

# The role of ePortfolios in supporting vocational teacher students' learning

Liana Roos<sup>a1</sup>, Karmen Trasberg<sup>a</sup>, Diana Eller<sup>b</sup>, Karmen Kalk<sup>a</sup>

<sup>a</sup> *Institute of Education, University of Tartu*

<sup>b</sup> *Tartu Vocational College*

## Summary

The use of the ePortfolio, a “product, created by the learner, a collection of digital artefacts articulating experiences, achievements and learning” (Joint Information Systems Committee, 2008, p. 8), has become increasingly popular in teacher education due to its potential benefits (Oakley *et al.*, 2014). Students work with a portfolio to show what they have achieved and learned and reflect on their learning (Barrett, 2007). Thus, the ePortfolio can be used as an assessment and a learning tool, supporting deep learning (Lin, 2008). Furthermore, an ePortfolio based on a professional standard provides a focus for learning, supports the creation of a sense of ownership over the knowledge and skills acquired, confirms the relevance of emerging teaching practices, enhances self-confidence as a teacher, and thereby creates a deeper connection with the future profession (Lewis & Gebric, 2012).

Based on the literature, the main benefits of implementing ePortfolios include synthesising and organising what is learned (e.g., Bataineh *et al.*, 2007; Lin, 2008), the possibility to document one's progress (e.g., Schneider, 2020), to develop reflective, critical and analytical thinking skills (e.g., Lin, 2008; Schneider, 2020), digital competencies (e.g., Lin, 2008; Kabilan & Khan, 2012), increase student teachers' professional confidence (e.g., Kabilan & Khan, 2012; Lewis & Gebric, 2012) and, through the validation of competencies, competitiveness in the recruitment process (e.g., Schneider, 2020). However, several studies show that although most students perceive that the portfolio supports their reflection and learning, the impact of the portfolio on their professional development and personal growth is not universal. Some students may remain passive in creating an ePortfolio, be resistant to the process (Kabilan & Khan, 2012), and perceive the role of the ePortfolio merely as a repository (Lewis & Gebric, 2012). Creating a portfolio can be challenging for the learner (Meeus *et al.*, 2006). Problems reported by student teachers include the time and workload involved in creating an ePortfolio (Kabilan & Khan, 2012; Lin,

---

<sup>1</sup> Institute of Education, University of Tartu, Jakobi 5, Tartu, 51005 Estonia; liana.roos@ut.ee

2008), unclear or overly restrictive instructions (Borko *et al.*, 1997), lack of feedback (Ok & Erdogan, 2010) and lack of clarity about the purpose of the ePortfolio (Lin, 2008).

ePortfolios are also used in vocational education (VET) teacher training to support their learning process, professional development, and career planning (Korhonen *et al.*, 2019; Korhonen *et al.*, 2020). Estonian VET teacher curricula also implement ePortfolios to examine, validate and assess students' vocational and professional competencies (Tallinna Ülikool, s.a.; Tartu Ülikool, s.a.), but to our knowledge, in Estonia, the implementation of ePortfolios has not been studied so far. There is also less research on the topic from a VET teacher training perspective worldwide. However, several VET teacher-specific aspects could be relevant for a more targeted and effective implementation of ePortfolios in the initial VET teacher training. First, while teachers in Estonian general education schools are mostly expected to complete a Master's degree, most VET teachers have already achieved a qualification at Bachelor's level. Second, Estonian VET teacher students are on average older than other teacher education students (Selliiv & Vaher, 2018). They usually have a VET background that prepares them more for the vocational world than academic teacher education studies. Prior to becoming a teacher, a VET teacher is, in most cases, already a specialist in a particular vocation, and teaching is a second career for them (Berger & D'Ascoli, 2012). Therefore, for VET teachers, their professional development is a continuous effort to balance the development of prior vocational competencies and additional teaching competencies (Andersson & Köpsén, 2019) through vocational practice, teaching, and VET teacher education (Fejes & Köpsén, 2014). These aspects encouraged us to study the implementation of ePortfolios, from a distinctive perspective of initial VET teacher training. In order to enhance the implementation of ePortfolios in initial VET teacher curricula, we aimed to identify VET teacher students' perceptions of the role of an ePortfolio in supporting their learning and their experiences in the ePortfolio development process.

## Methodology

The study was based on five focus group interviews with 19 VET teacher students. Focus group interviews allow bringing together individuals with similar experiences and drawing on group dynamics, generating discussion about the experience of writing a development portfolio, identifying collective views, and exploring the topic in context and depth (Nyumba *et al.*, 2017). The data were analysed using qualitative inductive content analysis, which allows for a more condensed description of the phenomenon under study, as comprehensive as possible (Elo & Kyngäs, 2008).

## Results and discussion

In line with some previous research carried out in the context of teacher education (e.g., Kabilan & Khan, 2012; Lewis & Gebric, 2012; Lin, 2008), it can be said that VET teacher students experienced the process of compiling an ePortfolio as supportive and empowering for their learning, but also as a process that was unclear, insecure and challenging. An ePortfolio can have a variety of sometimes even contradictory purposes, covering learning, assessment, and career planning (Oakley *et al.*, 2014). The results here show that VET teacher students perceived the role of the ePortfolio as more of a presentation and assessment function, whereas some valued its learning function. While making sense of ePortfolios simultaneously in terms of process and outcome makes deep learning through standards-based assessment possible (Lewis & Gebric, 2012), one of the crucial concerns for the future implementation of ePortfolios in VET teacher training is that of supporting students' understanding of the combined, and even conflicting aims of ePortfolios.

In some previous studies (e.g., Borko *et al.*, 1997), students have considered overly restrictive ePortfolio instructions to be a problem. The VET teacher students wanted the ePortfolio process to be supported and framed by more detailed instructions. Even more, they wished for follow-up deadlines and reviews, more specific guidance, and more frequent supportive feedback from their faculty. They felt uneasy about not knowing precisely how to create an ePortfolio the right way. While some of the students valued the opportunity to create an ePortfolio that is unique and expresses their individuality, the results here suggest that similar to some previous studies (e.g., Lin, 2008; Meeus *et al.*, 2006), flexibility, and the open character of ePortfolios, may prove to be a challenge for some students.

On the one hand, we can conclude that in addition to the subjects directly linked to creating the ePortfolio, it is crucial that the process is cross-curricular, well-integrated, and supported. On the other hand, the need for more explicit guidance may also stem from the fact that some of the VET teacher students may have a VET background and they need more support in their academic studies. Our study concludes that the importance of integrating the ePortfolio into the curriculum as a whole cannot be overemphasised. This implies a need to enhance the cooperation between the faculty in synthesising the courses and the ePortfolio tasks. Secondly, we consider it important to rethink the ePortfolio guidelines with a clear timeline and the supervision activities, enhancing appropriate guidance and feedback opportunities at the beginning of the process and then gradually giving responsibility to the students. This could help students overcome the uncertainties in their first steps of creating an ePortfolio and

support them in coping with the open nature of the ePortfolio and its diverse purposes. In order to help students to see the practical benefits of ePortfolios in their future career planning, we consider it necessary to enhance the visibility of VET teacher students' previous vocational experience in their ePortfolios, as it is an integral part of their VET teacher professionalism.

Although the study highlighted VET teacher students' perceptions and experiences, we believe that the study could have a broader interest to planners of ePortfolio implementation in teacher education curricula and higher education.

*Keywords:* ePortfolio, student teachers, vocational teacher, professional standard