Craft education in sustaining and developing craft traditions

Reflections from Finnish craft teacher education

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In 2013, the UNESCO convention for the Safeguarding of Intangible Cultural Heritage was ratified by Finland, and its implementation has continued since. During this process, the discussions on the role of craft tradition have concerned the specific features of Finnish craft culture. One recognised aspect is the role of craft education in Finnish basic education. This article discusses the role of craft education in sustaining and developing textile craft traditions from the perspective of craft teacher education. The student teachers' portfolios from two courses were examined to determine how students applied traditional crafts and craft techniques in individual work and in teaching practices. The findings suggest that the way the students applied crafts traditions was often related to their own motivation, experiences, and ideation. Some of the topics in these two courses guided them to apply craft traditions but often it was their own choice to consider traditional aspect. Following the guidelines of the Finnish Curriculum for Basic Education, Finnish craft teacher education does not particularly focus on craft traditions. Taking the targets of safeguarding of intangible cultural heritage seriously, more effort is required when educating future teachers about craft traditions and the ways to sustain and develop them further.

Keywords: textile craft, craft education, teacher education, intangible cultural heritage, tradition, sustainability

Introduction

Finnish society was agriculturally based for a long time (Statistics Finland 2017), craft skills were highly valued, and utility articles, including textiles, were mainly produced at home. After World War II, the industrialisation and urbanisation processes grew rapidly, causing the meanings of home production to change. However, textile crafts remained a popular hobby and an important leisure time activity for many and continue to be so even today (Kouhia 2016; Taitoliitto 2018).

In 2013, the UNESCO convention for the Safeguarding of Intangible Cultural Heritage (UNESCO 2003) was ratified by Finland, and its implementation has continued since 2015. The discussions on the role of crafts as part of this process have covered questions about what Finnish craft culture means and what its specific features are. An important recognised aspect behind the still-robust craft culture is the role of craft education in Finnish compulsory basic education (Veeber, Syrjäläinen and Lind 2015; Kouhia 2016; Kokko and Dillon 2011; 2016).

Craft education, taught to all pupils as part of Finnish basic education (from ages 7 to 16), has undoubtedly sustained the intangible cultural heritage of crafts. Kokko and Dillon (2011; 2016) have studied the meanings of cultural heritage and crafts from the viewpoint of international student teachers in Finland. They highlighted the need to find innovative ways to sustain both craft education and cultural heritage education. Although crafts still have the status of a standard school subject in Finland, the role of craft tradition and cultural heritage as part of it is poorly articulated.

In this study, tradition is seen as being concerned with the inherited past which is constantly reflected in contemporary lifestyles. It is present everywhere in society, in all human beliefs and actions. Tradition is formative; all human beliefs and actions recall and embody some traditional elements received from history. Although inherited beliefs can be modified and traditional patterns of behaviour changed, the new always incorporates something of the past. (O'Collins 2018.) Craft traditions express designs and products that emerge from place-based practices. Their cultural significance is related to craft traditions contributing to a sense of local identity. With long historical links with communities and cultures, they have much to offer for the future in terms of sustainability, cultural resilience and well-being. (Jung and Walker 2017; Kokko 2018.)

Although tradition is essential for identity and enhancing meaningfulness, it is often seen as representing something old-fashioned, stiff and not part of contemporary lifestyles. However, new ideas about designing can create practices that make traditions relevant to today's people. (Evans et al. 2017; Halbert 2018; Walker et al. 2018.) ICT provides vast opportunities for sharing and documenting craft work and craft processes. It is useful for designing and sharing designs, instructions and tips about the various material and technical aspects of crafts (Maciver and Malins 2015; Halbert 2018). Networking in internet-based social platforms provides a way to share the living traditions of different cultures (Vartiainen 2010; Halbert 2018).

Many researchers have paid attention to the perseverance of hand-making and crafts despite the pressures of mass production (Greenhalgh 2002; Hemmings 2015). On the one hand, local craft traditions are sustained as symbols and important parts of national identity construction. On the other hand, the intersections of local and global cultures lead to creating new designs and practices. (Gimeno-Martínez 2016; Evans et al. 2017; Halbert 2018; Walker et al. 2018.) However, this is often due to grassroots-level activities and, with the lack of formal craft education, there is a risk of losing rich craft traditions.

Ecological awareness and the ideas of sustainable development are an important consideration in Finnish basic education, and for a long time have been part of the Crafts curriculum in Finland (Marjanen 2012) and the other Nordic countries (Klepp et al. 2015; Carlsen, Randers-Pehrson and Hermansen 2018; Hasselskog, Holmberg and Westerlund 2018; Olafsson and Joelsdottir 2018) Earlier, it was necessary to use materials sparingly for economic reasons; textiles were reused and recycled until they were finally used as rags and disposed of (Saha 2011). Today, many student teachers are aware of the principles of sustainability and consider sustainable issues to be important in their future teaching (Vartiainen and Kaipainen 2012). Having a sustainable future and education for sustainability have been important topics in craft teacher education (Räisänen and Laamanen 2014; Jónsdóttir 2015), and link closely to the topic of globalisation.

Teaching is important in perceiving traditions and sustaining intangible knowledge, and arts subjects in a broad sense have good potential for this (Potočnik 2017). Teachers as pedagogical authorities have excellent opportunities to develop new ways to sustain the tangible and intangible knowledge of crafts. However, research on teachers' pedagogies has shown that student teachers tend to continue their learned courses of action during their working life (Patrikainen 2012). The conventional working manner is strong in schools and relates to both teachers and pupils. Special effort is required to break this schema. Teachers need stimuli and support in how to discover new ways of teaching, supervising, and planning the curricula. Investments in teacher education and training are usually rewarded with higher levels of student success. (Räisänen 2014; Nuutinen, Räisänen and Fernström 2016; Karppinen, Kallunki and Komulainen 2017.)

From the perspective of Finnish craft teacher education, this paper focuses on the role of craft education in sustaining and developing craft traditions. The research questions below were used to find out how the student teachers applied traditional textile crafts in their individual craft making processes and in their teaching practice. The currently-topical themes of sustainability and globalisation were also looked at in this context.

- How do student teachers apply traditional textile crafts in their individual craft making processes?
- How do student teachers apply traditional textile crafts in their teaching practice?
- How do the ideas of tradition in contexts of sustainability and globalisation appear in students' individual working and teaching practise?

Craft Education and Craft Teacher Education in Finland

In most European countries, craft education is integrated into the curriculum of subjects such as arts, home economics or design and technology (Eurydice 2009). However, in the Scandinavian and Baltic countries, crafts is a standard school subject in basic education (Gulliksen and Johansson 2008; Lind and Veeber 2015; Taar 2017). The roots of craft education in Finnish basic education date back to the beginning of the school system in the 19th century (Marjanen 2012). Today, craft is taught as a compulsory subject from grades 1 to 7 (ages 7–13): in grades 8 and 9 (age 14–16) it is optional.

The pedagogical objectives of craft education have changed over the years, reflecting both local and global changes in crafts and society: from the practical purposes of making products for everyday life to present-day craft education, which emphasises the role of design, technology and craft expression (Marjanen 2012). Today, the making of crafts is based on experimentation and innovation, and pupils are encouraged to utilise various visual, material and technical solutions. Designing and producing crafts can be done independently or together with others. Transversal themes should be included, and versatile abilities developed in craft studies. (FNBE 2016, 462.)

The Finnish National Core Curricula for Compulsory Basic Education 2014 (FNBE 2016) was implemented in August 2016. It directs the teaching and learning of crafts more explicitly towards multi-material approaches, which refers to the use of a range of materials in teaching and learning. Earlier, teaching crafts was mainly split into two fields: textiles, and hard materials such as wood and metal. Without doubt, the new direction will change the prevailing gendered course of craft education, in which girls have been more oriented to textiles and boys to hard materials (see Kokko 2009; 2012). However, the requirements of multi-material approaches have led to new challenges for craft teachers to cooperate between the two fields.

The new curriculum (FNBE 2016) emphasises phenomenon-based learning, problem solving and utilising ICT - the targets of 21st century skills (e.g. Gordon et. al. 2009; Karppinen, Kallunki and Komulainen 2017). These targets are also recognised in the craft curriculum, which offers little in terms of the meanings of craft traditions. As the Finnish approach to school education leaves the teachers with a great deal of responsibility for choosing the topics and contents of the teaching (e.g. Sahlberg 2011), it is up to each craft teacher to decide the role of tradition and cultural heritage in their teaching.

University-level craft teacher education in Finland qualifies students to teach in basic education as well as in higher levels of education. However, other career paths are also possible, and some graduates end up working as specialists in other fields of design, technology and material culture. In Finland, master's-level studies are required to be awarded a teaching qualification, and this also applies to craft teachers.

The past division of the Finnish craft education into textile crafts and technical crafts, i.e. hard materials, means that craft teacher education has mainly been arranged so that students specialise in either one of these fields. The students of this study had followed the Textile Craft Teacher study programme, which consisted of studies in textile crafts, teacher's pedagogical studies, languages, ICT, and minor subject studies in disciplines of their choice.

Two courses of Craft Teacher Education as the context of the research

The Finnish Craft Teacher Education programme includes both theoretical and hands-on courses in which the students learn various approaches to crafts and making, and pedagogical studies through which the students learn aspects of general and craft pedagogy. Hands-on and pedagogical studies are based on theory and research of crafts (Studieinriktningar - Slöjdlärare, 2019). Two courses of the Textile Craft Teacher's study programme held in spring 2015 at the University of Helsinki - namely *Material and Surface* (1st year students) and *Advanced Teaching Practice* (5th year students) – were chosen to represent courses in which the students developed their own hands-on activities and approaches in teaching practice. The purpose was to study the students' applications of textile craft traditions in these two courses which represented separate phases and aspects of the study programme. The authors of this paper were partly involved with teaching in these respective courses and thus had a pre-understanding of the contents. In the *Material and Surface* course, two other university lecturers were involved. In the *Advanced Teaching Practice*, the students participated in the group supervision at the university with the author; however, this teaching practice was mainly supervised by the craft teachers at the teaching practice schools.

The *Material and Surface* course (8 ECTS, European Credit Transfer and Accumulation System) was a combination of four minor courses: Experiential Textile Design (2 ECTS), Dyeing (1.5 ECTS), Textile Printing (1.5 ECTS), and Embroidery (3 ECTS). The courses formed an intertwined, progressive structure in which one course was based on the knowledge gained from the previous courses, and together they yielded a continuum in which the resulting ideas were produced as personal materials that could be utilised to make textile artefacts (Figure 1). The aim of the *Material and Surface* course was more to explore materials and techniques rather than concentrate on the product. The basis for this creative approach was laid out in the Experiential Textile Design course, which was the first of the minor courses. The students completed assignments to learn different ways to gather information and express ideas. This knowledge was applied and deepened in the assignments in the subsequent Dyeing, Textile Printing and Embroidery courses, the targets of which were also to introduce students to particular craft techniques. (Nuutinen, Räisänen and Fernström 2016; 2017.) In the *Material and Surface* course, different craft techniques were introduced from the perspective of tradition, but contemporary examples were also presented. Students were encouraged to think broadly and to develop their own ways to use a technique.

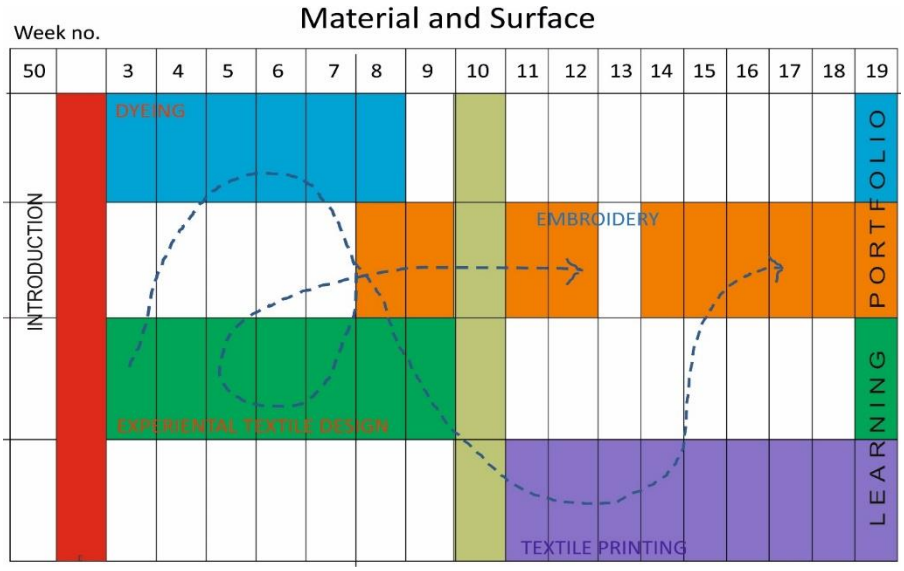

Figure 1: The progress of *Material and Surface* (8 ECTS) course and its minor topics: Experiential Textile Design (2 ECTS), Dyeing (1.5 ECTS), Textile Printing (1.5 ECTS), and Embroidery (3 ECTS) which formed an intertwined continuum where ideas and materials were developed as illustrated by the arrows. Materials were processed combining techniques.

Finnish teacher education programmes include a study unit in pedagogical studies (60 ECTS), equivalent to one year of study. As part of this study unit, students practice teaching at schools at different phases of their studies. The students whose portfolios were included in this research were conducting their last *Advanced Teaching Practice,* which gave them 8 ECTS. The aim of *Advanced Teaching Practice* was to allow the students to plan, implement and assess their teaching independently, while continuing to cooperate closely with their supervisors, who were university lecturers and textile craft teachers at the Teaching Practice Schools. The purpose was to develop the students' pedagogical competence to meet the requirements of the current educational targets in Finland. The students practised in primary and secondary schools, and some in adult education programmes for continuing education. Since most of the students' teaching was in secondary school grades 7–9 (13–15 years old pupils), the examples for this study were taken from this context. The students were given some loose topics for their teaching practice, such as interior design, clothing, bag or back pack fashion, fabric printing, revitalisation of a garment, and recycling material. Otherwise, they were free to determine the content of their teaching, since the purpose was to give them responsibility and a chance to try on their own ideas on teaching.

The data and analysis

The student teachers documented their learning processes in portfolios, which were the source of the data of this study. Twelve student portfolios from each of the courses were chosen for deeper analysis (N = 24). At the beginning of the courses, the students were informed of the study and they were asked to provide signed consent for their portfolios to be used for research purposes. Participating in the research was voluntary and did not have any effect on the course assessment. The portfolios were written in Finnish, and the quotations in this paper were translated into English by the authors.

The portfolios of the *Material and Surface* course consisted of texts and pictures. In their portfolios, the students explained their craft projects and reflected on their personal learning as well as their thoughts on further utilising the skills in their work as teachers or textile professionals. The portfolios of the *Advanced Teaching Practice* consisted of lesson plans, written reflections on teaching and the student's pedagogical development, observations of the lessons followed, examples of teaching materials, examples of feedback on teaching practice, and photos of the pupils' processes.

The data were analysed qualitatively using systematic data-based content analysis (Table 1). Identifying the categories and themes to summarise the contents of the data is commonly used method in qualitative content analysis (e.g. Denzin and Lincoln 2005; Drisko and Maschi 2015). Accordingly, the data were first coded to identify the emerging categories to answer the research questions. The analysis based on the first research question *´How do student teachers apply traditional textile crafts in their individual craft making processes?´* focused on the appearance of the techniques used by students in their own craft work. The aspects and manifestation of tradition were observed, as were the implications of new applications of the tradition. Such techniques as dyeing, shibori, textile printing, felting, needlework, quilting, and bead embroidery emerged to represent textile traditions. The applications of tradition consisted of choices of new materials, colours and tools used in the traditional technique. In addition, the procedure and working order, when applying a certain craft technique or combining the techniques, were related to the new applications.

To address the second research question '*How do student teachers apply traditional textile crafts in their teaching practice?*', the data were analysed in the following categories: Teaching and learning methods applied in the teaching practice; the artefacts produced in the textile craft lessons; the techniques used in the textile craft lessons; and the teaching materials and equipment used.

The third research question '*How do the ideas of tradition in contexts of sustainability and globalisation appear in students' individual working and teaching practise?'* was looked at in both courses and in all the data.

Table 1: Framework for the analysis.

Research questions	**Categories**	**Content analysis**
How do student teachers apply traditional textile crafts in their studies?	Textile techniques	dyeing, shibori, textile printing, felting, machine and hand embroidery, quilting, appliqué, bead embroidery
	New applications of craft traditions: materials, tools, procedures	materials, colours, tools, procedure and working order, combining techniques
How do student teachers apply traditional textile crafts in their teaching practice?	Textile techniques	embroidery, art darning, machine sewing, pattern making, knitting, crocheting, frame-weaving, rya-making, felting, tie-dyeing, dyeing with Kool-Aid and bio-materials, gradient dyeing, bleaching, splashing, textile printing: resist printing and picture transfer printing, marbling, braiding, sewing with a serger, tearing, perforation
	Teaching and learning methods	demonstration, lecture, joint discussion, work instruction, models, drawing, collage, sketching, mind map, notebooks, paper doll, individual work, working in pairs, group work, workstation, exploring the surrounding environment, visiting craft and fabric shops, enterprises and museums, photography, video making, holding an exhibition, exploring textile materials
	Teaching and learning materials	picture, video, power point, notebook, magazine, literature, learning diary, assessment form hand-out, instruction, models, paper doll, Moodboard, Edmodo, Flinga, Pinterest, Padlet, Kahoot, MyStyle, recordings, music, blogs, computer, iPad, tablet, mobile phone
	Artefacts made by the pupils	bag, rucksack, sewing machine cover, cushion, bed cover, chair cover, wall hanging, t-shirt, shorts, skirt, crop-top, shirt, trousers, dress, coat, mending, remaking, pouch, clothes
How do the ideas of tradition in contexts of sustainability and globalisation appear in students' individual working and teaching practise?	Sustainability	raising awareness, recycling, reusing materials
	Global-local dimensions	motives, forms, colours, techniques, cultural information

Traditional and innovative experimentation in individual craft making processes

Techniques, materials and tools

During the *Material and Surface* course, the students were introduced to various craft techniques the aim being to learn the basics of the techniques. They were asked to experiment with the techniques by completing assignments, for example, dyeing using the shibori technique or experimenting in embroidery with the appliqué technique. Before starting to experiment with a certain craft technique, the students were given instructions on how to use the machines, tools and equipment, and how to get started with some simple exercises. At the beginning, some pictures were shown as examples of the variety of traditional and contemporary applications.

Because the students were in their first year, many of them had no previous knowledge of the techniques, or their knowledge was based on their junior school years. Many reflected that they had no idea of what was going to happen in the lessons.

> Basically, I had no experience of dyeing, I had previously only used commercial ready-made washing machine dyes, but they had turned out to be terrible.

Some students had previous knowledge but were still keen to attend the lessons and learn more. The analysis revealed the following techniques: dyeing shibori or tie-dye, dyeing flammu or ikat, textile printing, felting, and embroidery. The latter appeared as machine embroidery, hand stitching, quilting, appliqué and bead embroidery.

Dyeing is a traditional technique for colouring yarn and cloth. New aspects emerged when observing the kinds of materials, tools and ideas the students used for their assignments. Most commonly, dyeing was performed using a piece of new plain white weave fabric (sheeting) or single jersey of cotton. However, many used old fabrics which were already colourful or had print on them. Moreover, some students utilised second-hand garments, for example, by applying different shibori techniques to different parts of the garment. Recycling and reusing materials, as well as modifying them, have been methods in traditional craft (Saha 2011). However, sustainability gives new value to dyeing as textiles that have lost their cultural and social acceptance can be updated, renewed and made desirable, which increases their lifespan as well as the owner's engagement (Hirscher, Niinimäki and Armstrong 2017).

Most of the students found the shibori dyeing technique interesting. Some of them had used shibori or tie-dye as a child during the basic education years. For some, the shibori/tie-dye assignments brought back memories of a hippy style t-shirt, which was not very inspiring. However, students were surprised when they learned that it was possible to use pieces of wood and folding to create geometrical forms.

> The shibori technique is like opening a Christmas present. I want to work with this technique at school when I have my own class to teach.

In their shibori experiments, the students also used a variety of non-traditional tools, for example clips, drainpipes or pieces of wood with different shapes, forms and holes.

For some students, the traditional techniques were familiar, but they had not experienced them themselves. Some techniques, for example flammu (the same as ikat in the international context) was completely new for most of the students. In the Finnish craft tradition, flammu (weft ikat dyed) yarns have been used in the woollen fabrics of folk and national costumes (Sirelius 1923). In their reflections, some students mentioned that they were pleased to discover and experiment with the traditional flammu technique and would continue applying it in the future when working as textile craft teachers. In their opinion, it was important to demonstrate traditional ways of decorating textiles. In addition to woollen

material, students used cotton for flammu dyeing and used dyed yarns for weaving in accordance with tradition, but also developed new applications by using the yarns for knitting socks and mittens or crocheting.

The discussion on the intersection of cultures and the use of textiles is ongoing (Hemmings 2015). It is often difficult to determine the point at which a new adaption becomes a widespread practice or turning global into local. One example of this is resist dyeing, using shibori/tie-dye and flammu/ikat. Signs of these techniques go far back into history, also in Finnish folk costumes (Sirelius 1923), but global knowledge has certainly influenced practices.

Novel procedures

Based on their former experiences, the students had expectations of some of the techniques. Several students reflected that they thought embroidery to be the same as sewing with a needle and thread, like cross-stitching. They were surprised to find that embroidery consisted of a vast variety of techniques that could be applied much more freely than they expected.

The Embroidery course was the last in the *Material and Surface* continuum (Figure 1), and it was possible to combine embroidery with the previously learned techniques, i.e. to embroider on dyed, printed and felted materials. It was clear in some of the portfolios that students succeeded in advancing the ideas and combining different materials and craft techniques.

Figure 2 shows an example of one student's process. It shows how the student transformed the ideas from the Experimental Textile Design into assignments to learn several craft techniques: dyeing a colour chart, dyeing shibori, dyeing fibres and felting, printing, and embroidering such as appliqué and machine embroidery.

Figure 2: An example of a student's process in the Material and Surface course.

> Design-based working and combining these different courses was a good idea. Without integration, the outcome and learning experience would have remained short and less interesting. With integration, the value increased: methods, techniques and assignments became part of the designing process.

Bringing different craft techniques together and sometimes working in uncertain conditions taught the students persistence and self-knowledge.

> At the beginning, hand embroidery was unpleasant, but my attitude has changed. Now it's interesting, because it can be done anywhere, even on the train. On hectic weekdays I can relax with embroidery, it turns my thoughts away from work. Furthermore, I realised that the way I feel about embroidering has an enormous effect on the final output.

When the students had no previous experience, they had no up-front views about the end results. Therefore, their applications varied a great deal from the traditional. Furthermore, the combination of dyeing, printing and embroidery resulted in the outcomes being original.

One group of students had no previous experience of some of the craft techniques they studied, nor did they know much about the Finnish craft tradition and its subtleties. Now and then prejudices emerged towards some techniques, which were based on students' previous, even childhood, experiences. For example, some students thought that embroidery was boring and old fashioned because they felt that it consisted of only traditional thread and needle work like cross stitching, or that tie-dyeing only created an unattractive hippie style. These negative attitudes need to be dealt with in teacher education so that they do not affect students' practices as future teachers. Students often choose to continue using techniques in the manner that they are most familiar with (Räisänen 2014; Laamanen and Seitamaa-Hakkarainen 2014). When working together during the lessons, the students observed each other's work and discovered new ways of applying traditional techniques. Collaborative working was important for them to discover and develop new approaches, which resulted in learning and changing attitudes.

Traditional and new applications in teaching practice

Textile techniques

The student teachers guided their pupils to use a variety of textile techniques. Some of these were typical in Finnish craft culture, such as using a sewing machine, embroidery, textile printing, and rya making. However, the approach to these techniques varied. For example, many students experimented with teaching special forms of dyeing and printing, such as tie-dye, dyeing with natural dyes using bio-materials from the kitchen, dyeing with Kool-Aid drink mix, whitewashing, marbling, transfer printing, and reserve painting, which are not especially representing Finnish craft culture. One student teacher taught experimental dyeing of yarns: the pupils experimented dyeing with bio-materials from the kitchen and Kool-Aid drink mix, and used the dyed yarns to make a small frame weaving or rya (Figure 3), which is a very traditional Finnish textile (see Ahonen-Kolu, Svinhufvud and Viljanen 2009). Thus, the pupils learnt about Finnish textile craft traditions and created their own applications of it, using a range of older and newer dyeing techniques.

Figure 3: Kool-Aid dyed yarns that the pupils used to produce ryas in teaching practice.

The student teachers encouraged their pupils to apply craft techniques creatively. One student teacher asked the pupils to design an interior textile for their own room at home. The pupils analysed their rooms to find ideas for improvement. The ideas of the whole group were documented in a Coggle application (https://coggle.it/), and the pupils formed smaller groups based on similar ideas. The visual and technical designing processes were implemented side by side: the pupils experimented with different textile techniques such as weaving, rya making, machine stitching, dyeing, and fabric printing and then specified their design. They were free to apply their chosen technique to designing the artefact for their room. Many pupils chose to make a type of pillow, but they also produced wall hangings, fabric containers and bedclothes. They applied the technique to these artefacts creatively utilising craft traditions to their own purposes.

Artefacts made by the pupils

The textile artefacts that the pupils produced during teaching practice were often rather conventional, such as clothes, bags, pouches; and interior textiles such as pillows and wall hangings. It seemed that the products were chosen so that they would not be too demanding for the pupils to accomplish and design themselves. In many cases, the focus of the teaching was on some aspect of the craft process other than the actual fabrication, for example on decorating the fabric using a special technique, as described earlier.

Ecological awareness and the ideas of sustainable development were reflected in the teaching practice, especially by the learning projects that were based on reusing textile materials. For example, the pupils personalised used clothes with printing, dyeing and machine embroidery (Figure 4). These included techniques such as bleaching, marbling, tie-dyeing, resist dyeing, paint splashing, and artistic darning.

Figure 4: Personalised clothes made by pupils in teaching practice: An example of recycling used materials.

Teaching methods

In their *Advanced Teaching Practice* portfolios, the student teachers presented their chosen approaches to teaching. As this was their last and most advanced teaching practice, many of them wanted to experiment with new teaching approaches. Thus, they were inclined to use less teacher-centred teaching and more pupil-based learning. For example, the pupils were often encouraged to work in teams instead of the more conventional form of individual craft work. They were encouraged to find information and share good practices among themselves.

Furthermore, student teachers used out-of-classroom practices for the pupils to gather information and sources of inspiration. During their craft lessons, they took the pupils to places such as museums, textile material shops and shops selling textile products, libraries, recycling centres, and textile enterprises. This differs from the ~~more~~ conventional craft lessons that have mainly been arranged in the craft classroom in the school building.

In their teaching, the emphasis was on designing, sketching and making prototypes before starting the actual making process. This is in line with the current trends of the Finnish Craft education curriculum which now emphasises the designing process (FNBE 2016, 156–157, 290–292, 462–464; Kokko et al. 2014). During the history of Finnish craft education, the focus was on making a craft product, which meant following ready-made instructions (Marjanen 2012).

The student teachers reported that they had utilised various ICT tools in their teaching. This follows the current objectives of Finnish basic education, which emphasise the development of ICT skills (FNBE 2016, 156–157, 290–292, 462–464). Computers, tablets and mobile phones were tools that the students used for both individual and group work.

The pupils used ICT for various purposes, but mainly for finding information and sources of inspiration. However, they also used it for documenting the process and the product and sharing experiences. A camera application was used for photos and videos. Other frequently used applications were Moodboard (http://www.gomoodboard.com/), Pinterest (http://pinterest.com), Flinga (https://flinga.fi/), Kahoot (https://kahoot.it/), Padlet (http://padled.com), and MyStyle (https://www.is.fi/mystyle/). The pupils also scanned various blogs related to the topic. Some classes used a special e-learning platform, i.e. Edmodo (https://www.edmodo.com/).

Sustainability and globalisation

The analysis shed light on the ideas of tradition in the contexts of sustainability and globalisation as important themes related to student teachers' textile craft making and teaching practice. These are also topical themes in Finnish basic education.

Sustainability appeared to be a natural and internal part of students' craftwork and their teaching practices. In the assignments of the *Material and Surface* and *Advanced Teacher Training* courses, the students were not particularly instructed to pay attention to aspects of sustainability. However, they were reminded that because of low student budgets, it might be a good idea to look for materials in their own closets or at flea markets. The materials to be used in the assignments did not need to be brand new. In the Finnish craft tradition, the recycling of materials is self-evident (Saha 2011). Most of the materials that were used in the *Material and Surface* course were recycled. Old clothes were dyed to give them a fresh, preferable or fashionable colour. Textile structures provided inspiration for work and even small pieces of found and recycled materials were appropriate for further applications in embroidery.

Many student teachers used recycled textile materials in their teaching practice. This was partly related to the loose topics they had been given by their supervisors and partly due to their own wish to include this aspect in teaching. For example, with seventh grade pupils, old jeans were used for making new artefacts by bleaching the material and cutting them for sewing bags. Another student teacher instructed eighth grade pupils to personalise old clothes by dyeing, decorating with fabric printing or machine stitching, and reshaping them. One student teacher took seventh grade pupils to a recycling centre where they found old t-shirts which they personalised in the textile craft lessons according to their own ideas, using a range of techniques (Figure 4). Some student teachers took their pupils to visit clothing entrepreneurs who made clothes from recycled materials.

The effect of globalisation became visible in the students' craftwork, as many of them reflected on their travel experiences in the portfolios and used these as sources of inspiration. For example, motives, forms and colours from other cultures were used. Furthermore, the students were open to adapting techniques from other cultures and used them in their craft assignments. For example, one student applied mola, a reverse appliqué technique, which originates from the Guna people of South America (Figure 5).

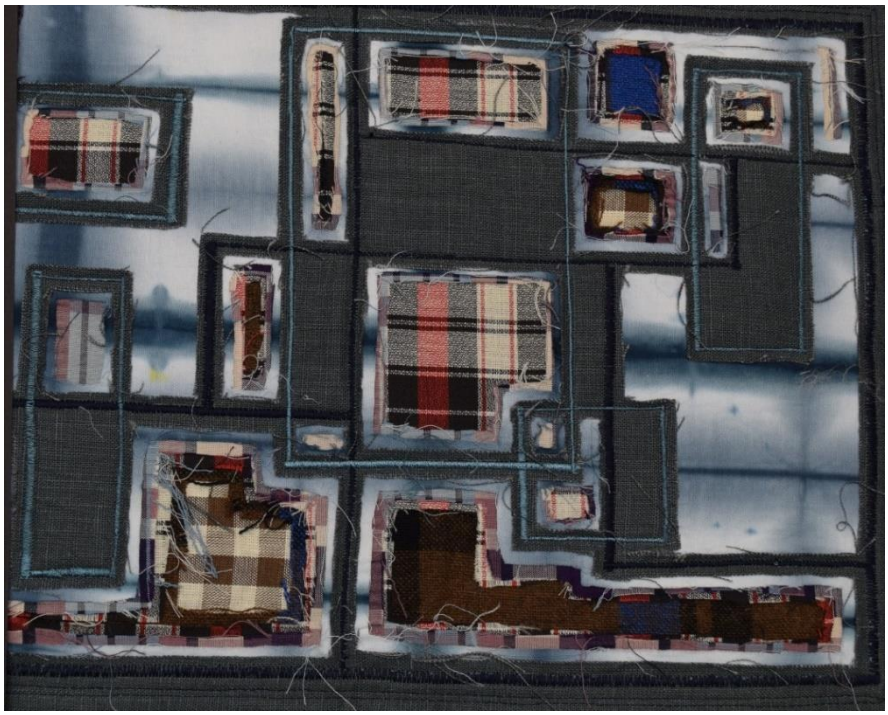

Figure 5: Adaption of mola, reverse appliqué technique that one student teacher used in his individual hands-on work.

One student teacher chose Moroccan culture as the starting point for teaching a project to seventh grade pupils on fabric printing called ´Mosaic-like cloth´ (Figures 6 and 7). She chose the rich Moroccan mosaic culture as a source of inspiration. She used various teaching and learning methods, such as showing a video of Morocco; asking the pupils to search for pictures of Moroccan mosaic from web sources such as Pinterest or Instagram (https://www.instagram.com/), and to use these as inspiration for their dyeing and printing project; asking the pupils to create their own Moodboard for visualising their designs; and giving practical instructions on the dyeing, printing and sewing techniques. The pupils designed their own fabric printing inspired by Moroccan culture. This project taught pupils a great deal about another culture, and they were able use this knowledge as inspiration to further develop their own adaptations.

Figures 6 and 7: Moroccan culture as the source of inspiration for the pupils in teaching practice.

The student teachers in this study shared views on the importance of motivating and inspiring the pupils to practice crafts. Cultural aspects were considered to be an important element in education.

> In my teaching, I want to emphasise the kind of general knowhow that is developed during the making process. Such as systematic working and cooperation. I'd like all the pupils to feel the craft culture to be their own and easy to approach. Above all, I want to inspire the pupils to make crafts and to see the subject as something they could approach on their own, also after school education.

Discussion

This study revealed that to some extent, the student teachers both identified textile traditions and found new approaches to them with techniques, materials and tools, thus creating practices relevant for them. Kokko and Dillon (2011, 501) noted 'that crafts have a special role in cultural heritage education by both enabling students to engage practically with a tradition through making and to understand how tradition shapes individual, family and community identities' (cf. Jung and Walker 2017). Through their own making processes, the students in this study learned to re-value the tradition and gave it new meanings. The hands-on experience of learning new techniques and conducting experiments themselves was important for them to realise what skills and knowledge each technique involves. In this way they learned to appreciate the craft traditions developed in Finland and other parts of the world. Hands-on experimentation was essential for them to understand things such as the time and effort that different textile techniques require.

In their teaching practice, the student teachers utilised multiple ways to inspire the pupils to learn crafts in their pedagogy. Some of them included the aspects of craft traditions more clearly, focusing on them in the pupils´ assignments while the others did not specifically concentrate on this aspect. However, craft education as such is an important way to sustain craft traditions since it teaches the pupils a range of skills, many of which have their roots in tradition (cf. Veeber, Syrjäläinen and Lind 2015; Kouhia 2016; Potočnik 2017). This is not self-evident in all parts of the world.

In Finland, the role of craft education at school has been recognised, but in many countries, crafts have been dropped from basic education, as have learning craft traditions (Eurydice 2009; Kokko and Dillon 2016). The prevailing thinking in educational policies tends to value academic and science subjects, which is reflected in the international evaluations of educational success such as PISA[1] and TIMMS[2]. Arts, including crafts, play a smaller role in the basic education curriculum (Eurydice 2009). This devalues the options for arts and crafts in holistic education, which could include many cultural, societal and environmental aspects. These aspects were included in multiple ways both in the hands-on craft activities and in craft teaching by the Finnish student teachers of this study.

In contemporary societies, sustainability and globalisation are central topics of discussion which play a significant role in the curricula and practices of basic education. (Marjanen 2012; Klepp et al. 2015; Carlsen, Randers-Pehrson and Hermansen 2018; Hasselskog, Holmberg and Westerlund 2018; Olafsson and Joelsdottir 2018). Issues of sustainability have been recognised as important topics in craft teacher education overall (Räisänen and Laamanen 2014; Jónsdóttir 2015, Vartiainen and Kaipainen 2012). The student teachers in this study included these aspects readily in their hands-on work and their teaching practice, sometimes combining the ideas of tradition with them. The expanding processes of globalisation were reflected in the students' activities by their open attitude to including aspects of many craft traditions in their own hands-on work and teaching. Rather than focusing on keeping up the specific

[1] The Programme for International Student Assessment (PISA) is a worldwide study by the Organisation for Economic Co-operation and Development (OECD).

[2] The Trends in International Mathematics and Science Study (TIMSS) is established by the International Association for the Evaluation of Educational Achievement (IEA)

craft traditions, their approach was to create new designs and practices at the intersection of local and global craft cultures (cf. Gimeno-Martínez 2016; Evans et al. 2017; Halbert 2018; Walker et al. 2018.)

Teachers and their chosen pedagogy, teaching and learning content, and the values they promote have an important impact on how craft traditions are passed on to new generations. The Finnish teachers have a lot of freedom in their pedagogy (Sahlberg 2011; Patrikainen 2012): those willing to sustain craft traditions and include sustainability aspects in their teaching, may choose the topics of teaching accordingly. The guidelines of the present craft curriculum (FNBE 2016) emphasise the designing, the multi-material craft processes, and utilising ICT and technology to such an extent that the teachers may find it challenging to include cultural and traditional aspects of crafts in their teaching within the limited lesson hours. Teacher education forms the basis for the pedagogy of the future teachers and is therefore crucial in raising the student teachers' awareness of the meanings of craft traditions and providing them with the skills to sustain craft traditions as future teachers.

Conclusions

This study looked at the Finnish craft student teachers' work in two courses of their study programme, and thus has limitations in terms of generalisation. Analysing students' work on a wider spectrum of courses and conducting a longitudinal study would provide a deeper and more detailed picture. Also, including the views of the pupils and craft teachers of basic education would broaden the picture of ways in which to sustain textile craft traditions in craft education.

Taking the targets of safeguarding intangible cultural heritage (UNESCO 2003) seriously, more effort is required for educating future teachers about craft traditions and the ways to sustain and develop them. The research project reported in Design Routes (Evans et al. 2017; Walker et al. 2018) showed that research, together with education, plays a key role in learning about traditions, their meanings and contemporary relevance. The role of higher education in this respect deserves more attention (Kokko 2018).

The analysis revealed that Finnish craft education and craft teacher education are not particularly focused on craft traditions. Although the students were guided to apply traditional aspects of crafts to some extent, the students' own motivation, experiences, and ideation had an important role in the contents and forms of their hands-on working and the teaching practice. However, the ideas of tradition in contexts of sustainability and globalisation were considered.

Teacher education lays a foundation for teachers' pedagogical thinking and has long-lasting effects on their teaching practices (Räisänen 2014; Nuutinen, Räisänen and Fernström 2016; Karppinen, Kallunki and Komulainen 2017). Efforts are required to educate craft teachers to see the opportunities to sustain and develop craft traditions at present and in the future. Ideas of sustainability and globalisation are well suited in this context. We conclude by providing some ideas about the opportunities to strengthen this aspect in craft teacher education. For example, web-based services provide access to the sources of tradition, such as digital museums and archives (cf. Vartiainen 2010; Halbert 2018). This could be utilised to allow the students to learn about traditions and develop them further (Evans et al. 2017; Halbert 2018; Walker et al. 2018; Carlsen, Randers-Pehrson and Hermansen 2018). It is worth considering offering special courses in which the students could learn about craft traditions in Finland and other countries. In the global world, collaboration with universities in other countries would be fruitful for sharing good practices and exchanging ideas. Craft traditions and their applications could be a topic for some of the student´s teaching practice and it is worth considering the option of providing teaching practice in another country. More research is needed on craft traditions and their education. These topics could be looked at in the BA and MA theses.

References

Ahonen-Kolu, M., Svinhufvud, L. & Viljanen, E. (2009). *Ryijy! = The Finnish ryijy-rug*. Helsinki: Designmuseo.

Carlsen, K., Randers-Pehrson, A. & Hermansen, H. (2018). Design, kunst og håndverk i Norge. *Techne Series - Research in Sloyd Education and Craft Science A*, *25*(3), 58–73. Obtained 28 January 2019 from https://journals.hioa.no/index.php/techneA/article/view/3028.

Denzin, N. & Lincoln, Y. (eds.) (2005). *The handbook of qualitative research* (pp. 1–32). 3rd ed. Thousand Oaks, CA: Sage.

Drisko, J. W. & Maschi, T. (2015). Qualitative Content Analysis. In J. Drisko & T. Maschi (eds.) *Content Analysis*. Oxford Scholarship Online. Obtained 14 May 2018 from http://www.oxfordscholarship.com.libproxy.helsinki.fi/view/10.1093/acprof:oso/9780190215491.001.0001/acprof-9780190215491-chapter-4.

Eurydice (2009). Arts and cultural education at school in Europe. Obtained 22 August 2017 from http://eacea.ec.europa.eu/education/eurydice/documents/thematic_reports/113EN.pdf.

Evans, M., Walker, S., Jung, J., Darby, S. & Cassidy, T. (2017). *Design Routes: Revitalising Culturally Significant Designs, Products and Practices by Design. Manchester*. UK: Manchester School of Art.

FNBE. Finnish National Board of Education (2016). *National Core Curriculum for Basic Education 2014*. Helsinki: Finnish National Board of Education.

Gimeno-Martínez, J. (2016). *Design and National Identity*. London: Bloomsbury.

Goodson, I. (2014). Context, curriculum and professional knowledge. History of Education, 43(6), 768–776. DOI: 10.1080/0046760X.2014.943813.

Gordon, J., Halasz, G., Krawczyk, M., Leney, T., Michel, A., Pepper, D., Putkiewitcz, E. & Wisniewski, J. (2009). *Key Competences in Europe: Opening Doors for Lifelong Learners across the School Curriculum and Teacher Education*. CASE Network Report, No. 87. Warsaw: Center for Social and Economic Research. Obtained 11 January 2018 from https://www.econstor.eu/bitstream/10419/87621/1/613705459.pdf.

Greenhalgh, P. (ed.) (2002). *The Persistence of Craft. The applied Arts Today*. London: A & C Black.

Gulliksen, M. S. & Johansson, M. (eds.) (2008). Nuläge och framåtblickar - om undervisning och forskning inom det nordiska slöjdfältet. NordFo Nordisk Forum för Forskning och Utvecklingsarbete inom utbildning i slöjd. *Techne Series B*,15. Vaasa: Åbo Akademi University.

Halbert, J. (2018). The revitalization of a craft economy: The case of Scottish knitting. *Critical Studies in Fashion & Beauty*, 9(2), 179–195. DOI: 10.1386/csfb.9.2.179_1.

Hasselskog, P., Holmberg, A. & Westerlund, S. (2018). Sverige. Slöjdämnets situation, utveckling och forskning under 2009–2018. *Techne Series - Research in Sloyd Education and Craft Science A*, *25*(3), 74–93. Obtained 28 January 2019 from https://journals.hioa.no/index.php/techneA/article/view/3029.

Hemmings, J. (ed.) (2015). *Cultural Threads. Transnational Textiles Today*. London: Bloomsbury.

Hirscher, A-L., Niinimäki, K. & Armstrong, C. M. J. (2017). Social manufacturing in the fashion sector new value creation through alternative design strategies? *Journal of Cleaner Production*, 172(20), 4544–4554. DOI: 10.1016/j.jclepro.2017.11.020.

Jónsdóttir, A. (2015). Teaching and learning for sustainability: An Icelandic practice-based research. *International Journal of Education through Art*, 11(3), 391–406. DOI: 10.1386/eta.11.3.391_1.

Jung, J. & Walker, S. (2017). Creative Ecologies. In S. Walker, M. Evans, T. Cassidy, A. T. Holroyd & J. Jung (eds.) *Design Roots. Culturally Significant Designs, Products and Practices* (pp. 11–24). London: Bloomsbury Academic.

Karppinen, S., Kallunki, V. & Komulainen, K. (2017). Interdisciplinary craft designing and invention pedagogy in teacher education: student teachers creating smart textiles. *International Journal of Technology and Design Education*, DOI: 10.1007/s10798-017-9436-x.

Klepp, I. G., Laitala, K., Schragger, M., Follér, A., Paulander, E., Skårdal Tobiasson, T., Eder-Hansen, J., Palm, D., Elander, M., Rydberg, T., Watson, D. and Kiørboe, N. (2015). Mapping sustainable textile initiatives: And a potential roadmap for a Nordic actionplan. Copenhagen: Nordic Council of Ministers. Obtained 29 January 2019 from https://www.diva-portal.org/smash/get/diva2:840812/FULLTEXT01.pdf.

Kokko, S. (2009). Learning practices of femininity through gendered craft education in Finland. *Gender and Education*, 21(6), 721–734.

Kokko, S. (2012). Learning crafts as practices of masculinity. Finnish male trainee teachers' reflections and experiences. *Gender and Education*, 24(2), 177–193.

Kokko, S. (2018). The role of higher education in sustaining culturally significant crafts in Estonia. In S. Walker, M. Evans, T. Cassidy, A. T. Holroyd & J. Jung (eds.) *Design Roots. Culturally Significant Designs, Products and Practices* (pp. 231–242). London: Bloomsbury Academic.

Kokko, S. & Dillon, P. (2011). Crafts and craft education as an expression of cultural heritage: individual experiences and collective values among an international group of women university students. *International Journal of Technology and Design Education*, 21(4), 487–503.

Kokko, S. & Dillon, P. (2016). Engaging trainee teachers with crafts and cultural heritage. *International Journal of Education through Art*, 12(1), 21–37.

Kokko, S., Viilo, M., Matinlauri, M. & Tokola, A. (2014). Kokonainen käsityö ja suunnittelun ohjaaminen peruskoulussa - käsityön opettajaopiskelijoiden kokemuksia [Student teachers' experiences of supervising craft design at basic education]. In A. Nuutinen, P. Fernström, S. Kokko & H. Lahti (eds.) *Suunnittelusta käsin: käsityön tutkimuksen ja opetuksen vuoropuhelua* (pp. 81–99). Publications of Home Economics and Craft Science 36. Helsinki: University of Helsinki. Obtained 13 February from http://hdl.handle.net/10138/153027.

Kouhia, A. (2016). *Unraveling the meanings of textile hobby crafts*. Doctoral thesis. Home Economics and Craft Studies Research Reports 42. Helsinki: University of Helsinki.

Laamanen, T-K. & Seitamaa-Hakkarainen, P. (2014). Constraining an Open-ended Design Task by Interpreting Sources of Inspiration. *Art, Design & Communication in Higher Education*, 13(2), 135–156.

Lind, E. & Veeber, E. (2015). The Attainment of the Ideas of Handicraft and Home Economics Syllabus in School Reality. In V. Dislere (ed.) *Rural Environment, Education, Personality (REEP)*. Proceedings of the 8th International Scientific Conference. Jelgava: Latvia University of Agriculture, 15–16 May.

Marjanen, P. (2012). *Koulukäsityö vuosina 1866–2003. Kodin hyvinvointiin kasvattavista tavoitteista kohti elämänhallinnan taitoja* [School crafts in 1866–2003. From wellbeing at homes towards skills in life management]. Doctoral thesis. Publications of the University of Turku C 344. Turku: University of Turku.

Maciver, F. & Malins, J. (2015). Fostering design collaboration: Novel ICT tools to support contemporary design pedagogy. *International Journal of Education through Art*, 11(3), 407–419.

Nuutinen, A., Räisänen, R. & Fernström, P. (2016). Material and surface - Course synergy as a channel towards a more encompassing view of learning. *Techne Series – Research in Sloyd Education and Craft Science A*, 23(1), 30–48.

Nuutinen, A., Räisänen, R. & Fernström, P. (2017). Ugly as a concept in craft to examine alternative futures, *European Journal of Futures Research*, 5, 18. DOI: 10.1007/s40309-017-0127-3.

O'Collins, G. (2018). Tradition: Understanding Christian Tradition. Oxford: Oxford Scholarship Online. DOI: 10.1093/oso/9780198830306.001.0001.

Olafsson, B. & Joelsdottir, A. (2018). Design og håndverk og Tekstil på Island. *Techne Series – Research in Sloyd Education and Craft Science A, 25*(3), 39–57. Obtained 13 February from https://journals.hioa.no/index.php/techneA/article/view/3026.

Patrikainen, S. (2012). *Luokanopettajan pedagoginen ajattelu ja toiminta matematiikan opetuksessa* [Class teacher's pedagogical thinking and acting when teaching mathematics]. Doctoral thesis. Helsinki: University of Helsinki.

Potočnik, R. (2017). Effective approaches to heritage education: Raising awareness through fine art practice. *International Journal of Education through Art*, 13(3), 285–294.

Räisänen, R. (2014). How to visualize design? Pupils' experiences of designing in a textile craft project. *Craft Research*, 5(2), 199–219.

Räisänen, R. & Laamanen, T. K. (2014). Tieto, kritiikki, toiminta, vastuu – pohdintaa kestävän kehityksen ja eettisen kuluttamisen näkökulmista käsityössä [Knowledge, critique, action, responsibility – discussions about sustainability and ethical consumption in textile craft]. In S. Karppinen, A. Kouhia & E. Syrjäläinen (eds.) *Kättä pidempää: Otteita käsityön tutkimuksesta ja käsitteellistämisestä* (pp. 48–61). Publications of Home Economics and Craft Science 33. Helsinki: University of Helsinki. Obtained 13 February from http://hdl.handle.net/10138/43167.

Saha, T. (2011). Käsillä kestävää [Sustainable by hands]. *Taito*, 4, 18.

Sahlberg, P. (2011). *Finnish Lessons. What Can the World Learn from Educatioanl Change in Finland*? New York: Teachers College Press.

Sirelius, U. T. (1923). *Suomen kansallispukuja - Kuvia ja ohjeita käytäntöä varten* [Finnish National Costumes - Illustrations and Instructions for Application]. 2nd ed. Helsinki: Tietosanakirja-osakeyhtiön kirjapaino.

Statistics Finland (2017). Helsinki: Tilastokeskus. Obtained 21 August 2017 from http://www.stat.fi/index.html.

Studieinriktningar - Slöjdlärare (2019). Kandidatprogrammet och magisterprogrammet i pedagogik. Helsingfors universität. Obtained 11 February 2019 from https://www.helsinki.fi/sv/ohjelmat/kandidat/kandidatprogrammet-och-magisterprogrammet-i-pedagogik/studier/studieinriktningar.

Taar, J. (2017). *Interthinking in Estonian Home Economics Education*. Obtained 3 February 2018 from https://helda.helsinki.fi/handle/10138/228138.

Taitoliitto (2018). *Käsitöiden harrastaminen Suomessa* 2018 [Craft as hobby in Finland 2018]. Obtained 29 January 2019 from https://www.taito.fi/kasitoiden-harrastaminen-suomessa-tutkimus-2018.

UNESCO (2003). Convention for the Safeguarding of Intangible Cultural Heritage. Obtained 11th February 2019 from https://ich.unesco.org/en/convention.

Vartiainen, L. (2010). *Handicrafts and a sense of community – networks, skills and shared experiences*. Doctoral thesis. Publications of the University of Eastern Finland. Dissertations in Education, Humanities, and Theology 4. Joensuu: University of Eastern Finland.

Vartiainen, L. & Kaipainen, M. (2012). Textile craft students' perceptions of sustainable crafts. *Problems of Education in the 21st Century*, 43, 131–140.

Veeber, E., Syrjäläinen, E. & Lind, E. (2015). A discussion of the necessity of craft education in the 21st century, *Teche Series – Research in Sloyd Education and Craft Science A*, 22(1), 15–29.

Walker, S., Evans, M., Cassidy, T., Holroyd, A. T. & Jung, J. (eds.) (2018). *Design Roots. Culturally Significant Designs, Products and Practices*. London: Bloomsbury Academic.

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