The Student-Produced Electronic Portfolio in Craft Education

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Abstract: The authors studied primary school students' experiences of using an electronic portfolio in their craft education over four years. A stimulated recall interview was applied to collect user experiences and qualitative content analysis to analyse the collected data. The results indicate that the electronic portfolio was experienced as a multipurpose tool to support learning. It makes the learning process visible and in that way helps focus on and improves the quality of learning.

Introduction

The aim of this study is to research the use of an electronic portfolio (ePortfolio) in craft education at the primary school level and especially to develop its use as a method of documentation. The main research question focuses on the pupils' experiences of the functions and the benefits of using an ePortfolio.

The ePortfolio is a personalized tracking of learning with authentic evidence (e.g., Carmen and Christie, 2006; Lorenzo and Ittelson, 2005; Barrett, 2010). The ePortfolio´s role relatively often culminates in assessment and its main task is to bring forth the successes (Sherman, 2006). Sherman argues for more versatile use of the ePortfolio, such as reflection, goal setting and communication. Furthermore, Waltz (2006) defines university level students' definitions of the ePortfolio's role in their studies. Students described the ePortfolio as a means of storing their work, a way of collecting evidence of their development, a tool for information management and a tool for connecting and communicating with their teachers and other students. Parallel results were obtained with primary school students (Saarinen et al, 2016). Fundamentally ePortfolios should be studied as a means to increase pupils' own understanding of their learning (Barrett, 2003). The documentation of one's own learning process and its emphasis in assessment strongly emphasized in the renewed curriculum for craft education in Finland, which came into effect in 2016. The learner's active role, mastery of ICT tools and metacognitive skills are components of transversal competences, which are integrated across all school subjects in all grade levels (FNBE, 2014).

This longitudinal development study is based on data collected over four years, during which the students progressed from the beginning of the 3rd grade to the end of the 6th grade. The ePortfolio process was facilitated with one-hour starting session and general discussion of how to document, what to document and how often. The digital application starts portfolio with an empty white paper, which student fills with photos, writings and audio elements. The functionalities and instruction for using the ePortfolio were developed across the years: the minimum list of documentation was defined (the first year), video clips guidance was offered (the second year), peer-assessment was added (the third year) and optional video recording was permitted (the fourth year).

Method

A semi-structured stimulated recall interview was applied when the students were in the fifth grade to collect their experiences after three years of using the ePortfolio. Holding interviews provided an easier and more flexible means of gathering data than having the students write about their experiences. The students' own ePortfolios were used as stimuli during the interviews, as their use facilitated the students' recollection of past events. All the interviews (n=38) were video recorded, transcribed and analysed using data-driven content analysis. A qualitative content analysis program (ATLAS.ti) was used to analyse the data. The students' notes were organized according to the message of the notation. One notation could be divided into smaller units, but then again, the length of one unit could vary from one word to thirty words.

Results

The results indicate that an ePortfolio is a useful method for craft education. When students begin using it during the early school years, it is experienced as a natural part of the work process. The four key functions identified by students (see Figure 1.) were the storing and management of information, as well as communication and verification of development (inner circle). The experienced educational benefits were related to supporting the work process: for instance, the activities documented in the appeared to operate as stimuli to memory, eliciting the recollection of concepts in a way that deepened the understanding of past experiences (outer circle).

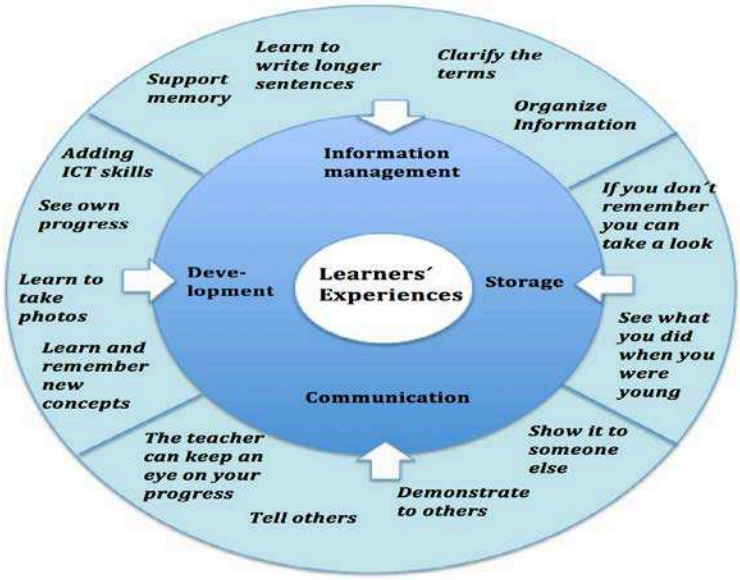

Figure 1. The student-identified functions of the ePortfolio are in the inner circle, and its benefits in the outer circle.

Discussion

The ePortfolio makes it easier to draw attention to the learning process. It offers a means of concretizing the steps of the learning process, which in turn enables the learner, or others, to monitor, reflect on and assess it afterwards. The method was considered to be positive and encouraging, and several benefits were pointed out. Each pupil learned to find their own individual style of using the method and had the opportunity to emphasize their own perspective. These results are in line with earlier research results (Walz, 2006), and relevant because they are useful to teachers both in developing their pedagogical practices and in expanding their understanding of the multiple possibilities of the ePortfolio.

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Acknowledgments

The present study has been supported by the Academy of Finland (under project no. 12863837).