'MY PREVIOUS VIEW OF DESIGN WAS LIMITED' – TEACHING DESIGN TO NON-DESIGNERS AT [UNIVERSITY]

Abstract: The expanding role of design has led to a higher interest in design from non-design professionals. Yet, non-design professionals sometimes lack an understanding of what design is and what designers do. This study reports on the experience of teaching design to non-design students at [UNIVERSITY] under a project called [PROJECTNAME]. We interviewed [PROJECTNAME] members and reviewed 139 answers submitted to [ONLINECOURSE], an introductory online design course. The results of the study inform design education and give insights into how to support non-design students to learn about design.

Keywords: Design education, Design Methodologies, Introduction to design, Design for non-designers, [UNIVERSITY NAME]

1 Introduction

The relevance of design in today's society is shifting. Over the last decades, design has expanded from designing physical objects to more strategic approaches (Calabretta, Gemser; 2017; Micheli et al., 2018; Perks et al., 2005; Valencia et al., 2013; Valtonen, Nikkinen, 2022; Valtonen, 2005). In Finland, Strategic and Management designers represent almost one-fifth of the workforce in the country (Nordic Design Resource, 2018). With this expansion of the outcomes delivered by designers and the value provided for organizations, definitions of what design is and what designers do become unclear (e.g. Björklund, 2019). Discussions about definitions and the role of design are common in the design field (see e.g. Buchanan, 2001; AUTHOR, 2021; Harland, 2016; Julier, 2013; Poggenpohl et al., 2004), but if designers cannot agree on these issues, why should we expect non-designers to be any less confused?

In this article, we report the experience of teaching design to non-designers at [UNIVERSITY] under a project called [PROJECTNAME]. [PROJECTNAME] was an initiative aimed at promoting design practices and knowledge across all the other departments of the university. In this paper, we focus on the educational side of [PROJECTNAME], where we interviewed faculty who worked on the project and analyzed 139 answers submitted to an online introduction to design course created by [PROJECTNAME]. The research question we explore in the article is: *How does introductory-level design education affect non-design students' knowledge about design?*

This growing interest in the work of designers and designers' approaches to help organizations follow non-designers' interests in design thinking as a method for problem-solving (e.g., Dorst, 2011). As outlined by Mosely, Wright and Wrigley (2018), the definition of design thinking has evolved over the last decade: from designers' decision-making process (Rowe, 1987) to a more contemporary understanding involving the specific ways for non-designers to use design methods and design thinking as a tool to evaluate and synthesize problems (Brown, 2008; Dorst, 2011; Kimbell, 2011). In this context, design thinking becomes a tool and mindset for generating, exploring and developing creative and imaginative solutions to problems (Dorst & Cross, 2001).

Harnessing design thinking as a practice outside the design field enables design to address new problems in organizations (Cooper et al., 2009). Design thinking has become a frequent topic in business forums (e.g. Brown, 2008) as a way for organizations to become more user-centric. Design thinking models popularized by IDEO, Stanford Design School and IBM have been frequently cited in business literature (Micheli et al., 2018). As Tim Brown stated, 'Design thinking can be practised by everybody' (Brown, 2009, p. 223). Therefore, design thinking has enabled non-designers to see broader potential when collaborating with designers. Growing interest in design thinking has ushered in a need to build educational activities to teach design and design thinking to non-designers (Plattner et al., 2016) as a way of building their creative thinking and problem-solving skills (Razzouk & Shute, 2012). On a similar note, Liedtka, Salzman and Azer (2017) in their article about teaching design thinking to non-designers state that their goal was not that students would become designers, but to help students use design thinking as a problem-solving methodology in their fields.

Our study adds to previous research on teaching design for non-designers. For example, while Siegel and Stolterman (2008) looked at ways of 'transforming non-designers into designers', our goal is to bring design capabilities for non-design professionals in a way they can use in their own fields. Also, we add to research aimed at teaching design thinking to primary and secondary education students (e.g., Rusmann, Ejsing-Dunn, 2022) or non-designers (Liedtka et al., 2017). We present a case on shaping how non-design students broaden their perception the role design plays. Also, we contribute to research on design education (e.g. Cassim, 2013; Dorst & Reymen, 2004) by addressing how design topics can be taught for non-design students. In doing that, our goal is to encourage other universities – and specifically design departments – to build actions to clarify the role of design and designers for the communities of non-design professionals.

We divide the remaining of this article as follows: first, we present information about [PROJECTNAME]. Next, the methods used to collect and analyze data for this study. Then, we present the results and later on the conclusions and learnings from and teaching design for non-designers at [UNIVERSITY].

1.2 [PROJECTNAME] project at [UNIVERSITY]

[PROJECTNAME] (2018–2022) was an [UNIVERSITY] project in the project portfolio of the university's vice president of art and creative practices. The portfolio aimed at laying the foundations for art, design and creative practice-driven renewal of the university and ultimately the society. [PROJECTNAME] was chaired by a senior professor who reported to the vice president of art and creative practices. The initiative had two full-time employees and about a dozen contributing scholars.

[PROJECTNAME] had four main goals: (1) create a university-wide offering of design education integrated with technology and business studies, (2) apply design as a tool for developing university strategies and processes, (3) integrate design into research collaboration and partnering agenda and (4) engage a general audience by showcasing the university's achievements in a design-driven manner. This article focuses on the first goal: creating educational initiatives for teaching design across [UNIVERSITY].

[UNIVERSITY] has a history of providing deep design specializations through cross-disciplinary master-level programmes. The [PROGRAMME] and [PROGRAMME] programmes have provided engineering and business students with a learning platform to study design and enhance their core competencies with design thinking. However, prior to [PROJECTNAME], [UNIVERSITY] there were no entry-level design education initiatives to reach every engineering and business student.

The planning and implementation of [PROJECTNAME] education was a mixed-initiative process started in line with the university's strategy and the vice president's vision of art and design-driven future developments. During the execution of the project, various discipline-specific needs and requirements increased in importance. This planning was not guided by commonly agreed pedagogical models or philosophies; instead, the actors drew from their teaching experience and pedagogical knowledge, linking that to the particular context of each course. The unifying pedagogical objective was to introduce design and design thinking as skills seamlessly linked to the core competencies of engineering and business disciplines and education.

The educational offering of [PROJECTNAME] had three main elements. First, [PROJECTNAME] provided expertise to integrate design content into introductory-level undergraduate courses for technical and business bachelor-level programmes at [UNIVERSITY]. The content was tailored to each program, showcasing design's potential in engineering and business management processes. For example, in chemical engineering, [PROJECTNAME] organized information visualization teaching, and in business, it introduced service design approaches to streamline recruitment processes. The second element of the [PROJECTNAME] education offering was a range of entry-level elective courses with hands-on exercises open to the whole university, including topics such as creative process skills, exploratory prototyping with 3D printing, service design and design thinking. The third element was an online self-study course called [ONLINECOURSE] providing basic information about the definitions, scope and selected key theoretical concepts of design. In tandem with the development of [ONLINECOURSE], [PROJECTNAME] also developed [DESIGNEVENTNAME], a series of open lectures about the relevance of design.

These elements were then placed in what we called the non-design students' design journey to learn about design (see Figure 1 on the next page). This journey arranged the study activities based on the time required from the participants. As students are busy with their own degrees and projects, we build low-threshold opportunities for them to interact with design/designers. Thus, [DESIGN EVENT NAME] and the integration projects were defined as Level 1, or the 'first steps into design', requiring between two and five hours of their time. In Level 2, students could continue their 'design journey' by taking the two-credit [ONLINECOURSE]. Level 3 continued the journey by offering specific project-based three-credit courses in topics such as service design, design thinking, product design and prototyping. Lastly, in Level 4, students could include design topics in their bachelor/master thesis – for example, having a design professional as a thesis advisor. Another option to further their design learning would be to select a design minor programme at [UNIVERSITY].
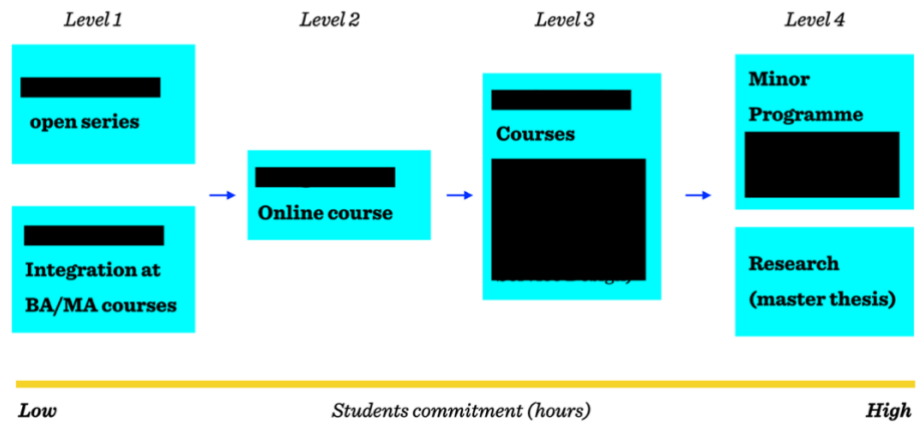
Figure 1: Non-design students' journey to learn design skills. Source: Internal documents of [PROJECT NAME] (Names in the figure hidden during submission process)

In this article, we focus our attention on the answers submitted in the [ONLINECOURSE]. [ONLINECOURSE] was built in 2020 with the goal of promoting a broader view of design and design methods for non-design students. Initially, the course was planned only for students at [UNIVERSITY], but later, it was open to any student around the globe. The course is divided into seven chapters (see Figure 2 below): the initial two chapters cover topics about definitions of design and the relevance of design, where we provide examples and cases to highlight why design matters and the value designers bring. Then, in the next four chapters, students go through what we call the '4 pillars of design': Sustainability, Collaboration, Innovation, and Management. Each pillar is covered in one chapter of the course. These four areas present students with a broader facet of the work done by designers, where we present design tools (e.g., Design Thinking and Double Diamond models) and the ways designers work (e.g., Co-Design, Design for Sustainability, Design Management). In the last chapter, the course presents definitions of 'Good Design', based on Dieter Rams's Ten Principles for Good Design. Also, in this final chapter, the course suggests other courses and paths for students to learn more about design at [UNIVERSITY].
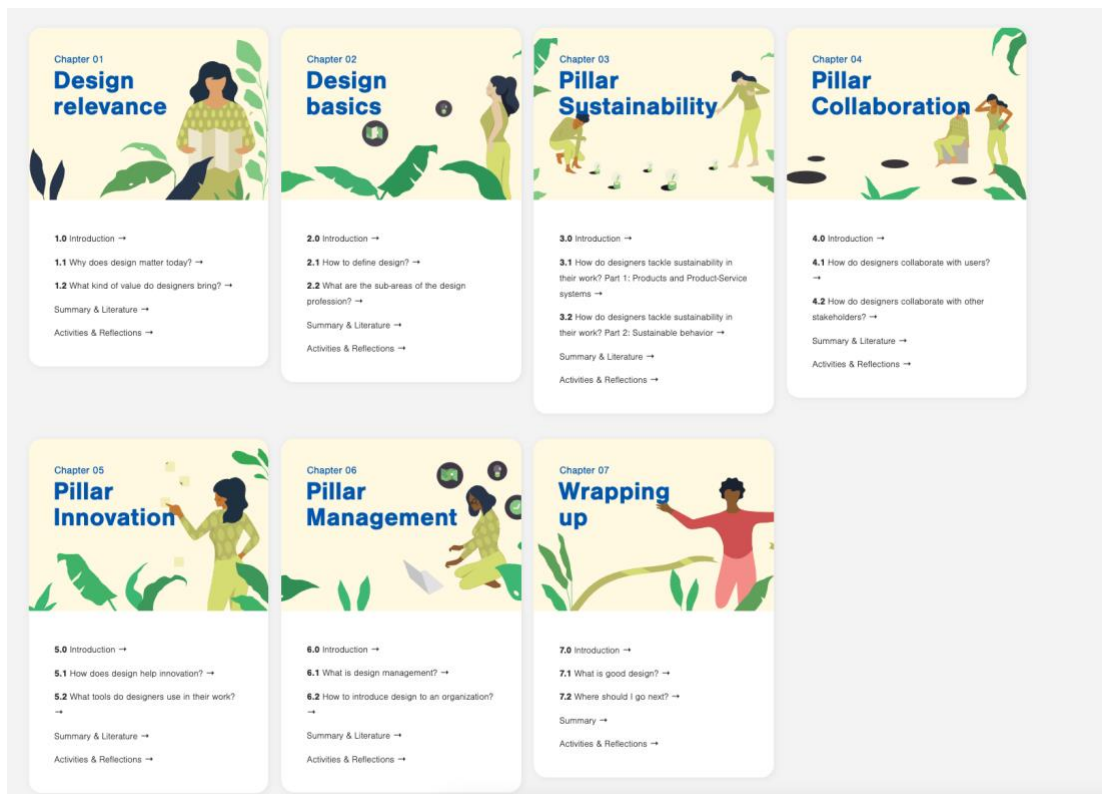

Figure 2: [ONLINECOURSE] structure.

2. Method

The three authors were involved in [PROJECTNAME]. The first author worked as a 'designer in residence' in 2021–2022 with responsibility for the educational aspect of [PROJECTNAME]. The second author worked as a research assistant in the late phase of the project in 2022. The third author was its academic lead, with a key role in overseeing the project 2018-2022.

For a better understanding of the goals and context of the [PROJECTNAME], we interviewed 3 previous [PROJECTNAME] staff members (designers in residence and academic advisor) who worked on the project. The interviews covered how the project started, its goals and actions and the interviewees' reflections on what worked/did not work in the project. To contextualize discussions about the goals of [PROJECTNAME] and teaching non-design students about design, we used the Bloom taxonomy of learning (Krathwohl, 2002) and the Dreyfus expertise model (Dreyfus & Dreyfus, 1980). All interviews were recorded and conducted online via Zoom. The interviews lasted between 30 and 60 minutes. During these interviews, we reviewed internal presentations describing actions, plans and goals of the project. For example, one interviewee shared a presentation of a project action plan from 2018. We used these documents to familiarize ourselves with the early project phases and build the narrative for the actions carried out during the four project years.

In addition to the interviews, we analyzed answers provided by 139 students in [ONLINECOURSE], our introductory online design course. In the [ONLINECOURSE], students had to answer both open-ended and multiple-choice questions to get 2 credits from the course. In this study, we selected the students' answers to the following feedback questions:

- – What did you learn about design through this course that challenged your earlier view? What surprised you in the course?
- – Which design topics did you find most interesting, and why?
- – What was the most helpful thing you learned in this course?

We then used a combination of thematic (Braun & Clarke, 2006) and content analysis (Krippendorff, 2013). Thematic and content analysis are often presented as similar methods, with content analysis adding counting to the activities of coding and identifying themes in the data (Vaismoradi et al., 2013). For the interviews, we followed thematic analysis guidance provided by Braun and Clarke (2006). Initially, the first and second authors read the transcripts using in vivo coding (Lapadat, 2010). In other words, we added codes to transcripts of texts based on the transcript itself. After reviewing the interviews, we looked for patterns and similarities in the codes added to each interview.

For the answers provided by students, we followed a similar approach as for the interviews: first, the second author did in vivo coding and created the first version of the coding scheme. Then, in collaboration with the first author, the codes were revised and merged based on similarities. The first and second authors applied the revised coding scheme throughout the 139 answers and compared the results to improve the reliability and validity of the analysis. The last step, following content analysis principles, was to extract the frequencies of each code. For that, we counted how many times each code was present across our whole dataset. We categorized the answers into 3 major codes - 'Definitions and redefinitions of design'; 'Transferable design skills' and 'Design topics students marked interesting', containing a total of 40 sub-codes. In this study we report the 17 sub-codes which appeared in more than 5% of the answers (see Table 1 on the next page).

3. Results

Our thematic analysis resulted in two main themes: First, we report on the emerging code 'definitions and redefinitions of design' and its sub-codes, covering how [PROJECTNAME] students described how their thinking about design changed. Second, we report on the emerging codes 'transferable design skills' and 'design topics students marked interesting', where we cover the goal of teaching design topics to allow students to apply these in their own disciplines (e.g., business, engineering).

3.1 ¬ Definitions and redefinitions of design

While definitions of design are constantly 'being constructed, but also decentred, dispersed and disorganized' (Julier, 2013, p. 50), clear comprehension of the scope and role of design helps non-designers and designers to collaborate in multidisciplinary teams. [PROJECTNAME] aimed to educate non-design students on the nature of design, the work of designers, and the design process. One key action to tackle this challenge was the development of an introductory online design course called [ONLINECOURSE]. Table 1 on the next page presents the frequency of codes and sub-codes in the 139 answers from participating students.

Table 1: Frequency of codes in the answers provided by students in the [ONLINECOURSE] course. We report here codes with a frequency higher than 5%.

Code	Frequency (n = 139)	Sub-codes	Frequency (n = 139)
Definitions and redefinitions of design	91,4%*	Design as a broad topic	61.2%
		Changed perceptions about design	51.1%
		Definition of design	28.1%
		Design is more than visuals	24.5%
Transferable design skills	46%*	Design processes & frameworks	23.7%
		Problem framing/defining	20.1%
		Design thinking as a mindset	10.8%
Design topics students marked interesting	91,4%*	Design & Sustainability	46.8%
		Design & management	33.1%
		Design & Collaboration	28.8%
		Design & Innovation	20.1%
		User-centred design	18.0%
		Design Tools	9.4%
		How might we method	7.9%
		Design & Strategy	7.9%
		Service design	6.5%
		Double diamond framework	5.8%

* The frequency reported here is the number of answers which presented at least one of the sub-codes in the same category. For example, 91,4% of answers presented at least one of the following sub-codes: Design as a broad topic, Changed perceptions about design, Definition of design and Design is more than visuals.

'Definitions and redefinitions of design' was the most frequently mentioned theme by the students (91.4%). By breaking down this category, we classified the answers from students referring to 'design as a broad topic' (61.2%), 'changed perceptions about design' (51.1%), 'definition of design' (28.1%) and 'design is more than visuals' (24.5%). Students frequently expressed that their initial understanding of design was limited, and the course broadened their perspectives on design. For example, one student believed that designers only produce 'physical objects, such as clothes, shoes, furniture, etc.'. This idea of expanding design definitions is also illustrated in the answers provided by these two students:

> *Design was for me mostly something creative and its job was to make things look better and more appealing, which is of course not the case. (...). Therefore, this course made me realize **that my former definition/thoughts of design were way too simple** – and convinced me that design offers so much more. – Student's answer in the [ONLINECOURSE] course.*

> ***My previous view of design was very limited** and to be honest it wasn't something I really ever thought about. Things that came to mind when thinking about design were mostly aesthetics-related, for example architecture, furniture design, graphic design and so on. (...) The whole idea of design being about problem-framing and advocating for users was new to me – Student's answer in the [ONLINECOURSE] course.*

As these answers show, the [ONLINECOURSE] course provided new insights about design and encouraged students to challenge their existing perceptions. Similar to the main 'misconceptions about design' presented by Dorst (2015), students repeatedly described how their early definitions of design were limited to 'design = aesthetic' (24.5%). This is well presented in the words of two students below:

> *Before taking this course, **my definition of design was very narrow**. Now I understand that it's much broader than I thought, i.e. **design is not only about visuals**. – Student's answer in the [ONLINECOURSE].*

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*I was more familiar with the **form-giving function of design**, so this course expanded my view of design as a process and a strategic focus. –Student's answer in the [ONLINECOURSE].*

*I thought design as more about **creating appealing "graphic / visual content and objects"**, and designers were more like artists in my view. However, clearly after this course, that way of thinking no longer holds - Student's answer in the [ONLINECOURSE].*

Another misconception presented by Dorst (2015) was also found in the students' answers. Dorst states that 'design is not all about ideas' and that the 'popular notion about design is that it works like this: client gives brief to designer, brilliant idea is born, client is happy, designer becomes rich and famous. This virtually never happens' (p. 42). In the [ONLINECOURSE] course, we presented two models to overcome the idea that designers simply generate ideas randomly: the Double Diamond model by the British Design Council (designcouncil.org.uk) and the Design Thinking model by the d.school at Stanford University (dschool.stanford.edu). As a result, students had a better view of how designers work and their processes. This was illustrated by one student's answer: 'I was surprised by how systematically the design process proceeds and, yes, also the fact that not all designers are good at drawing.'

These responses reveal how non-design students initially held limited views regarding the nature of design and the work of designers. Another design angle explored in the course is how designers focus on user-centricity (e.g., Björklund, 2019), mainly through problem framing/solving (e.g., Dorst, 2015). For example, one student mentioned being surprised that 'the constant questioning and reframing of the problem is an essential part of designer's work'. Similarly, another student pinpointed that focusing on the user is a key part of designers' work:

*I was very surprised to realize that finding the right question to answer is what design is all about. Also, the **centricity of the user** and interviews in the design process are something that I thought a lot about throughout the course. – Student's answer in the [ONLINECOURSE].*

Lastly, students were asked to mention the course chapters that they found more insightful and interesting for their fields. The chapter about sustainability was cited by almost half of students (46.8%), followed by the chapters about management (33.1%), collaboration (28.8%) and innovation (20.1%). These four chapters were presented to the students as the 'Pillars of Design' and covered these topics from the design perspective. For example, the sustainability chapter presents how designers tackle sustainability in their work, based on the design for sustainability framework by Ceschin and Gaziulusoy (2016). This diverse range of interests across chapters showcases the students' varied backgrounds and indicates a keen alignment of design principles with their individual fields of study.

3.2 – Building design expertise as a non-design student

While design literature acknowledges the challenge of building design expertise and moving from novice to expert levels (Cross, 2004; Dorst & Reymen, 2004), the challenge faced by [PROJECTNAME] educational initiatives was different: design literature focuses on designers building design expertise while [PROJECTNAME] focused on non-designers building design expertise. Dorst and Reymen (2004), drawing upon research by Hubert Dreyfus, suggest that design expertise builds on level by level, starting from 'novice' and moving up to 'advanced beginner', 'competent' and so on. This model is relevant for design education in building design expertise for designers.

In [PROJECTNAME], the audience comprised of non-designers, and the goal was not to 'transform' them into designers, but to introduce design for application in their own fields. In Table 1, we represent this idea under the code of 'transferable design skills to other fields', where students highlighted some examples of design processes and frameworks (23.7%) usable in their own disciplines. Also, students frequently mentioned problem framing/defining (20.1%) from a designer perspective and design thinking as a mindset (10.8%) when building design expertise as a non-design student.

The skill acquisition model presented by Dreyfus and Dreyfus (1980) was presented in the interviews with [PROJECTNAME] faculty as a context for building design expertise for non-designers. Most of the interviewees pointed out that [PROJECTNAME] did not intend to go through all the way to 'competent' or 'expert'. This idea of building design expertise as a non-designer was presented by two interviewees:

... (non-design) students would know enough about design and would know that it's something they might want to deepen their skills. Or that they know enough about processes and language that it becomes possible for them to collaborate with (design) professionals in their fields. [The students]

*know a little bit of design thinking, so it becomes easier to discuss design with designers. **So, you don't really develop your own competence as a designer, but you develop your own competence as an engineer and then know something about design as an element and then collaborate with different kinds of professionals**. – Professor at [UNIVERSITY].*

We want them to understand about design but not necessarily become designers. (…). We want them to understand what design is and go back to their fields. *For example, now you are an engineer and you know about user-centred design. Or you are a business student and you know a little bit of design thinking – Designer in Residence at [UNIVERSITY].*

Building design expertise as a non-design student occurred via different initiatives organized by [PROJECTNAME]. As mentioned above, we built a non-design students' design journey (see Figure 1) from low to medium effort study attainments. The various options for developing design expertise were important to give students different entry points into design: non-design students have limited time to explore areas outside their own fields during their bachelor's or master's studies. By having multiple educational options, requiring different levels of commitment (hours), we increased students' opportunities to start and move forward in the design journey. For example, we saw some students joining one lecture about design in the [DESIGN EVENT NAME] series and later enrolling in the [ONLINECOURSE] ONLINECOURSE. Teachers also noted this idea of progression in design learning. In one example where [PROJECTNAME] integrated data visualization activities in a course in the engineering school, the teacher in charge mentioned that this skill was a starting point for teaching design to non-design students:

4. Discussion

I think the design process and tools that I was introduced to during the course will be useful not only for my current and future work/study/professional projects, but also in my personal daily life. For example, I can use the design thinking process and tools to design and plan a road trip with my friends and family in the future. Especially by utilizing the '5 Whys' and co-design techniques, I think I can get a better understanding about each trip participant's preferences for sightseeing, activities, food and drinks, hotel choices, and create a better plan accordingly – Student's answer in the [ONLINECOURSE]

The quote above summarizes [PROJECTNAME]'s goals: teaching non-design students about design topics and, more importantly, encouraging them to incorporate their design learning in their professional fields. For instance, the student above saw how they could apply design tools in their personal life. Another example of a practical application of design knowledge was given by one student who said that the content of the course 'will be useful for designing the user interface of some physics simulations that I'll do in the future'.

The design field is expanding its contribution to encompass strategic elements. One of the key parts of this expansion is that designers are involved in co-creation processes together with users and other professionals (e.g. Lee et al., 2018). In other words, designers are not siloed: they work in constant collaboration with business professionals, engineers, etc. This collaboration requires designers to learn about other fields, while non-designers also need to learn about what designers can deliver and how they work. Teaching design to non-designers is a way of facilitating this collaboration between designers and non-designers.

This article reports the [PROJECTNAME] project's journey at [UNIVERSITY], providing non-design students with opportunities to develop their design expertise. Addressing this paper's research question– How does introductory-level design education affect non-design students' knowledge about design?– we acknowledge that [PROJECTNAME] successfully communicated a broad and contemporary understanding of the scope of design, which led non-design students to add design capabilities to their skillsets. The emerging codes and sub-codes from the answers submitted by students in our [ONLINECOURSE] showcase that many misconceptions of design are still present: 9 out of every 10 student's answers (91.4%) presented elements regarding 'definitions and redefinitions of design'. This limitation on how non-design students perceive the potential role of designers can hinder these students' future collaborations with designers in their professional careers. This argument was also made by Lloyd (2002) in his study of representations of industrial designers in television programmes: misconceptions about what designers do can create wrong expectations among professionals buying design services. For example, while collaborating with design professionals, other professionals might assume that

designers' only task in a project is to take care of visual aspects. Therefore, designers' role in this project will be limited and under-utilized.

While the design field is constantly changing its scope, it becomes increasingly difficult for non-designers to know what designers do and how they can collaborate with design professionals. Yet, initiatives like [PROJECTNAME] aim to build design expertise and raise the awareness of design among non-design students. We expect that these non-design students will work together with designers and/or buy design services. This higher awareness of design by non-design professionals can overcome some of the barriers for adopting design practices found in the literature. For example, Liu and de Bont (2017), in their study of barriers for Chinese organizations to adopt strategic design practices, found that 'CEOs don't understand strategic design' (p. 141). Similarly, Micheli et al. (2018) identified that 'generating awareness of design's role and contribution' (p. 614) was key to elevating design to a strategic level in organizations. In short, [PROJECTNAME] aimed to increase the awareness of design for non-design students, which will facilitate how designers and non-design professionals can collaborate on future projects.

This study presents some limitations that can serve as starting points for other researchers interested in further investigating how non-design professionals acquire knowledge about design. First, the study reflects one initiative in [UNIVERSITY]. Specifically, this university has a tradition of integrating [AREAS] in its teaching. Thus, our faculty and students might be more inclined towards learning about design . This might not be the case in other universities in Nordic countries or elsewhere in the world. Future studies can look at how non-design students learn about design in different geographical or cultural contexts. Secondly, we analyzed a small sample of 139 answers provided by students in the [ONLINECOURSE]. Future studies can complement these findings by using different methods (e.g. interviews) that can add more granularity to the findings, which will allow to explore deeply the topics that non-design students find interesting and are able to use in their own fields and degrees.

5. Conclusion

[PROJECTNAME] was an [UNIVERSITY] initiative aimed at developing design skills for non-design students through education. The project developed courses and integrated design topics into teaching in non-design programmes with the goal of helping non-design students to understand the broad role of design and how design methods can help them in their own fields. With the expansion of the role of design and designers working in close collaboration with other professionals, it is important for non-designers to know the full range of what designers do and what they can deliver in projects. Thus, [UNIVERSITY] sought to help non-design students develop their design skills to promote and shape the role of design. We expect that non-design students who participated in [PROJECTNAME] educational activities will be better able to collaborate with designers in the future. We also encourage other design schools to promote initiatives to build design skills across their non-design programmes as a way to promote the value of design in society.

Specifically with the [ONLINECOURSE] introduction to design online course, our main goal was to provide non-design students with educational content to broaden their notions of what design is and what designers do. In the emerging codes from the answers submitted to the course, we saw evidence of students claiming to bring the knowledge acquired in the course to their own fields (e.g., business, engineering). In short, [ONLINECOURSE] provided non-design students with a perspective on how designers work, which allowed them to reconsider their definitions of design and how they can implement design ways of working in their own fields.

[PROJECTNAME] concluded in August 2022 after running for four years at [UNIVERSITY]. However, the learnings from the project and some of the initiatives were kept and made permanent at the university. For example, the [ONLINECOURSE] introductory online design course and the service design course were moved to the design department and are part of the department's offering for students across the university. Also, [PROJECTNAME], together with other initiatives under the arts and creative practices strategy, laid the foundation for building the new university strategy, launched in 2021 under three new themes: [THEME 1], [THEME 2], [THEME 3].

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