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NARROWING THE GAP BETWEEN GENERAL DESIGN EDUCATION AND HIGHER EDUCATION IN DESIGN

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ABSTRACT
This paper illuminates the 13-year run for general design education, which developed in response to the art and design education community's ability to build an academic community originating in practice during the 1990s. This paper distinguishes between knowledge developed from an insider's perspective and knowledge developed from an outsider's perspective, such that established university disciplines represent the outsider position. Relying on Goodlad's framework for studying curriculum theory and practise, this paper addresses curricula for the primary, secondary and upper secondary levels and discusses ideological changes stemming from the processes of building an academic community. This paper also reflects on the potential consequences of these processes and emphasises the possibility of narrowing the gap between general design education and higher education in design (e.g. product design). Training new teachers is crucial when implementing new educational ideas. This paper highlights the need for close cooperation between teacher training and professional studies in design, as such an approach could have positive effects for both parties. The concept of Knowledge Building is used to describe both existing processes and possibilities for the future. Special emphasis is placed on the knowledge building discourse and on working creatively with knowledge.

Keywords: General design education, knowledge building, teacher training, higher design education.

1 INTRODUCTION

In 2006, the Norwegian *Knowledge Promotion Reform* [1], [2] for primary, secondary and upper secondary schools was launched. This reform strengthened design as a vital component of art and design education and placed significant emphasis on both distinct field-specific content and this school subject's contributions to society. The reform further developed ideas first implemented in the curriculum reform of 1997 [3] concerning primary and secondary school. Later, in 2016, these ideas were further strengthened when a revised curriculum addressing upper secondary school was launched [4]. The ideas developed between 1997 and 2016 contrast significantly with ideas promoted during the former curricula and the school subject Forming (1960–1997). In order to fully understand the curriculum changes, the history of the art and design community must be taken into consideration. In particular, it was not until 1995 that the teachers of art and design were given the opportunity to take part in organised research education at a PhD level. Until this point, research relevant to the school subject had been driven by traditional academic disciplines at universities. The curriculum changes first seen in 1997 can be considered a direct response to the opportunities for research training and knowledge production that originated in art and design education.

Following John Goodlad's [5] structural framework for discussing curriculum theory and practice, this paper illuminates how educational ideas shift over time. The initial work of the 1990s indicated changes for the coming curricula and shifted the educational focus from self-expression and personal development to field-specific knowledge (e.g. design). This paper explores how the changes have formed the basis for continuous design education from primary school to university colleges and elaborates on the potential consequences.

2 FRAMEWORK AND THEORY

2.1 Curriculum theory—curriculum practice

John Goodlad's [5] description of curriculum theory and practice offers an arena for a structured discussion on the relationship between educational theory and practice. Goodlad distinguishes among five different curriculum manifestations from the ideological, formal, perceived, operational and experiential domains. The ideological domain is concerned with ideas and visions about education. These ideas not only change over time, but may also contradict other ideas popular during a given timespan or paradigm. The formal domain refers to the formal curriculum. The perceived curriculum is concerned with interpretations of the curriculum. The operational curriculum reflects 'what is going on' in the classroom. Finally, the experiential curriculum indicates how the operational level affects students, their experiences and their actual learning outcomes. Studying curriculum theory and curriculum practice is challenging. As Goodlad notes, 'Curriculum inquiry gets into largely uncharted territory (…)' [5:65]. This is especially true when an inquiry concerns the operational and experiential domains. In this paper, components of Goodlad's structure are used to address curriculum turns in art and design education. The particular focus is on the period of upheaval during the late 1990s and its effects on the national curricula developed between 1997 and 2016. The ideological domain is explored through a variety of written sources that illuminate the history of art and design education in Norway. The formal domain is addressed through national curricula, including primary, secondary and upper secondary school curricula. The closing section of this paper is a discussion on the potential outcomes of the curriculum shift, which, following Goodlad's terminology, can be described as the 'potentially experienced domain'.

2.2 Knowledge building—'knowing how'

The concept of knowledge building is an ongoing process focused on improving and developing the knowledge base of a specific community. According to Scardamalia and Bereiter, knowledge building '(…) focuses on the 21st century need to work creatively with knowledge' [6:1]. The term 'knowledge building discourse' refers to the process through which a community negotiates its knowledge base. As Scardamalia and Bereiter notes, 'The discourse of Knowledge Building communities results in more than the sharing of knowledge; the knowledge itself is refined and transformed through the discursive practices of the community – practices that have the advancement of knowledge as their explicit goal' [6:10]. Gilbert Ryle's [7] terms 'knowing that' and 'knowing how' offer a suitable terminology for distinguishing between traditional research carried out by conventional academic disciplines and the young research community of art and design education: in other words, the difference between a researcher being an outsider and a researcher being an insider. Being an insider requires knowledge and skills at both the practical and the theoretical level. Following Ryle, this paper argues that building a community of art and design education requires both theoretical knowledge and practical skills.

3 THE IDEALOGICAL LEVEL

3.1 International influence

In 1960, the three school subjects of Drawing, Slöyd and Textile were merged into one and given the name Forming. Whereas the three former school subjects aimed to prepare children and youth for adulthood through craft, needlework, clothes reparation, etc., Forming arose from new ideas that were primarily concerned with children's personal development. International artists, art pedagogues and psychologists, such as John Ruskin, Herbert Read and Victor Lowenfeld, first promoted these ideas [8], [9]. Helga Eng was one of those who introduced these international ideas to the Norwegian art and design education community. Eng had a PhD in psychology [10] and was the first female professor in this discipline at the University of Oslo [11:44]. Eng was particularly interested in children's drawings. Her first book on the subject was *Barnetegning* [Children's Drawings] [12]. Eng also conducted a thorough study on John Ruskin and the aesthetic movement [13]. She described how Ruskin, together with William Morris, warned against industrialisation and the machine culture and promoted ideas about pre-industrial art, history and culture as a counterbalance to modernisation. These ideas inspired the artist and teacher Rolf Bull-Hansen, the first leader of Norsk Tegne—og Handarbeidslærerforbund [The Norwegian Association for Teachers of Arts and Craft], who was made

head of Specialised Teacher Training in drawing and slöyd at Notodden in 1938 [11] and who later wrote several books inspired by both Ruskin, Read and Lowenfeld [8], [9].

3.2 The alternative view

In the 1970s, Sweden witnessed the rise of alternative ideas. These opposing ideas promoted a critical and reflective approach to images and visual communication. In Norway, the Swedish ideas gained support from such groups as Landslaget Forming i Skolen [the National Association for Forming in School], which claimed that a stronger emphasis on these aspects in school could further contribute to society. However, these ideas, primarily promoted by the field of practice, lacked the same impact on the development of the school subject as ideas drawn from university disciplines. Nielsen [14] described how the lack of a field-specific research community created a gap between the profession and ideas developed at the universities. Without a proper academic environment, the art and design education community was not capable of influencing the formal domain.

3.3 Building community—organised research education at the master and PhD level

In 1976, a master programme in art and design education was established at two pedagogical institutions in Norway. This was the first Norwegian master programme to include practical aesthetical work. However, the master programme was obliged to adjust to traditional university-developed academic standards [9], [15]. In order to engage in the knowledge building discourse, it is vital to foster an ongoing negotiation among all involved. This requires that all parties be equal [15]. In order to adapt to this position, the art and design education community also had to engage at the highest academic level, which presupposes adequate research training.

In the late 1990s, interest in research concerning both the art and design disciplines and art and design education was growing in the Nordic countries. There was an emerging need for research-based knowledge. In 1995, teachers with a master degree in art and design were given the opportunity to enter the doctoral programme at the Oslo School of Architecture and Design (AHO). This programme embraced the 'making disciplines', such as architecture, product design, graphic design and art. This made it possible for several teachers to attend organised research training. In 2000, Liv Merete Nielsen was the first teacher in art and design to defend her doctoral theses at AHO [16]. Since the late 1990s, several theses have been defended at AHO and other institutions both in Norway and in the other Nordic countries. One interesting aspect of the early production of doctoral work by art and design teachers is that several seem to have taken a critical stance toward the romantic ideas promoted in the area of Forming [11]. This critical attitude suggests the need for a closer look at the curricula for primary, secondary and upper secondary school implemented in the late 1990s and subsequent years.

4 THE FORMAL LEVEL

4.1 Primary and secondary level: 1st–10th grade

The curriculum changes implemented in 1997 were substantial. The change of the name from Forming to Art and Crafts was considered a huge shift and was widely debated. The renewed content implied a new direction promoting design as an important aspect. Whereas Forming was dominated by romantic ideas about art and art education, the new subject sought to promote relevant knowledge and practical skills. The change was supported by the Minister of Education, Gudmund Hernes, who criticised Forming as lacking a distinct knowledge base. According to Hernes, pupils learned little beyond finger painting [17] when they attended Forming lessons. With its changed name and redefined content, the school subject gained a fresh start and became more modern. In 1997, the renewed subject embraced two main components: one concerned with two-dimensional forms, such as art and images, and the other covering three-dimensional forms, such as sculpture and handicraft [3]. In 1st through 10th grade, pupils worked with practical exercises in studios and learned about art and design history.

In 2006, Art and Crafts was revised as part of the *Knowledge Promotion Reform* [1]. This time, the curriculum changes were minor and focused primarily on adjusting the direction of the content. The subject was divided into four thematic areas—art, visual communication, architecture and design—in choice that can be seen as a response to the joint research education at AHO and, thus, a shared research context between the 'making disciplines' and the art and design education community [9]. The new curriculum promoted new ideas concerning societal issues, such as democratic participation and sustainability. In 2006, Art and Crafts intended to comprise personal, local and global concerns

[18], [19]. The curriculum changes in 1st through 10th grade illustrate the ambition to incorporate aspects vital to modern society and key components for professional design practice.

4.2 Upper secondary level: 11th–13th grade

At the upper secondary level, the first major changes could to be seen as early as 1994. Minister Hernes decided that all pupils should have the right to 13 years of study and defined a continuum from primary school to secondary school and, finally, to upper secondary school. This strategy focused on modernising the upper secondary level through a three-year run of either vocational training or further general education, the latter of which aimed to prepare students for further studies at universities or university colleges. During this modernisation process, the more than 100 first-year courses were reduced to 13 and were made the starting point for 13 different educational programmes [20]. What had been a wide number of separate courses in traditional craft and textile craft were merged under the common term 'Formgiving' [Design]. The design programme included several courses, which pupils could follow to prepare for either a specific profession or studies at universities and university colleges.

In 2006, the upper secondary level was revised as part of the *Knowledge Promotion Reform* [2]. During this process, vocational training was separated from further general education. Furthermore, while the programme for further general education kept the name 'Formgiving', the programme for vocational training was given the name Design og håndverk [Design and Craft] [21]. Whereas the vocational training programme sought to prepare pupils for specific craft professions, the three-year programme in Formgiving sought to teach both traditional academic subjects (e.g. maths, English, science, etc.) and design and art [2]. To accomplish this goal, two art and design subjects were made obligatory: Design og Arkitektur [Design and Architecture] and Visuelle Kunstfag [Visual Art]. Pupils were also given the opportunity to immerse themselves in optional courses. In particular, the 2006 curriculum included four field-specific courses: Visuell Kultur og Samfunn [Visual Culture and Society], Trykk og Foto [Printmaking and Photography], Senografi og Kostyme [Scenography and Costume] and, finally, 'Samisk Visuell Kultur' [Sami Visual Culture].

The curricula for the three-year run for further general education was revised in 2016. The Norwegian Directorate for Education and Training proclaimed that one of the objectives of this revision was to better prepare pupils for higher education in design and art. Teachers, organisations, institutions and professionals all called for courses at the upper secondary level that were more relevant to higher education [22], [23]. The programme for further general education was renamed as Kunst, Design og Arkitektur [Art, Design and Architecture] [4], and the obligatory subjects were revised, with one keeping its name Design og Arkitektur and the other experiencing a minor change to Kunst og Visuelle Virkemiddel [Art and visual tools]. The optional courses experienced the most obvious changes, becoming Design og Bærekraft [Design and Sustainability], Arkitektur og Samfunn [Architecture and Society], Foto og Grafikk [Photo and Graphics], Kunst og Skapende Arbeid [Art and Creative Work] and Samisk Visuell Kultur [Sami Visual Culture]. These latest changes were meant to draw upon vital aspects of design, art and architecture and to narrow the gap between general education and higher education. Today, it is possible to identify a vision for a 13-year run of design education preparing pupils for higher education in design.

5 'THE POTENTIALLY EXPERIENTIAL DOMAIN'

Knowledge building, as described by Scardamalia and Bereiter [6], is an ongoing process that aims to improve the knowledge base of a specific community. The process implies a desire to change and a willingness to work creatively with the concept of knowledge. Until the mid-1990s, the art and design education community was unable to engage in organised research training. Though a master programme was established as early as the 1970s, it was insufficient to challenge the established academia. The result was that the art and design education community was prevented from taking part in the knowledge building discourse, including negotiations about school subjects' knowledge bases. The situation changed when organised research education was made possible at the doctoral level. In Goodlad's [5] terminology, the opportunity to perform research changed the *ideas* and, thereafter, the *formal curricula* of art and design education. A study of the formal curricula developed between 1997 and 2016 reveals features that were shared among the curricula for the primary, secondary and upper secondary levels and the 'making disciplines', which originated in the AHO's doctoral programme. Teachers with a master in art and design education were given opportunities to immerse themselves in

field-specific research questions originating in practice and to interact with related disciplines. These shifts, in turn, paved the way for a new educational direction. In the wake of this process, it is interesting to raise the following question: What is the potentially experiential outcome of the curriculum turn?

The thematic divisions at the primary, secondary and upper secondary level regarding design, architecture and art have the potential to introduce pupils to several characteristics of these disciplines. The educational changes have made it possible to identify a 13-year run for general design education. This paper argues that this could have a positive effect on higher education in design and emphasise future students' prior knowledge when entering higher education. A distinct design curriculum throughout general education could produce more qualified students entering professional studies in design (e.g. product design). However, for these benefits to be realised, several obstacles must be overcome. In particular, there is a need for close cooperation between professional design education and specialised teacher training. The training of new teachers is crucial when implementing new educational ideas. Today, students are trained in various techniques, materials and approaches. However, a closer cooperation between teacher training and the professional design field may introduce other aspects as well. If students, as part of their teacher training, can act as visiting students in courses in product design, this could promote new and interesting ideas and practical experiences, potentially prompting important educational reflections and discussions. As another alternative, it would be interesting to bring together students from different bachelor programmes (e.g. teacher training, product design and engineering) in joint workshops to challenge and fuel one another's new ideas and perspectives. Such an approach could be advantageous for teacher training students, students from product design and engineering students. Students could also gain experiences that may change their ways of thinking about their own discipline. In particular, for the teacher training students, these experiences could prove important later, when they enter classrooms in primary, secondary and upper secondary school. This approach assumes that both the art and design education community and the professional design field are willing to work creatively with the concept of knowledge and to explore unchartered territory together. The resulting process, which can be traced back to the first attempts in the 1990s to define a knowledge base originating in practice, has the potential to narrow the gap between general design education and higher education in design.

The study presented in this paper have solely looked into the situation in Norway. However, what would be interesting is to investigate further the situation in other countries, both in the Nordic countries and in Europe. Many countries are reducing the scope of design subjects in general education but at the same time, the general design interest is increasing. As further work, it would be interesting to look into curricula for design education in several countries, searching for common goals and alternative approaches.

6 CONCLUSION

The 13-year run of general design education in preparation for higher education in design can be regarded as a process originating in an opposition towards early romantic, psychological and pedagogical ideas about art and art education. The curriculum turn was made possible when art and design education teachers gained the opportunity to participate in organised research education in the mid-1990s. Their initial ideas have since been further developed, with the last contribution taking the form of a revised curricula for general education at the upper secondary level, which was implemented in 2016. A vital element of the curriculum turn has been the promotion of field-specific knowledge and societal relevance. This paper argues that further strengthening these ideas requires cooperation between teacher training and higher education in design as such cooperation could have positive effects for both parties and could narrow the gap between general design education and higher education in design.

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