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The Opinion of Pre-Service Teachers on the Online Course on Textiles

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Abstract: Distance learning became the predominant mode of education during the COVID-19 period. The purpose of the present study was to find out students' opinions about hands-on textile work during online learning in the basic textiles course, which is usually live. During the semester, they receive instructions for practical work through the online classroom. After completing the work, their work was evaluated. They were also asked to complete a survey expressing their opinions about online learning of practical work. 1st year Home Economics students participated in the study.The results showed that students took on this kind of work as a challenge. As they were limited in material, they had to show a certain amount of ingenuity and creativity. Half of the students was to recycle old clothes. The results indicate that practical work motivated students to learn new techniques and that the task was perceived as relaxing; they mentioned positive emotions during the activity, the desire to improve products with which they were not satisfied, independence. It was interesting that on average the textile products were made more carefully and precisely than the products of students in the previous year. A reason for this could be that students were not limited with time like they are in formal classes and probably spent their free time making the best possible product. The results indicate the important role of practical work in fostering creativity and motivation for the content of the course.

Keywords: distance learning, practical work, textile technique, pre-service teachers, creativity.

Introduction

Although learning textile techniques today is no longer essential for living (textiles are easily accessible), research shows an important role in terms of promoting psychological, cognitive, and motor development of the individual (Mason, 2005), expressing/maintaining cultural identity (Gale et al., 2002), and improving of well- being (Riley, 2008). Rönkkö and Lepistö (2011) found also that practical work and action-based learning encourages students to develop their problem-solving, participation, interaction, and decision-making skills. Textile techniques can also be the basis for designing a case study in which students link information related to economy (e.g., price, cost estimation) with knowledge of textile techniques (Montgomery, 2006).

There are several studies in literature that have researched the role of knitting. Melrose (2011) states that performing precise movements is related to the area of reading ability in the brain, and that rhythmic repetition of movements has a calming effect on the individual. Huchingsons (Huchingson et al., 1993) found that the calmness and concentration that occur in knitting also affect better divergent thinking. Eugene points out the connection with mathematical skills – especially in more complex patterns where proper planning, design of sketches, counting loops, rows is essential (Eugene, 2009).

Research also showed that knitting is often used in a variety of psychotherapeutic activities (to help control stress, fear, dementia) and that a successfully manufactured product also affects positive well-being and positive self-esteem (Corkhill et al., 2015).

McCaffery's (1993) survey on practical textile work showed that students felt accepted in practical work, were happy and cheerful, highlighted positive feelings, stressed awareness that the activity is useful and can be repeated at home, they had a sense of adulthood associated with a sense of self-confidence and success, as well as a sense of confidence, responsibility, and independence.

Owen-Jackson (2000, 27) claims that craft lessons should help learners to pursue the following goals:

- to evaluate products critically;
- to recognize opportunities;
- to improve systems or products;

- to be creative;
- to be organized;
- to gain a better understanding of materials;
- to use tools and equipment confidently;
- to make quality products.

Today, textile industry is facing several problems, one of them being the growing amount of textile waste (Fajt, 2014). This is why it has become extremely important that the individual also thinks about textile waste management. One of the possibilities of using surplus textiles is recycling. By recyclingnew, creative products can be createed as well as following the idea of sustainability: "*Working educationally with the potentiality of waste materials thus open up for different ways of thinking about how the things are used and discardedand about the temporal aspects of sustainability*." (Jørgensen, Madsen, Læssøe 2018, 811). Therefore, it is important that pre-service teachers gain as many ideas as possible during their studies on how to encourage or how to make a recycled textile product.

Distant learning

During the COVID-19 epidemic, distance learning became the predominant model of education from primary school to university. This type of education was made possible by information and communication technology (ICT), such as portals, forums, chat rooms, blogs, skype, e-mail, which enable the transfer of knowledge (Kranjc, 2008). With the help of ICT, a teacher can increase motivation in the classroom, monitor student activities, enable students to acquire knowledge (Ilomäki et al., 2007), and enable them to acquire digital competence (Rebernak, 2008). Digital competence refers to the meaningful use of technology for work, learning, and communication, which requires basic ICT skills (Juvan, 2016).

The Home Economics` Curriculum recommends that ICT should be included in all stages of household lessons in a meaningful way as to motivate, impart new knowledge and repeat/consolidate knowledge as well as check and assess knowledge. It proposes the introduction of ICT for the following activities (Gospodinjstvo Učni načrt, 2011, 27-28):

- presentations using various tools, such as an interactive whiteboard,
- use of various applications (educational games),
- programs that are didactically designed for home economics lessons,
- use of information and resources online,
- educational recordings online,
- e-materials (e-textbooks, didactic e-materials).

The Home Economics` Curriculum deals with topics in 4 modules (economics, textiles, living environment, and food and nutrition). Within the modules, a part of the content can be presented to pre-service teachers also in practical work. Through practical work, pre-service teachers get to know several textile techniques (spinning, felting, weaving, knitting, sewing, and fabric finishing techniques).

During the COVID-19 pandemic, teaching in physical classes was not possible. All tasks which include practical work were adapted to distance learning – demonstrations of practical work were carried out only through video lessons. The students were limited in their choice of appropriate textile material and worked individually.

The purpose of the present study was to find out students' opinions about hands-on textile work during online learning in the basic textiles course, which is usually live.

Methodology

With this investigation, authors were aimed to answer the following research question: RQ1: What is the students' opinion about online learning of practical textile topics?

Participants: 20 prospective teachers, 1 male and 19 female students from the Faculty of Education of the University of Ljubljana, majoring in Home Economics participated in the study. The main goal of

the Fundamentals of Textiles course (in addition to acquiring theoretical knowledge) is to develop practical skills and creativity.

Measures: For research purposes a survey was designed with open-ended questions, which was anonymous and voluntary. Students' responses were categorized and the following descriptive statistics calculated: absolute frequency and percentage share for each answer category. The results were presented in figures.

Procedure: Due to the COVID-19 epidemic, online learning was involved; students received instructions for making practical products weekly through online classroom on Moodle. They received written instructions and videos and had to photograph and submit their products. During the semester, they had to knit with their fingers without needles and with knitting needles; dye products with natural dyes (beetroot, onion peels, turmeric, chamomile); make a potato stamp and print on fabric; they even tried to sew (sewn picture, a pouch, a protective mask). The obligatory tasks were a pouch, a protective mask, a friendship bracelet; on their own volition, they could also make a toy and a pendant. At the end of the semester, authors analysed their submissions and asked them for optional feedback on the practical work they had been doing via distance learning. For this purpose, authors designed an open-ended survey, anonymous and voluntary. Their responses were classified and the following descriptive statistics were calculated: absolute frequency and percentage share for each answer category. The results were presented in figures.

Results and Discussion

As part of the sewing lessons, students learned about different stitches. To train accuracy and encourage creativity, they were given the task of creating a hand-sewn image. Although they could choose the motif by themselves, most of them decided to make a flower, which was also used in the tutorials. Thus, 13 students used as a flower as their basic motif, 2 students sewed an apple, and 3 students set on the heart. As far as original and new ideas go, one student used a picture of a bear with flowers and bees, and another one a roe and a heart.

The products were analysed in terms of the originality of the motif and the complexity of the stitches and sorted into three categories. In the first category (basic), authors included products with a simple plant motif and basich stitch. In the second category (upgrade), authors included images that included details of plants and insects and required more precision and sewing skills. The third category (original/new idea) included products in which students presented plants and animals in an original way (e.g., colour combinations, more demanding animal imagery) and products that included other motifs and were made with more demanding sewing skills. As can be seen in Figure 1, the largest share of products falls into the category of upgrades. The analysis also showed that students sought inspiration for their creations in the real world; no one chose to produce an abstract image.

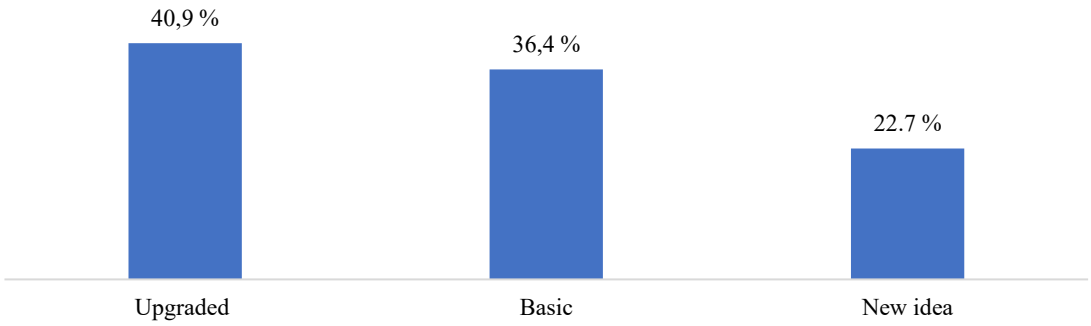

Figure 1. Categories of students' textile products.

The learning of basic textile techniques was followed by the production of different textile products (pouch, friendship bracelet, a protective mask, and so on). The first mandatory product was a pouch. All students made them in accordance with guidelines, 50 % of students also included various decorations on their own initiative (with stiches and buttons). They also made protective mask in line with video guidelines. One half of students sewed them by hand, one half on the sewing machine, which was also their own initiative. One of these students stated that the opportunity to try something

new was *"additional motivation"* (Student 3) and one stated: *"These textile tasks encouraged me to sew again, and my sewing machine was certainly happy with all this attention. Other products have also been created, such as a whole collection of masks and new clothes"* (Student 2).

The task of making a knit friendship bracelet also produced enthusiasm and encouraged the creativity of the students. Although the production of a simple bracelets was expected, the majority (60 %) opted to make bracelets that required slightly more skill. They also put effort into choosing colour combinations. Five female students also made an additional textile product – one made a pendant and four made toys. The results revealed that the students embraced the challenge of learning practical textile techniques at distance and that their textile products were better than those made by students who had to make the same products in a limited series of exercises at the Faculty. This suggests that the students probably sacrificed their free time to make textile products.

Authors also asked the students how challenging they found the tasks they had to complete. The majority of students (75.0 %) stated that practical activities were of appropriate difficulty, 15.0 % stated that the activities were demanding and two people claimed that the activities were not demanding. However, they all agreed that the tasks were a challenge for them.

When asked whether they experienced difficulties in their work, 80.0 % replied affirmatively. They pointed out problems related to knitting (2), the choice of materials (4) or a lack thereof (3), hand sewing (3), sewing with a sewing machine, no presence of a professor to help, lack of time.

The students were also asked to answer whether they liked the practical work they had to do in the online course and why. The results showed that they all liked the practical textile work they had to carry out during their distance learning. Authors categorized their explications and found that the dominant reason for their appreciation was to acquire new knowledge of textile techniques (Figure 2).

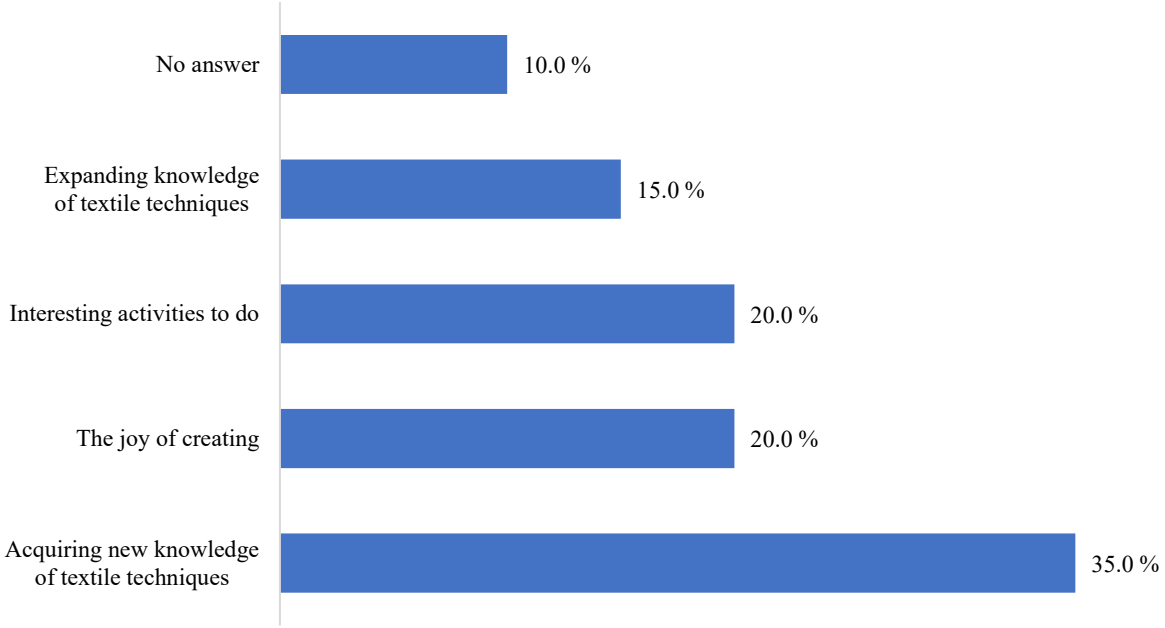

Figure 2. Reasons why students liked practical work.

For making textile products, the students had the possibility to use purchased material or to use old textiles that they no longer used (old T-shirts, pants, cloths, napkins). Results (Figure 3) show that more than half of the students chose material that was used (55 %).

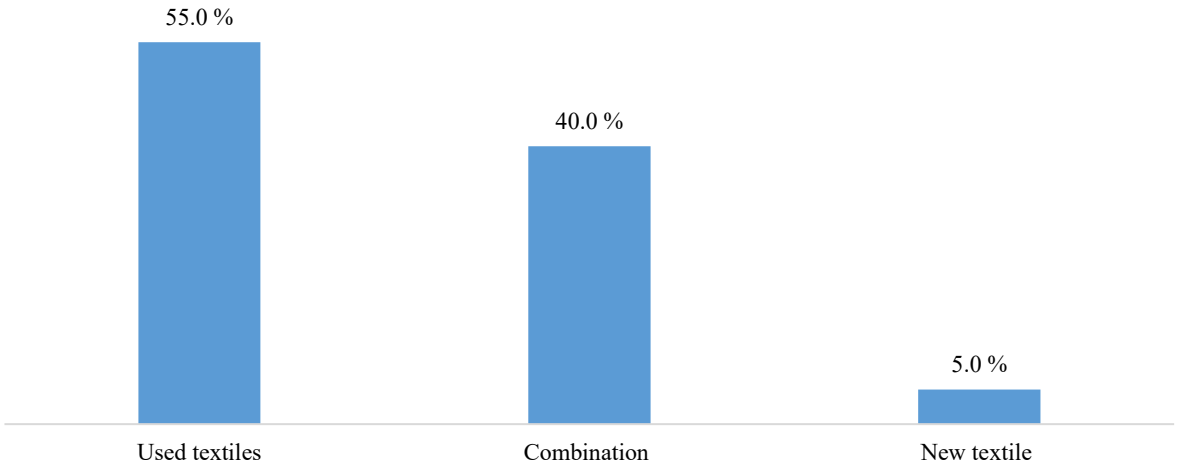

Figure 3. Materials used.

Students were creative not only in using textile but also in adapting all working processes:

"*With some ingenuity, I somehow solved the problem, I replaced the accessories with similar ones (for example, instead of knitting needles I took Chinese sticks; instead of white elastic, I used hair elastic in the mask). Although the work took me quite some time, I still really enjoyed it. With the exercises, I renewed my knowledge from before, and I learned a lot of new things"* (Student 3).

When students were asked what they had gained from the practical exercises, most responded that this was useful knowledge (12.0 %), one person was encouraged to revive his hobby, and one person discovered a new hobby. Among those who stated that they had gained useful knowledge, 25.0 % found valuable that they now know how to make a practical product (e.g. toy, recycled product):

"Manual work caused me a lot of problems at the beginning, because successful work requires concentration and, above all, patience. I liked knitting the most because it gave me a sense of success (the product is made quickly) and the process itself is relaxing. Because I have quite 'clumsy' fingers, I had problems with sewing, but when I sewed the mask and pouch, I discarded my handycrafts" (Student 6).

The literature emphasizes the importance of practical work for relaxation and wellbeing. Students were asked to provide information on how they felt during the practical activities. The results revealed the that students mostly felt positive emotions (Figure 4).

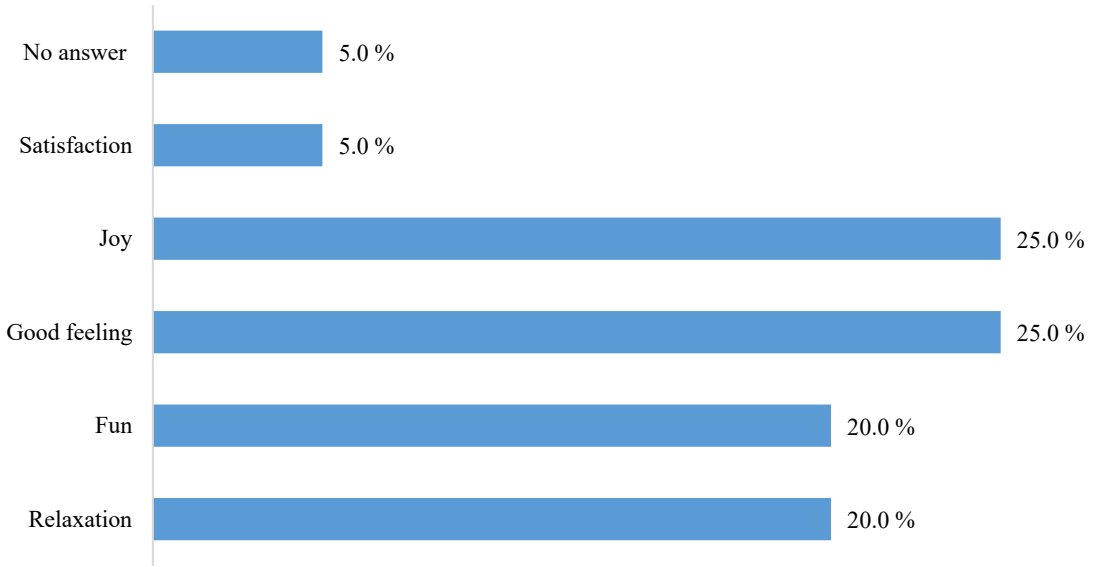

Figure 4. Students feeling during practical activities.

The students were also required to list the factors that allowed them to develop creativity. Most of the students (30.0 %) emphasized the possibility of freely decorating their products. Other answers included sewing (25.0 %), free choice of materials (10.0 %), finding solutions in the event of lack of materials for work (10.0 %) and the fact that it is necessary to make a useful product (15.0 %).

The answers to the open questions also showed that some students gladly accepted the challenge, as it allowed them to pursue their own hobby: *"With the large number of study commitments we have, I am running out of time for hobbies. Sewing, crocheting, and creating are one of them, so I was incredibly happy that I 'had to' take time for them"* (Student 1).

Schwartz (2009) states that the implementation of textile techniques enables the development of skills, work habits, perseverance, and precision. To perform more demanding tasks successfully may require more experimentation, effort, and (re-)thinking. During this process, students learn perseverance, self-control, and self-assessment (Korsak, 2013; Dray, 2010).

The results of our research show that during the study process students develop critical thinking and a desire to reproduce a product they believe to have failed: *"I think I did quite well, except for the sewn picture, when I do it again, I will spend more time on it"* (Student 4).

One student praised independence in distance learning.

"*I liked working from home, because I have the opinion that if someone is forced to learn something on their own, they will learn it much better than if someone shows it to them and they just repeat it"* (Student 5).

The research results suggest that giving the students opportunity to do crafts at their own pace has a positive effect on motivation to make good products.

Conclusions

At the time of the pandemic, the learning process was substantially adjusted. In the Fundamentals of Textiles course, which includes many practical activities, the question arose as to how students perceive adapted distance learning. The results showed that students embraced this kind of work as a challenge. Most of the students were motivated to work, wanting to make the best possible product, they also expressed the intention to make a product again (in case they were not satisfied with them). They also put in more effort than was required (e.g., sewing on a sewing machine). As most of the participants felt satisfied, they mostly expressed positive emotions. During the learning process, the majority of students opted for used textiles in making their practical products, which is important also from the perspective of learning sustainable behaviour. The results suggest that practical activities carried out in distance learning have a positive impact on student motivation to learn practical skills and sustainable behaviour.

The present study is limited by its small research sample. There is a need for further research on students' motivation to learn practical textile techniques/skills and the development of sustainable behaviour in distance learning.

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