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The Teachers' Views on the Significance of the Design and Craft Teaching in Finland

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Abstract

The Finnish curriculum for crafts emphasises the creative problem-solving skills of the student, the completion of different design tasks and the implementation of designs, while seeking to nurture the student's self-esteem. Furthermore, students should draw up the designs for their artefacts, plan their work, and also develop designs when needed. These aims can be accomplished by teachers diligently teaching the designing of craft products. The purpose of the present study is to analyse teachers' views on design as a part of the holistic craft process in the school context. The study was conducted in two phases. In the first phase five teachers were interviewed, and in the second phase four teachers wrote short essays. The research questions addressed were as follows: "What kind of views do teachers hold on students' designing in the crafts area? How is designing implemented in craft teaching?" The results indicate that the extent of students' participation in designing their craft product is dependent on the attitudes and competence of their craft teacher. Design-oriented teachers plan the designing situations and stimuli carefully and value design as a significant part of the craft process. Technique-oriented teachers will consider their students' participation in design unnecessary or too challenging and as detracting from more essential learning outcomes, such as craft techniques. It seems the teachers need supplementary education to implement the new curriculum of crafts in Finland.

Key words

design, craft teaching, craft as a subject, holistic craft, craft teacher

Introduction

In Finland, craft teaching of primary education started in 1866 from the initiative of Uno Cygnaeus. He developed the idea of educational crafts to promote a student's activity and independent enterprise, mediate certain generic skills and integrate crafts with mathematics and science. (Kiviniemi and Vuorinen, 2010). The craft education developed by Cygnaeus had influence to other Scandinavian countries, but it also had indirect reference to craft teaching in Britain and the United States (Kananoja, 1999).

Craft education has maintained quite a steady status as a school subject in Finland (Garber, 2002). Craft has gone through many changes as curricula have been amended. Traditionally, the aim of craft teaching has been to increase students' welfare, production capacity, and provide them with skills to manage in everyday life (Garber, 2002). The contents have been divided between textile work and technical work on the basis of the gender. This division to textile work and technical work was valid up to the end of the 1990's after which the contents of the crafts were connected into one subject called craft. (Syrjäläinen & Seitamaa-Hakkarainen, 2014). However, even nowadays the majority of craft teachers are either textile teachers or technical work teachers (Marjanen, 2012).

It is not necessary to learn to make products needed in daily life anymore as it was in Cygnaeus' times (Seitamaa-Hakkarainen, 2010), and the appreciation of the practice of everyday life skills has gradually reduced its significance (Marjanen, 2012). The target of craft teaching is to develop the craft skill of students, so that their self-esteem improves and they enjoy their craft work. At the same time the students' sense of responsibility increases alongside the knowledge of materials. The values have moved towards creativity and problem solving, technical and aesthetic skills, independent working skills and promotion of self-expression. During craft lessons, students learn the art of long-range and independent working. Becoming acquainted with one's cultural genotypes is a part of the teaching of the crafts. (FNBE, 2004; see e.g. Seitamaa-Hakkarainen, 2010).

The current Finnish core curriculum for crafts (FNBE, 2004) emphasises the significance of the holistic craft process in teaching to realise these goals. In the holistic craft process, the maker is responsible for developing ideas, design, production, and finally assessing the artefact and the whole process (Pöllänen, 2011; Rönkkö, 2011). The first phase of the holistic craft making process involves brainstorming to generate ideas and designs (Kojonkoski-Rännäli, 1995). This visual and technical design is the most important part of the holistic craft process because research, experimentation, problem solving, and reflecting on one's actions are essential parts of all creative processes (Pöllänen, 2009). In a non-holistic, or ordinary (Pöllänen, 2009), craft process, the craft maker is following someone else's plan and adapting a ready-made

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design to fit the desired purpose (Kojonkoski-Rännäli, 1995).

The main focus of the forthcoming curriculum (to be implemented from 2016 onwards) is on utilizing different multisensory, multimaterial and experiential starting points for designing, and on analysing artefacts, the surroundings, and nature. It also highlights using imagination, stories, drama, games, and the surrounding environment in designing craft products. In addition, documentation is a significant part of that process. In crafts, different designing tasks are creatively and resourcefully undertaken and the designs are realised, and at the same time self-expression is strengthened. (FNBE, 2014).

In other parts of the world, craft making as a subject has disappeared, either due to social changes or because it has been folded into technology, art and design, household, or work education (Pöllänen, 2009). For example, in England, a Crafts curriculum has changed to a 'Design and Technology' curriculum (D&T) (Davies, 2002; Wilson and Harris, 2003). In D&T students design and make functional products using critical and creative thinking whilst developing skills in the use of a variety of processes and materials (Atkinson and Sandwith, 2013). Its' goal is on creating critical understanding of design practice both through action and reflection (Roth, 2001; see e.g. Schön, 1983). D&T contains technical knowledge and understanding, aesthetic appreciation, making or manufacturing skills and design strategies (Barlex, 2007). The curriculum is carried out in many kinds of technologies including arts and crafts, and food and nutrition technology (e.g. Barlex, 1998; Given and Barlex, 2001; Rutland et al., 2005).

Comparing English D&T to Finnish craft education, the major difference is that D&T includes technologies from crafts, but also from arts, and food designing (e.g. Rutland et al., 2005). D&T contains also pure design tasks without implementing the design (Barlex and Trebell, 2008). Also the concept of design differs between England and Finland. Design in England is seen as a holistic view to students to plan his/her activity in different contents of D&T. Designing is defined by Parkinson (2007):

Design can be seen as a term involving the articulation of ideas to modelled formats. As such it is a uniquely thoughtful act that may concern the seeking of possibilities. Design ideas, of course, may occur at a purely abstract level. Design ideas conceived in the mind of a child, from spaceships to underwater bicycles, are "imaginings" that may have been given virtual form and substance so that through "inner

rehearsals" their capabilities may be assessed and their attributes subjected to scrutiny. Design ideas in the mind may, of course, exist in ways that are not capable of "standard" forms of representation, perhaps as vague intentions or as strategies based upon the anticipation of some event or situation. (Parkinson, 2007: 236)

In Finland, design is seen as a part of a craft process and as a way to plan and implement self-made artefacts (Kojonkoski-Rännäli, 1995). It has been a written aim of the curriculum (FNBE, 2004), and the significance of design is based on a concept of holistic craft. However, also in Finland the developing of design teaching and models for collaborative design has increased its' significance since the beginning of 21st century (Seitamaa-Hakkarainen, 2000; 2009; Seitamaa-Hakkarainen et al, 2001; 2010; 2012).

Although design has different definitions in the school context in Finland and in England the main concern in both countries is on enhancing creativity in teaching and students' independent working and enterprise. For example, according to Atkinson and Sandwith (2013: 39) D&T teachers "need to be more than just 'enthusiastic' about the process if they are to develop enthusiasm in their pupils that will sustain them through the exciting but sometimes arduous and difficult process required to achieve outcomes of which they and their teachers can be proud." Barlex (2007) also highlights the D&T teachers' role in the development of creativity. However, Finnish craft teachers have incomplete information on ways of guiding the designing process in teaching, which slows down and even prevents the development of design skills in our schools (see e.g. Hilmola, 2013; Seitamaa-Hakkarainen, 2009; Vanada, 2014).

In this study we are interested in clarifying the role of design in craft teaching in Finland. The central focus of this study is to describe the views teachers hold on implementing and guiding the designing element in craft teaching happening during students' holistic craft process. This focus makes it possible to study how the designing aspect should be implemented in teacher education in order to help teachers to guide the design processes. The research questions are as follows:

1. What kind of views do teachers hold on students' designing in the crafts area?
2. How is designing implemented in craft teaching?

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Designing as a part of the holistic craft process

In the holistic craft process, the maker is responsible for developing ideas, design, implementation, and finally assessing the artefact and the whole process (Pöllänen 2011; Rönkkö 2011; see figure 1). As a starting point for the designing, as well as the craft process, the maker looks for stimuli and experiences to incorporate into the craft product. The aim of the brainstorming is to generate new views on the phenomenon (Lawson, 2006). Sometimes inspiration needs to be supported by tangible or simulated experiences (Rönkkö and Aerila, 2015). These experiences can be provided in various ways such as through pictures, drawings, examples, visits, trips, memories, various artistic experiences (music, literature, movies etc.), and learning about craft techniques, materials, and tools. It might also be helpful to illustrate the ideas generated by brainstorming with various prototypes (Pöllänen, 2009).

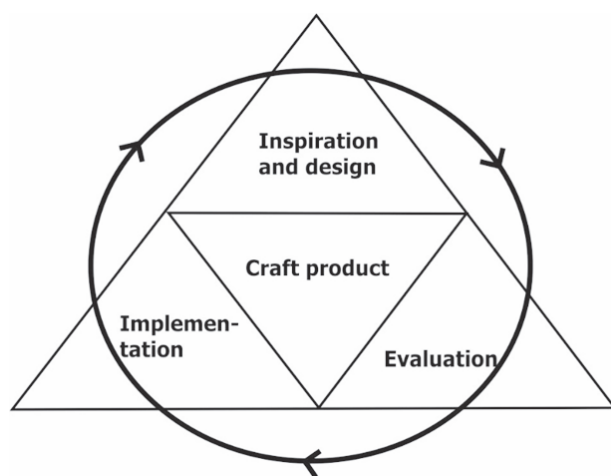


Figure 1. Holistic craft process (Rönkkö, 2011)

The design process can be defined in different ways. In this study it is seen as a part of holistic craft process in a school context in Finnish Craft. In holistic craft design is a problem-solving process or a process of reflection-in-action (Lahti, 2008). The different phases of the design process are conceiving of the task, defining the challenges involved in the design, brainstorming, qualifying, and developing the future (Lahti et al, 2003). The design process includes events like physical action (drawing, mental imaging, gesturing, acting or verbalising) and process intentions (reflecting on the process and selecting from alternatives) (Lawson, 2006).

During the actual design phase, the user defines the main purpose, properties and the maintenance of the artefact, but also requires specific information for the production of the craft product (Seitamaa-Hakkarainen, 2000). To turn ideas into a viable craft product, the maker must obtain

information about craft techniques, materials and tools by asking, experimenting and examining (Kojonkoski-Rännäli, 1995). The visual and technical design leads to the aesthetic and functional values of the product being specified (Sjöberg, 2009). The ideas of the tangible artefact will be developed through the application of visual and technical solutions (Lawson, 2006; Sjöberg, 2009).

The designing process usually requires both visual and technical sections in order to create a functional and aesthetic solution (Seitamaa-Hakkarainen and Hakkarainen, 2001). During the designing the information required for the implementing of the craft product is specified, and the techniques are practised, and other factors affecting production clarified. In addition, the designing process can be temporally placed in several stages of the craft process. After testing and reflecting on the prototypes, changes can be made to the original design. The direction of the designing process does not proceed linearly but is instead either spiral or proceeds both horizontally and vertically simultaneously (Seitamaa-Hakkarainen, 2000; Rönkkö, 2011). The solution can be the final result of design process without actually making the product (Taylor, 2000).

Students often need stimuli, help, support and feedback from the teacher in the course of designing. Sometimes setting limitations in the design phase can help students refine their initial idea into a feasible design (Britton et al, 2005; Rönkkö and Aerila, 2013). The phases of brainstorming and designing are important because they improve the creativity, spatial perception and the control of techniques and materials. It is said that craft making is a way to materialise design thinking (Syrjäläinen and Seitamaa-Hakkarainen, 2014). The hands-on activity is motivating for the craft maker, and crafts should not be mere visualisations and modelling (Rönkkö & Aerila, 2015). In the designing phase, the craft maker has to learn not only what is already known, but also to go beyond what is given. The modifying of the ideas and restrictions is characteristic of the designing task. If the different phases of designing are defined, divided and phased the designing will advance (Syrjäläinen, 2003). The situation creates new knowledge and creates the potential for learning (Seitamaa-Hakkarainen et al, 2012).

In developing the student's metacognitive skills, the teacher acts as the supporter of the learning, so that at first the amount of the teacher's control is high, and as the metacognitive skills of the student develop, the amount of the teacher's support and control will decline (see e.g., zone of proximal development by Vygotsky, 1986). Teachers build metacognitive supporting structures for the

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student when they define, direct, and segment different tasks, problems, or objectives of the learning (Syrjäläinen, 2003: 60).

Implementation of the research

The data collection

Our study is a typical example of the qualitative case study. A qualitative case study is dealing with significances and conceptualising of them (Dey, 1993; Snape and Spencer, 2003). A case study is a way of collecting data and it aims to understand the phenomenon deeply and to answer *how* and *why* questions? (Mitchell, 2000). Cases may be studied methodologically in different ways (Simons, 2015). Yin (1994:13) defines a case study as “an empirical inquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident”. The use of a case study strategy is justifiable when studying contextual conditions (Simons, 2015).

The participants of the study are professionally-qualified teachers of crafts in a primary school with classes ranging from the first to the ninth grade (meaning 7 to 16 years old students). Their education was either primary school teacher or craft subject teacher, and they had taught crafts for a minimum of four years. The participants were selected to present the different parts of Finland. In the selection of the participants half of the teachers taught textiles (5), and the other half technical work (4). This was taken into consideration during the research process. The data consists of five interviews with teachers (three women and two men: four primary school teachers and one craft teacher) and four essays written by a different group of two craft teachers and two primary school teachers (3 women and 1 man).

The data were collected in two phases. The first stage involved semi-structured interviews with teachers in northern Finland in 2010–2011. The interview can be considered a flexible method for data collection. It can be used to clarify matters, such as appreciations, values and reasons (Rubin and Rubin, 2005). Silverman (2010) describes the interview as a method for getting inside the interviewees' heads and reporting matters from the point of view of the interviewee. While the questions were semi-structured, the interviewer tried to ask questions sufficiently broad for the interviewee (Rubin and Rubin, 2005). The interview themes were defined in advance. During the interview a few additional questions were posed if the original questions seemed too challenging for the interviewees. Interviewees were also given an opportunity at the end of the interview to add any notions

that were important to them but that had not emerged during the semi-structured interview process.

The second phase of data collection started with a request to six teachers in western Finland to write an essay, and four subsequently agreed during semester 2013–2014. The brief of the essay was to describe students' design process and the meaning of designing as they have experienced it during craft lessons. Teachers were asked to tell about the theme with examples from different class levels, different design and craft tasks and different implementations of designing. The essays varied in length between 500 and 1600 words and two to five pages. The writers were chosen for their long experience of teaching crafts, and the step was intended to supplement and reinforce the data obtained via the interviews. Writing an essay gave the teachers more time to think about their viewpoints on teaching designing, offered an opportunity to interpret the meaning of the phenomenon (Gall et al, 2003) and analyse their views more distinctly than is possible when responding to interview questions (Befring, 2004). The aim of this study is to specify the views held on designing in primary schools, and to elicit detailed information from the teachers about their perspectives on letting students participate in the designing process.

The data analysis

The data were analysed using qualitative content analysis (see, Krippendorff, 2004). Content analysis concentrates on the systematic and objective analysis of the collected data (Neuendorf, 2002). Krippendorff (2004) defined content analysis as a replicable and valid method for making specific inferences from a text relating to other states or properties of its source. The challenge of analysing the qualitative material gathered in this study lies in determining the significance of the responses offered by the interviewee or the writer. The purpose of the text can be different for each individual reader and in different periods (Gall et al, 2003). The aim of conducting content analysis in this study was to reveal information on teachers' views on designing in craft teaching.

Qualitative content analysis does not require exact quantification (Mayring, 2000). Qualitative content analysis can be used in either an inductive or a deductive way. Both inductive and deductive forms of content analysis involve three main phases: preparation, organisation, and the reporting of results (Elo et al, 2014). In this study, interviews and essays were analysed both as a whole text, and by identifying differences between views. In practise the content analysis meant studying the data in details and organising it in themes. The themes emerging through analysis were the following: teachers'

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views on students' designing in crafts and how designing is implemented in craft teaching. To make the analysis more detailed the perceptions of teachers were also coded in accordance to their orientation. During the analysis the data were approached from the perspective of the research questions.

Results

Teachers as design- or technique-orientated craft teachers

The interviews and essays of primary school teachers teaching crafts show that teachers are aware of the holistic craft process and consciously consider their students' ability to design. There are teachers who value a personal designing process and actively support that process by giving time, stimuli, and guidance to students. On the other hand, some teachers consider increasing children's participation in the designing process problematic or unfeasible, because such participation in designing distracts from more essential learning targets, such as craft techniques. Many teachers of our sample would like to increase their students' participation in the design process, but were unsure of how to implement this goal into their craft teaching projects.

It is really difficult to guide designing in the lower levels of the primary school. All the techniques have to be taught to the student so I have not carried out student-centred designing. (Craft_teacher9_male_2014)

It is always question of the schedule; even if it should not be such a big matter. It is horribly difficult when there are fifteen children in the class and everybody is busy with a different stage. (Class_teacher3_female_2010)

It seems that the teachers contributing to this study have two different orientations on teaching crafts: a design orientation and a techniques orientation. In addition, there are teachers, who value designing, but feel incapable of facilitating the holistic craft process. The design-oriented teachers seem to perceive design as an equal part of the craft process. They understand that students designing and problem solving must be supported and given time. They clearly enjoy the interaction between students and are interested in student participation. As means of support they cite different stimuli prior to the designing stage and increasing the designing input of the students gradually, and setting limits to the problem solving.

The designing is an extremely important part of the learner's craft process. With its help the student is motivated to work, the theme is bounded to the maker's own living world, the significance, the need for

the work, the target and reason to strive towards the goal are created. In the designing process, it is easier for the students to let their creativity flow, inside the limits set by the teacher. A totally free designing stage would make considerable demands on material acquisitions, on the teacher's own material control and the organisation of chronological issues and the content of the teaching.

(Class_teacher8_female_2014)

The more traditional techniques-oriented teachers feel that the most important target in craft lessons is learning different craft techniques. They feel that there is no time for designing, and furthermore that designing is useless if the student does not know the techniques. They could be said to favour the view that designing is based on an ability to master the relevant production techniques and therefore only the teacher is able to design.

In every grade new craft techniques must be taught. In secondary school the situation is facilitated because students have a grasp of the basic techniques and the use of machines is allowed. It diversifies the making of different products. (Craft_teacher9_male_2014)

Even though the technique-oriented teachers emphasise the skills of crafts, they understand the meaning of designing for the student. They are of the opinion that designing demands skills that young pupils do not usually have and cannot be taught during crafts lessons.

It would increase the motivation if the student could undertake design him/herself. So it would be good for the student to be allowed to design as much as possible. In that case the working process would be more meaningful. The teacher's role would be focused on directing the designing activity in the right direction so that the product will be practicable and realisable. (Craft_teacher_male_2014)

Implementing designing in craft teaching

Design-oriented teachers envision designing crafts products as a multi-phase process that can be supported and taught in various ways according to the age of the students and the time available. Design-oriented teachers plan the designing phases of a craft product carefully and in advance. For them designing is not a free activity, but a well-planned and goal-oriented part of learning crafts. One of the methods the teachers use to support designing is to set certain limits to the designing process, which usually involves limiting students to using a number of pre-decided options.

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I have noticed several times that up-front planning of lessons and assignments, like how to design, how to limit, is required. ... The limits must always relate to competence and time. It is important for the teacher to mark off an assignment immediately at the initial stage. What is done, how it will be implemented, what are the optional limits that the student can choose etc. (Craft_teacher7_female_2014)

Design-oriented teachers use different methods in helping students to design their craft products. It seems that they gradually decrease the pedagogic control over the design. These teachers report that learning designing usually starts with brainstorming. It can be primed by eliciting different vision ideas, and they also try to help students' represent their thoughts and ideas for brainstorming by building mind maps with them, by asking amusing questions, by visiting various sites, and by discussing in an interactive manner with the students. Teachers value students' own observations on their environment and creating their own instruments.

The student's own 'output' is always needed here. The task of the stimulus material is to tempt, to hook, and to encourage the student into brainstorming and designing. The different pictures (the idea pictures, atmosphere pictures, example products etc.) serve as stimulus material depending on the current matter. Also fairy tales and stories, the problem to be solved, a survey of history, or the vision of the future can be ways that connect to the designing. (Class_teacher8_female_2014)

Design-oriented teachers feel that it is important to connect the designing process to students' own lives. This helps them to get ideas for their designs and understand how to implement design into their craft products later on. Giving students models on designing is important for the teachers from other perspectives as well, since doing so seems also to give students models on how to conduct a process of problem solving. Design-oriented teachers help students to discover different points of view on the problem to be resolved. They evaluate the students and their attitudes to set limits and to focus on brainstorming. One teacher offered an example relating to how students started brainstorming the designing of a bin:

Every student made a mind-map on his/her own room; important things, ideal colours, their own style, and personality. I asked the children questions like, "What is the most important thing to you in your room?"; "What kind of things are found under your bed?"; "When a thing is lost, where do you look first?". I

had thought of as many themes as I could, including funny ones. All the questions were connected to the solutions of the product. ... The children answered my questions on the mind-map, if they did not want to say them aloud. But, the children had to suppress their laughter. (Class_teacher6_female_2014)

After the brainstorming and motivational stages, design-oriented teachers let the students draw a visual representation of the product. For the technical drawing, they use structured design forms or design applications. The degreasing of the teacher's control is based on their students' knowledge of craft materials and craft techniques.

In the designing of the first woollen sock, a good help is for example a design form. I have used it both as help for the designing and also as a support for the learning of the structure of the sock. (Class_teacher8_female_2014)

Technique-oriented teachers see the designing process as one too demanding for the students to implement, and therefore prefer using ready-made models and focusing on motor skills training, and teaching craft techniques. The teachers seem to disagree on when the student is ready for the design process: a few even said that designing is impossible to implement in the primary school. Technique-oriented teachers emphasise the worth of ready-made models and limit children's designing activity to choosing colours, shapes, or some small details.

The pupil has been able to decide mainly in the finishing stages of the product. (Craft_teacher9_male_2014)

The interviews and essays show that there is an obvious need for further education in crafts in Finland. Some teachers are aware of the importance of enhancing students' designing but are uncertain on how to implement the designing process into craft lessons. They felt that they needed guidance in both planning the designing aspects for students, and in guiding children to design according to the learning targets and students' competences. In addition, the teachers' competence at craft production plays a significant role in teaching design; competent teachers, who master the craft skills themselves, are more confident in teaching design.

Yes, it is good to know how to do it... It facilitates teaching very much, when you know how you implement different phases and know what is made next. (Craft_teacher4_female_2011)

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Discussion

In craft teaching the craft task is to define the theme and the problems in such a way that the student has access to all available material, technological and aesthetic options to cope with designing and carrying out a project considering developmental and psychological views and usability. Teaching the skills of the 21st century requires a teacher to be more a guider of learning and working process than being an introducer of ready-made models. To implement the aims of the curriculum the teacher must be able to direct the designing of the craft product, to offer space for thinking creatively, analytically and practically and also give space to different creative solutions and options for technical realisation. (Vanada, 2014). If students are encouraged to think critically, to ask the right questions, and look for answers independently, students' self-esteem will grow. At the same time the student's role changes, students commit to studying instead of expecting ready-made answers from the teacher, and are courageous enough to question, pay attention, and be willing to experiment (Karppinen, 2008; Starko, 2010).

Designing is an essential part of the holistic craft process, but it is not easy to implement in teaching. It is also a new focus area in the curriculum of crafts (FNBE 2004; 2014). The results of this study align with those of previous studies (Hilmola, 2013; Karppinen, 2008; Seitamaa-Hakkarainen, 2009) stating that teachers of crafts tend to emphasise craft techniques ahead of designing craft products. Not all the teachers in our sample had incorporated the design process into their teaching, although they did understand its significance. Their reasons for not incorporating designing included feeling it was a demanding task that students could not cope with until they possessed the basic skills and technologies of crafts (Karppinen, 2008). However, it is reassuring to see that many teachers understand the significance of designing in the holistic craft process. Furthermore, the teachers sampled perceived designing to be a multi-phased process that incorporates brainstorming and visual and technological designing. According to our data, it seems, that the male teacher (both primary class teachers and craft subject teacher) is more likely to consider the meaning of designing as minor part of craft teaching.

Design-oriented teachers invest in motivating students to be involved in designing. The relevance of the design tasks has an important impact on students desire to design (Hope, 2009; Rönkkö and Aerila, 2015). The teachers want to sense the subjects are relevant to the time, themes, and to fashion and in this way to create new educational connections to the learners' lives (Rönkkö and Aerila, 2015) For example the different themes, the

purpose of product, fashion, available material, as well as improvement of existing products can serve as motivational aspects. These forms of motivation help students to perceive and define the task, to get into brainstorming, and to create both visual and technical designs (see e.g., Lahti et al, 2003; Rönkkö and Aerila, 2015). In this study, the design-oriented teachers seem to be female primary class teachers or craft subject teachers.

Conclusions

Recent Finnish Craft curriculums (FNBE, 2004; 2014) indicate the change occurring in Finnish schools as the focus moves from teaching craft techniques to a holistic craft process. This study shows that some of the teachers are not familiar with the design as a relevant part of student's craft making. The teachers need to reconceive the whole subject and perhaps make major changes to the contents, objectives, and time management of craft lessons. The holistic approach presented in the newest curriculum (FNBE, 2014) is intended to increase the learner's subject area knowledge and understanding, but may also involve other objectives such as improving learners' attitudes, logical thinking, evaluation methods, coherent thinking, and artistic thought processes. It also refers to a pedagogical approach where the traditional boundaries of school subjects are crossed and the aim is to concentrate on the phenomena of the real world or on certain themes (FNBE, 2014). That gives the teacher the opportunity to integrate subjects like arts, crafts, and literature. At the same time the teacher gets more time and the student more stimuli to spur the designing of craft products. (see e.g., Rönkkö and Aerila, 2015)

Both craft techniques and designing are important parts of craft teaching. Until recently the teaching of craft skills has been emphasised in teaching (Syrjäläinen & Seitamaa-Hakkarainen, 2014). The future curriculum (FNBE, 2014) challenges the teachers to invest in teaching designing as significant part of a craft process, not to forget the teaching techniques, but finding balance between efforts in designing and in craft skills. The results of this study indicate student's design activity manifests in very different ways in different forms of teaching. Enhancing the designing abilities of the students give them concrete tools for future problem solving processes and implementing craft products of their own. Variations in the way the holistic craft process in teaching is actioned is an issue that must be considered as the future curriculum is implemented. It is certainly a challenge for teachers, and suggests a need for professional development throughout Finland.

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This study is the one of the first attempts to come to understand the craft teachers' views on the significance of designing. The sub-sample of nine teachers is quite small, and it does not give possibilities for any statistical analysis. However, the information gained from the interviews and essays provided an informed picture of teachers' interest in guiding students' designing in Finnish crafts. It would be interesting to study the area more deeply from the perspective of gender, education (primary class teacher – craft subject teacher) and age. One aspect worth studying would be the connection between teachers' confidence in their own designing skills and their confidence on guiding designing.

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