

43.2 Inclusive Signs: A Teaching and Learning Toolkit to Generate Inclusive Meta-Design Concepts

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Abstract

The value introduced by informed teaching practices on Design for Social Inclusion is becoming widely accepted by many Design programmes worldwide, though students frequently struggle to propose novel concepts and design ideas from which to develop inclusive solutions. Both teachers and students often employ stereotyped concepts that ultimately lead them to propose 'disabling solutions'. This inevitably brings emphasis on the urgency to equip students with original tools through which to design meaningful inclusive artefacts. This article presents 'Inclusive Signs', an innovative toolkit for students of Design programmes interested in making innovative solutions that adhere the Social Inclusion's key vision and broader concept. Tests carried out in university contexts with groups of students and designers resulted in an innovative range of inclusive ideas and projects showing the potential to include the toolkit within innovative teaching practices. Therefore, the toolkit easily allows students of Design programmes to get more awareness on how to develop original design processes and ideas closely linked to Social Inclusion.

Keywords

inclusive design, meta-design insights, semiotic patterns, teaching and learning toolkit, unbiased contents

Introduction

Teaching students how to create innovative products and services that are more socially inclusive is receiving greater attention across Design fields (Coy 2003).

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United Nations (2016, 19) defines Social Inclusion as “the process of improving the terms of participation in society through enhancing opportunities, access to resources, voice, and respect for rights”. However, when transposed into Design studies, this definition resonates important topics like equity, justice, marginalisation, etc., which are paramount for the development of students’ creative practice and the design of inclusive artefacts. Students trained to work with these concepts are more capable to manage the complexity of global markets (Rainock *et al.* 2018), which are more sensitive to social issues than in the past.

Inclusive solutions are ‘enabling artefacts’ – tangible, intangible, or hybrid – that strictly comply with Social Inclusion principles by establishing non-disabling conditions for all users who will interact with them (Holmes 2018). They allow users to achieve a specific result by meeting their needs and psychophysical capabilities.

In terms of teaching, the creation of inclusive design concepts requires students of Design programmes to exercise a higher level of control because projects are considerably more complex. For example, they could be asked to design for consumers who cannot be considered as ‘standard end-users’ (Fletcher 2006). Moreover, studies document that inclusive solutions produce higher competitive edges into global markets (Gilardelli 2009); they have higher usability and sustainable qualities because made using participatory processes (Heylighen 2008); then social stigmas are mitigated (Bichard *et al.* 2007).

Enabling students to get confidence with Design for Social Inclusion so that they can easily manage the complexity of new design processes requires improved teaching and learning (T&L) methodologies to make them more aware on how to design enabling artefacts. This is paramount for long-term improvement of academic T&L.

The challenge of generating meaningful inclusive design ideas

Inspiring students enrolled in Design programmes to create inclusive artefacts means instructing them to not just create solutions for disabled people (inferred by Rossi & Barcarolo 2019), though they often design for weakest groups of users like disabled people (Steffan & Tosi 2012). Instead, a correct training on Design for Social Inclusion stimulates students to develop solutions that address important societal issues like social wellbeing and human rights (Reed & Monk 2006).

Teaching students to just design solutions for people with disabilities means touching the surface of the broader vision that today connotes the Design discipline. This statement is paramount when related to the studio practice, because the attention of teaching staff moves from solution-centred teaching – designing objects – to goal-oriented learning – enabling students to produce inclusive effects through enabling solutions. Furthermore, the idea of Social Inclusion might be challenging to understand; it forces students to create new artefacts overcoming stereotyped information gleaned from their own experience, such as designing only for wheelchair users, etc. (Rossi 2019, 2021).

Because the attention should focus on the creation of inclusive effects, the teaching process traditionally employed in Design modules need to consider more the creation of enabling insights – e.g., inclusive design ideas, strategies and innovations – so that T&L practices get in effectiveness on the side of student learning. Main

limitations are observable in the stage related to the identification of meaningful values around which to develop stronger ideas (Rossi 2022). Higher sensitivity is needed to embrace a design culture on Social Inclusion to translate concepts into effective design practices. Thus, both pedagogical strategies (e.g. critical reflections, live projects, authentic learning, etc.) and new T&L tools can foster the generation of deeper knowledge on Design and Social Inclusion. About new tools for inclusive projects, Braga (2017) suggests using them to mitigate the complexity of design processes and to frame articulated issues. Nonetheless, Rossi (2022) advises to focus on preventing biased behaviours such as designing only for disabled users.

Framing issues, overcoming biases, focusing on goals

'Inclusive Signs' is an open access card-based toolkit useful to generate creative inclusive design concepts and strategies (Rossi 2022) and has been created to help students enrolled in Design programmes to easily generate original ideas in the following two work stages:

1. Meta-design: the process-led stage between initial requirements and concept design (Fischer & Scharff 2000) containing research visions and design strategies useful to produce multiple inclusive projects.
2. Concept design: the stage where designers ideate inclusive solutions by using narrowed data about user needs, markets, materials, branding, etc. (Brown 2009).

Specifically, Inclusive Signs helps to achieve three main objectives:

1. In relation to simplifying the design process, the toolkit helps students to frame complex design issues related to Social Inclusion. Consistent with Braga (2017), it can support the translation of societal goals into design-oriented learning practices, fostering the finding of focused design insights that otherwise will be too complex to be identified in the meta-design stages.
2. Consistent with Steffan & Tosi (2012), and the previous objective, the toolkit promotes the development of a new culture on Social Inclusion through active learning processes. It can help students to overcome cultural biases and misconceptions about inclusive design processes. Therefore, the toolkit supports the cultural switch needed to move from 'solving problems' to 'looking for inclusive work trajectories' (Rossi 2019).
3. About the inclusive values needed to trigger innovation in different design stages (Howard *et al.* 2010), the toolkit helps focusing only on those specific aspects that are useful to ideate meaningful inclusive artefacts (Rossi 2022). This prevents the design of stereotyped solutions as well as the creation of sympathetic artefacts for weakest populations.

The Inclusive Signs toolkit

Understanding the values of inclusive artefacts

Non-inclusive solutions typically have a very little impact on markets, such as lower marketability. This can happen even in the case of solutions originally envisaged to

be inclusive or enjoyed by all (Moreira da Silva 2023) that, however, use mislead cultural models. For example, kitchens designed only for standard consumers and wheelchair users have a lower impact than one that also considers elderly, children, people with sensory impairments, etc. Accordingly, qualitative advances in terms of design culture on inclusivity are needed, as well as improved tools and methodologies to help to both designers and students of Design programme in managing the complexity of each new project aimed at creating an enabling artefact.

Inclusive Signs offers guidance to cover the cultural gaps in the conception stages (Brown 2009), which is the stage where inclusive design concepts are made.

Using semiotic patterns as meta-design narratives

As said, the creation of inclusive design insights is a research-through-design process around the identification of the most suitable concept that meets the Social Inclusion's goals. However, Vihma (1995) states that the meaning assigned to an object to design is similar to the identification of semiotic signs.

In Semiotics, a sign is defined as the combination of visual and conceptual meanings, 'signifier' and 'signified', respectively (Norrick 1981). The signified reflects the mental concept of what is perceived, whereas the signifier is the physical manifestation of something that may be perceived (Chandler 2017). For instance, the symbol of an aircraft (signifier) might refer not only to a jet, but also to travel, flight, future, etc. (signified).

Following the Vihma's statement, an early induction can be proposed: the concept underlying a design can conceptually be equated to the production of a semiotic sign. Thus, it is also reasonable to affirm that by cleverly combining signifiers and signifieds belonging to Design and Social Inclusion, a glossary of new signs can be produced, which is to say that multiple inclusive concepts can be generated by using the same set of conceptual references. Interpreting the work of Reed & Monk (2006), 'inclusive signs' can be produced to tackle important societal issues. This hypothesis is consistent with the idea that teaching students how to conceive enabling and inclusive solutions involves the creative process – the creation of 'inclusive signs' – than its mere execution (cf. Rossi 2021).

The Inclusive Signs toolkit uses semiotic patterns to create meaningful inclusive-oriented design meanings – 'inclusive signs' precisely. 'Inclusive signs' are considered as helpful in targeting the meta-design process in the development of inclusive ideas, concepts, and design strategies. It therefore promotes progressions in terms of culture on design and inclusivity by establishing creative links between concepts to be used. The toolkit and the related inclusive signs are consistent with the work of Davis & Hunt (2017) who say that Semiotics might be crucial when it comes to conceptual design, as the creation of inclusive solutions necessitates the application of unbiased design thinking. Accordingly, the toolkit promotes the identification of unbiased socially inclusive concepts and asks to operate creative links using semiotic associations (Rossi 2022). It lends support to the notion of meaning-driven inclusive innovation, mitigating students' attitude in using reductive design clichés.

The toolkit

Inclusive Signs is made up of two decks of cards – descriptive cards and visual cards to generate creative ideas – and a worksheet through which synthesise data

and develop inclusive-oriented meta-design insights called ‘inclusive signs’ (Rossi 2022).

Card-based toolkits in Design Education are not new and offer students a reliable and affordable resource for use in numerous co-design contexts. On their value, Roy & Warren (2019) suggest that these low-cost solutions encourage inventive mixes of knowledge and concepts. ‘IDEO Cards’ (IDEO 2003), ‘Design with Intent’ (Lockton *et al.* 2010), ‘Design Metaphors’ (Lockton *et al.* 2019), and ‘Sustainable Design Cards’ (Ræbild & Hasling 2018) are notable examples used in Design studies.

The toolkit is licensed under the CC0 Public Domain licence and was designed to be easily printed and used everywhere. Cards are in the A6 format while the worksheet is in A4 format (both landscape orientation) (Inclusive Signs 2022). The toolkit contains 180 cards, 60 descriptive and 120 visual cards.

Descriptive cards

Descriptive cards (Figure 1) depict some of the most popular keywords, concepts and goals related to Social Inclusion, and commonly discussed in the literature by eminent authors (e.g. Young 2000; Peace 2001). Descriptive cards allow students to culturally start an inclusive project by adhering to real concepts comprising Social Inclusion, mitigating the said risk to work with biased information.

Three subcategories of cards are grouped together: single keywords (e.g. No. 002 “participation”) for concepts that provide immediate understanding and cultural associations to Social Inclusion; binominal keywords (e.g. No. 028 “mixture and diversification”) for concepts that may benefit from association with other ideas, so that one can have an effect on the other; multiple keywords (e.g. card No. 021 gender/race/sexuality) for interdisciplinary concepts providing broader understanding of complex issues.



Figure 1
Sample of Descriptive Cards.



Figure 2
Sample of Visual Cards.

Visual cards

Visual cards (Figure 2) encourage students to produce original thought, creativity, in-depth reflections, and emotional connections, as well as divergent and lateral thinking. Visual cards are twice the number of descriptive cards to allow the widest range of cultural associations. The toolkit's user is given a visual reaction to accomplish this. Images have been selected to produce deep emotional reactions (cf. Freitas-Magalhães 2012); so positive and negative images are used, together with scenes of people and animals, along with figurative and abstract representations. Visual cards' aim is to provide toolkit's users either strong visual stimulations or a recall to cultural links when sided to descriptive cards.

Visual cards are considered in combination with descriptive cards in the way that they provide creative reflection on how to translate the Social Inclusion concepts into creative meta-design insights, namely 'how' (visual cards) to translate the 'what' (descriptive cards).

Worksheet

The worksheet's aim (Figure 3) is to assist students in organising the data that are produced during the generation of creative 'inclusive signs'. This resource enables the depiction of new inclusive concepts through both textual insights, such as written comments, sketches, diagrams, and new definitions. The worksheet is an essential part of the toolkit through which crystallise relevant ideas and meaningful suggestions, providing at the end the needed meta-design concept – 'inclusive sign' – through which to start the concept design stage.

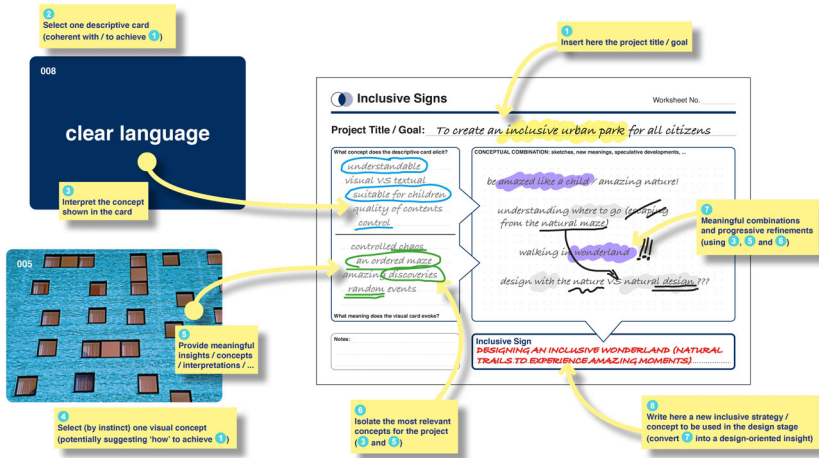


Figure 4
Generation of an 'Inclusive Sign' from a Descriptive Card.

identify a relevant concept of Social Inclusion to be linked. Considering the first example (Figure 4), users are invited to immediately state the aim of the project – a goal to which the 'inclusive sign' must contribute. Then, users are invited to select a descriptive card, which should be coherent with the stated project's aim, or at least it should have a soundness with it. Users can now produce the first conceptual developments by using the part of the worksheet reporting 'what does this descriptive card elicit?'. Then they are invited instinctively select one or more visual cards to be linked to the one picked; this stage is essentially related to the action 'how to achieve/implement/solve/figure out/...' the message contained in the descriptive card. Similarly with what was done with the descriptive card, users are asked to further develop the visual messages evoked by the visual card into meaningful insights and conceptual developments to be reported in the worksheet under the section entitled 'what meaning does the visual card evoke?'. The combination of descriptive and visual meanings is operated into the third area of the worksheet named 'CONCEPTUAL COMBINATION', where users can include terminological developments, cultural refinements, conceptual interpretations, as well as sketches, diagrams, and visual links. Finally, users are asked to transcribe the concept that, better than others, identifies the most promising design strategy, or the most suitable meta-design insight, for the next concept design stages; this part is called 'Inclusive Sign'.

Position in the design process

The Inclusive Signs toolkit offers students and designers the necessary data to produce insightful inclusive ideas to produce a wide range of enabling concepts and solutions. It is mainly conceived to be used in the meta-design process of any new inclusive project, which is the stage where students often struggle most to identify meaningful elements around which to propose design innovations (interpreted from Verganti 2009). However, the toolkit can also provide useful guidance in all situations when an original strategy for the creation of a new enabling solution is needed. Therefore, the toolkit contributes to solve the pre-identified main problems concerning the Design for Social Inclusion, such as framing complex

issues by providing innovative conceptual developments for future inclusive projects (see section “Framing issues, overcoming biases, focusing on goals”).

Toolkit validation

Aim of the validation process

A series of tests with students and designers have been conducted to validate the correctness of theories behind the Inclusive Signs toolkit as well its impact on the design of inclusive solutions within an academic T&L environment.

Mixed methods of assessment (Creswell & Plano Clark 2011) were employed to record all potential critical aspects concerning the use of the toolkit and its value for improved pedagogy into Design studies. Specifically, tests were aimed to:

- Understand the validity of the toolkit in the generation of inclusive meta-design insights in different fields of the Design studies like Product Design, Service Design, Fashion, etc., both at UG and PG level (via studio tests and tests with designers). This in order to discern the relevance and effectiveness of insights produced in design areas that are profoundly different in terms of design process, outputs, users to design for, etc.
- Understand its easiness of use with students in relation to complex design issues to solve (via online tests and studio tests). This in order to understand the facility experienced by learners when approaching the design of inclusive solutions for the first time – re suitability for less experienced students/designers.
- Understand any potential critical aspect related to the process of generation of inclusive meta-design insights and/or design strategies both via studio activities and online sessions (direct and indirect feedback recorded in all tests). This in order to refine the toolkit and solve any potential issue before its official release.

Testing

Online tests

Online tests with 41 undergraduate students at the University of Lincoln in United Kingdom and 31 undergraduate students at the University of Florence and at the University of Chieti-Pescara in Italy were aimed to assess the validity of the toolkit and its conceptual use on four pre-selected descriptive cards. The decision to work with pre-selected descriptive cards was motivated by the need to have comparable data from pre-identified concepts. Some tests were performed online during the Covid-19 pandemic. This further enriched the qualitative data analysis in relation to the validity of the toolkit in a blended learning environment.

Tests were preceded by a presentation of the toolkit. Students were introduced about its functioning and the concepts to develop. Presentations were also recorded to give students the chance to re-check the details at a later stage, if necessary. Students were therefore asked to generate some ‘inclusive signs’ by freely link the visual cards that better than others were suited to generate a meaningful concept in the form of short sentence – re descriptive concept from which to set up the concept design stage. Considering some instrumental limitations due to the online tests ran in Italy, students were given five working days to perform the simulations. Students in United Kingdom ran the tests in a blended

modality. In both sessions, students were asked to fill an anonymous survey to record opinions about the usefulness of the toolkit and its possible use for other Design modules.

As said, some tests were performed during the Covid-19 pandemic in the form of online seminar. From the qualitative perspective, the 'open comments' section of the survey revealed that students enjoyed using the toolkit, whilst stressing that they would have been benefit of using it in a real studio simulation applied in one of their studio projects. Overall, students expressed a more than positive feedback on the use of the toolkit (57 positive [79.17%], 9 neutral [12.5%], 6 negative [8.33%]), remarking its easiness of use, the intuitiveness of the process, the chance to link multidisciplinary concepts through creative lenses, as well as the benefits to be guided into the exploration of sophisticated issues through a step-by-step process.

Studio tests

The toolkit was applied in two Year 3 UG studio-based modules at the University of Lincoln in United Kingdom during the academic years 2020/2021 and 2021/2022. Forty-one students – the same sample that conducted online tests – were asked to use it for the generation of inclusive-oriented design strategies to be used in the completion of a studio project, following a themed brief focused on Design for Social Inclusion at the product-service system dimension. This motivated the use of the toolkit on student projects, getting fist-hand opinions about its impact on real projects.

Students were introduced to the use of the toolkit through a number of seminars, guided simulations, tutorials and brainstorming sessions. The experimentations started in the meta-design stage to either identify relevant design interpretations later applied to concept designs, or to boost the production of inclusive design strategies from data achieved in the preliminary research stages.

Creative inclusive design strategies were later used to address the concept design stage and the creation of inclusive solutions (Figure 5; Table 1). Results identified in this test were used to compare design strategies and the nature of final projects developed, to extract useful information on strength of the evidence produced, and their impact on the improved design process. Using Inclusive Signs toolkit as a T&L instrument was successful and has improved the module's learning objectives (cf. Herrington *et al.* 2014). Finally, students reported that the Inclusive Signs toolkit was easy to use, flexible, and even useful to guide brainstorming sessions and discussions by converging the attention on relevant data.

Themed workshop with designers

A themed workshop held at the University of Lincoln in United Kingdom was aimed to test the Inclusive Signs toolkit in relation to multidisciplinary domains of Design studies. Ten designers were invited to test the toolkit using pre-identified design briefs, as well as to bring their experience to discuss real problems and critical aspects that can be identified in real case studies (Figure 6). Designers were 50% male, 50% female; three declared to have a MA/MSc in Design studies, the remaining a BA/BSc in Design. In terms of age band, three were in the 20–25 band, six were in the 25–30 band, and one was in the 30–35 band. Five designers worked on the Product Design brief, three selected the one on Graphic Design, and two picked the brief for Fashion Design. Designers chose to work on the brief that mirrors their field of work. In terms of experience, four designers declared

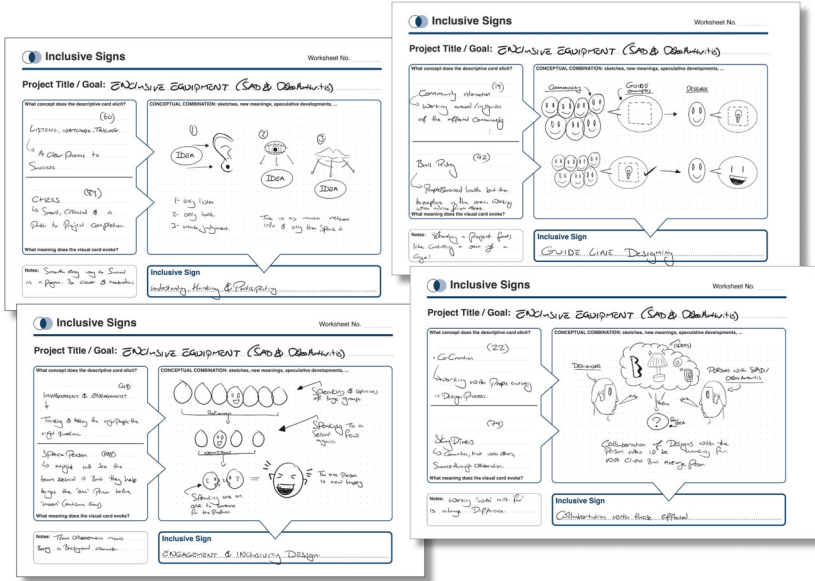


Figure 5 Sample of 'Inclusive Sign' (Worksheet) Produced in the Studio Tests.

TABLE 1 Sample of design strategies and correlation with inclusive solutions proposed by students

Brief's aim	Cards (DC and VC)	Inclusive design strategy	Inclusive solution
Making energy accessible to All	003 with 114	MESE strategy (Meaningful-Effortless-Simple-Elementary)	A universal plug adapter made with high-grip materials and doesn't require high levels of dexterity and coordination to be used
Improving independency at home	058 with 071	Designing enabling actions: supporting care, reflection and empathy	A discrete home assistant for the elderly that promotes a safe and independent living. The assistant connects elderly, parents/carers, and doctors
Inclusivity in schools	006 with 011	Knowledge helps children to achieve their full potential	An affordable learning platform (product + service) that uses AI and VR to help children to become good citizens

less than 5 years of work experience, five declared between 5 and 10 years, only one had 10+ years.

Designers were introduced on the use of the toolkit and its main features; later they were asked to develop, in group or alone, meaningful inclusive design strategies from pre-identified briefs representing unsolved design issues (Table 2). Designers were later asked to publicly show their work to the audience to record

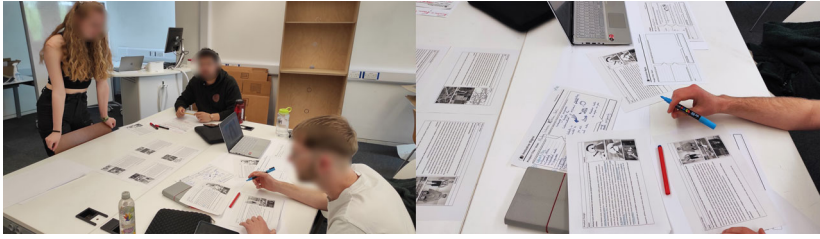


Figure 6
Themed Workshop with Designers.

opinions such as: evaluate the design approach and strategies, discuss terminological interpretations, etc. The involvement of designers also provided immediate information on the use of the toolkit on simulated professional conditions, proving its validity even in non-T&L contexts.

In terms of feedback, all designers expressed positive opinions about the toolkit and its use for a professional design activity. Comments recorded at the end of the workshop were used to elaborate the final notes on the use of the toolkit. For example, eight of them said that having a toolkit like this can speed up the design process and the creation of 'shared' inclusive ideas with clients. Six stated that the descriptive cards were helpful to work on narrowed concepts from which to generate creative ideas, avoiding frustrating biases data like 'designing for disability'. Overall, all designers enjoyed the process of combination and the fact that the pairing fuels creativity. An aspect that clearly emerged from all designers was the fact that the toolkit allows the generation of multiple creative design strategies around which to generate meaningful concepts, and this was considered as a strong plus especially by less experienced ones. Seven designers also said that the toolkit can foster the work with people that don't have a design background, as the toolkit's functioning is very inclusive. Also, a designer reported that the toolkit could be easily integrated into any academic module.

Conclusion

This article has described the Inclusive Signs toolkit and applied it to the creation of inclusive design strategies through a number of tests with a sample of 72 students and 10 designers to illustrate its use and test its validity. Overall, over 150 'inclusive signs' were generated during tests. As shown in Figure 5, inclusive design insights collected show a high grade of innovation and creativity, as well as a strong adherence to the cultural notions of Social Inclusion. This was particularly evident in studio tests with students where meta-design insights were later converted into major academic projects. Overall, all tests allowed students and designers to identify a wide range of innovative design topics to work on. This result is important because the toolkit stimulated higher awareness on the value of informed design practices on Social Inclusion. Therefore, it can be said that the toolkit offers helpful advice in those fields of Design studies where the human-product interaction is paramount to trigger cultural improvements on Social Inclusion (Dong *et al.* 2004).

TABLE 2 Sample of inclusive design strategies developed by designers

DISCIPLINE, Brief and Aim	Cards (DC with VC) – ‘Inclusive design strategy’ details
<p>PRODUCT DESIGN</p> <p>Kitchen tools are functional but not inclusive: not designed for all users and around their real needs</p> <p><i>How could you conceive an informed design strategy to make inclusive all kitchen tools?</i></p>	(017 with 064) – ‘Fit for purpose Design for necessity’. Design of flexible need-oriented kitchen tools to meet users’ lifestyle; the strategy meets sustainable-oriented design criteria bringing emphasis on the human-artefact inclusive interaction. The ‘inclusivity’ is achieved through the design of enabling conditions to achieve inclusive goals
	(010 with 016) – ‘Modularity in a varied of uniformity’. Design of flexible objects that follow users’ skills and needs; the more users get experience in preparing food, the more the tool can be implemented to perform new actions. The ‘inclusivity’ is achieved through flexible design meeting human needs as well as inclusive learning processes
	(050 with 030) – ‘Hands guided toward experiences’. A wearable solution to learn cooking skills through sensory stimulations. The ‘inclusivity’ is achieved through the smart use wearable technologies for leaning purposes
<p>FASHION DESIGN</p> <p>The fashion industry is not putting enough efforts in developing inclusive clothing collections for people with physical disabilities</p> <p><i>How could you conceive an informed design strategy to make inclusive a clothing collection?</i></p>	(010 with 011) – ‘Dressing emotionally’. Design of clothing collections beyond mainstream rules; consumers can benefit of new dress collections designed to express emotions. The ‘inclusivity’ is achieved through the reinforcement of individualities and the freedom of expression
	(014 with 047) – ‘Culture-inspired clothing with modern refinement’. Use of local culture as a fashion quality through which develop new collections, in a perspective of sustainable development; the strategy also fosters the improvement of autochthonous textile skills. The ‘inclusivity’ is achieved through the projection of local values into global scenarios
<p>GRAPHIC DESIGN</p> <p>Wayfinding systems are not inclusive: they don’t help people in finding the place they want to visit</p> <p><i>How could you conceive an informed design strategy to make inclusive all wayfinding systems?</i></p>	(016 with 012) – ‘Using citizens as guides’. This strategy employs humans to guide people; humans are involved in the co-design process to reinforce the community strength and to support the rise of informal economies, improving employability and local sustainability. The ‘inclusivity’ is achieved through community engagement
	(025 with 028) – ‘Be guided by knowledge’. Use of elderly’s memories as a local heritage to guide people through non-mainstream pathways; knowledge is seen as a medium to guide visitors throughout visit places. The ‘inclusivity’ is achieved through reuse of human values and participation
	(009 with 060) – ‘An informed visit experience for All’. A non-visual-centric visit experiences for all end-users. The ‘inclusivity’ is achieved through personalization of human (dis)abilities against the visit targets

The use of the Inclusive Signs toolkit is recommended in all design studios modules to foresee creative futures and design trajectories fostering Social Inclusion’s key values. By extension, any project can benefit of it as it is a useful

resource for students that want to create inclusive artefacts like products, services, interfaces, physical environments, etc.

The results produced by during tests reveal two interesting aspects, useful to understand the impact of the proposed toolkit:

1. Inclusive Signs fosters the creative development of innovative design ideas strongly tied to Social Inclusion. Therefore, the toolkit helped to overcome the cultural barriers observable in many 'apparently inclusive projects' developed at university level, where students often propose solutions for disabled users, missing then the opportunity to elicit a significant cultural evolution of the design practice.
2. The toolkit operates in line with the Human-Centred Design (HCD) approach (Giacomin 2015) and doesn't distract students to design functional objects having, for example a high grade of usability. Instead, Inclusive Signs encourages the generation of novel ideas and cultural innovations on Social Inclusion, from which complete sets of enabling solutions, both tangible and intangible, can be produced.

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