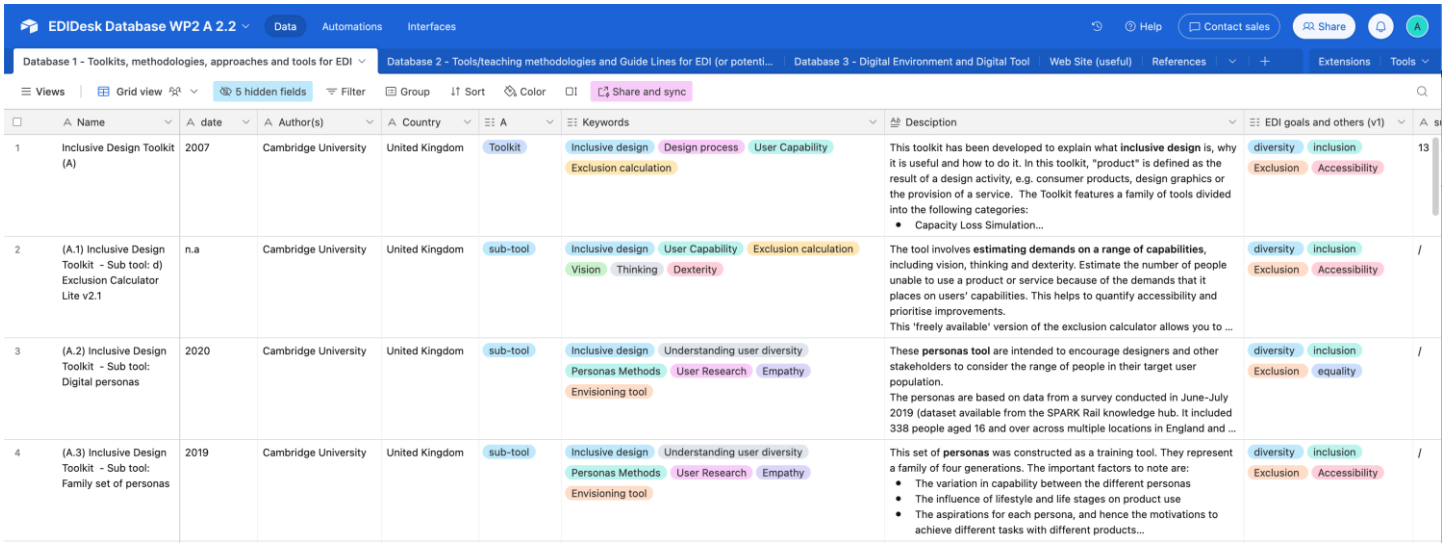

Figure 2. EDIDesK Database "AIRTABLE"

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.

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

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.

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

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.

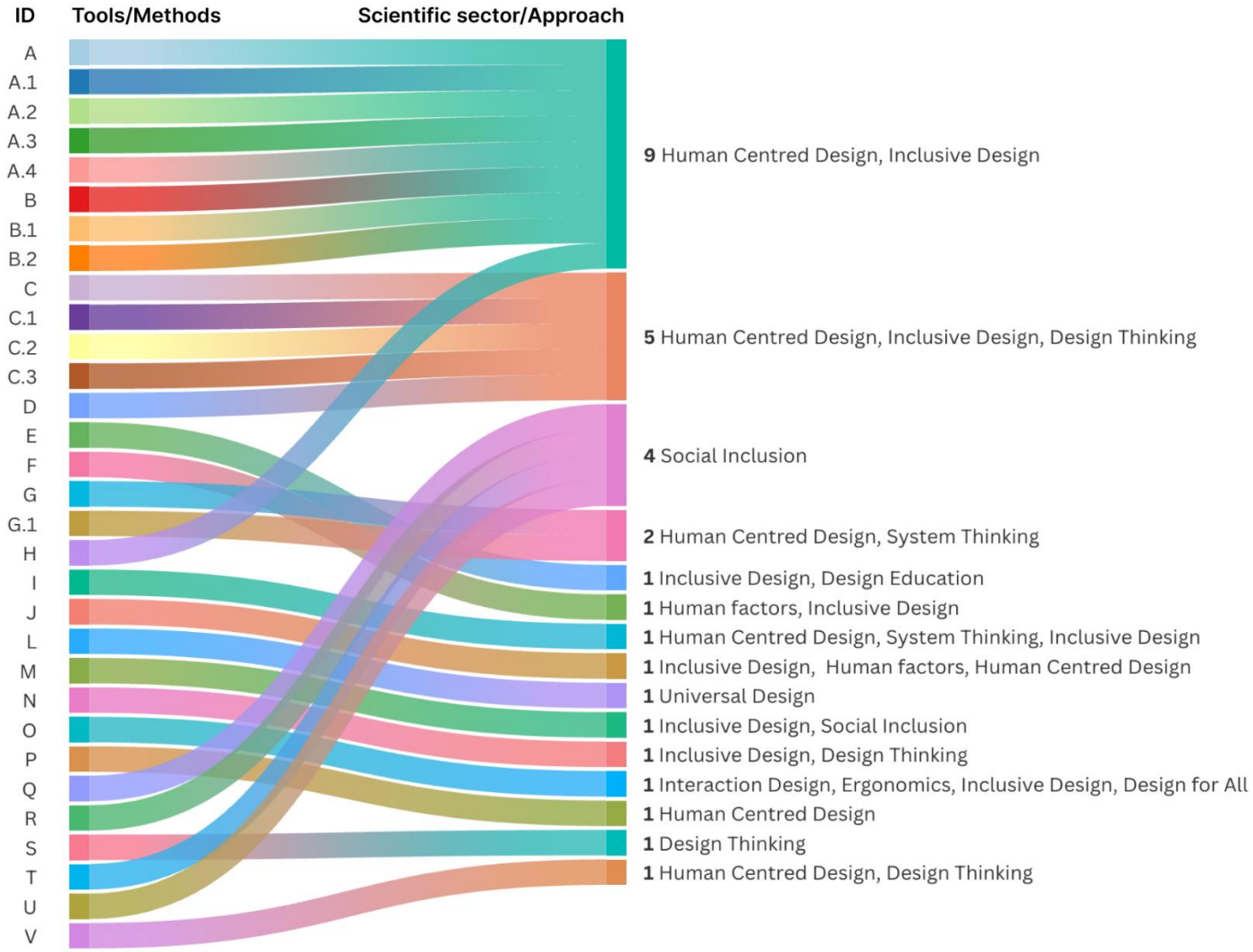

Figure 3. Diagram illustrating the relationship between tools/methods and the corresponding scientific sectors or approaches (Indicator C). For the complete list and detailed descriptions of the tools and methods, see Appendix, Table Database 1.

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.

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 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

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

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.

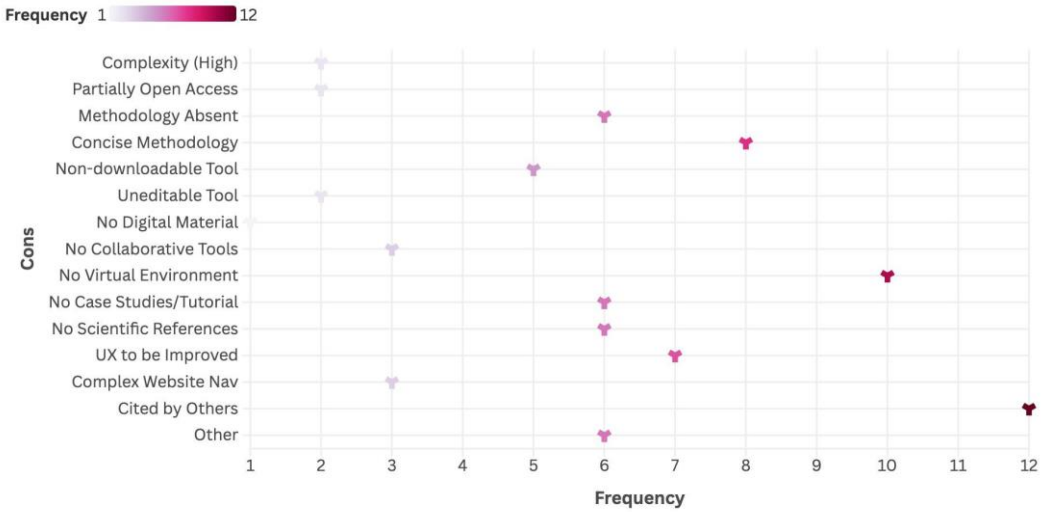

Figure 5. Distribution of limitations "cons" identified across the evaluated resources.

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

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

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

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

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.

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

ACKNOWLEDGMENTS

This work is funded by the European Erasmus+ project 'Open Access Contents on Design for Equality, Diversity, and Inclusion for Higher Education Programmes'; project acronym: EDIDesK; strand: KA220-HED (Cooperation Partnerships in Higher Education); grant number: 2023-1-IT02-KA220-HED-000153774; project website: https://www.edideskproject.com/. In particular this work is based on the results achieved by the authors involved in the WP2 of the EDIDesK project. The content of this publication does not reflect the official opinion of the European Union. Responsibility for the information and views expressed in the publication lies entirely with the author(s).

Author Contributions: Study conceptualization and design, A.B.; methodology, A.B.; data analysis, A.B. and E.I.; data review and validation, A.B.; data collection and visualization, A.B. and E.I.; writing – Abstract, Introduction, Sections 1, 2 and 3 (3.1, 3.2), A.B.; writing – Sections 3.3, 4 and 5, E.I. All authors have read and agreed to the published version of the manuscript.

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 Classrom, Inclusive Education	Guide for Microsoft software	**Microsoft Inclusive Tools (2022) –** Source
10	ToFIE – Tools for Inclusive Education [EU project]	Guidelines, Tools, Inclusive Classrom, 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, Multimodal 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/