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E-portfolio thinking in teacher training: a small-scale study in K-12 in Turkey

Authors   Ayse Kok

Address for correspondence   Department of Education
University of Oxford
15 Norham Gardens
Oxford OX2 6PY
UK
ayse.kok@gmail.com

Abstract

The account given in this paper is related to the experiences of foreign language teachers involved in the pilot study undertaken in a high school in Turkey. After outlining the distinctive advantages of e-portfolios in the context of teacher development; this paper discusses the results of a qualitative study addressing the value of e-portfolios as versatile teaching and learning tools to showcase the professional skills of the teachers. Data collection was undertaken through both semi-structured interviews with the majority of these teachers and field observations. By providing teachers with the opportunity to enhance their technological skills and to reflect critically upon their work as educators, e-portfolios can serve as an invaluable resource for meeting educational standards and promoting effective teaching practice.

Introduction

Electronic portfolios (e-portfolios) are gaining an increasing importance in the educational landscape of the 21st century as they provide today's learners with the freedom to gather and reflect evidence of their learning progress. As Ali (2005) states as e-portfolios are readily and conveniently used in most classrooms they are highly motivating for the students who are encouraged by exhibiting their work.

Definition and classification

Barrett (2000) describes e-portfolios as '(those that make) use of electronic technologies that allow the portfolio developer to collect and organise artefacts in many formats (audio, video, graphics, and text). A standards-based electronic portfolio uses hypertext links to organise the material to connect artefacts to appropriate goals or standards…an electronic portfolio is not a haphazard collection of artefacts (i.e., a digital scrapbook or multimedia presentation) but rather a reflective tool that demonstrates growth over time'.

Rather than being a personal web page an e-portfolio is a network application that provides its creator with administrative functions for managing and organizing files created with different applications and for granting access rights (Greenberg, 2004). With the convergence of text, sound, graphics and video into a common digital format and the reduced technical barriers for production a substantial online archive such as the digital portfolio can be maintained (Greenberg, 2004).

The underlying logic of e-portfolios is derived from the contemporary courses where students are urged to revise and resubmit their assignments after peer assessment (Ali, 2005). These

assignments reach the teacher after several careful drafts. Ali (2005) asserts that the portfolio approach is developed from this concept of reflective practice.

According to Greenberg (2004) different types of e-portfolios can be categorised in terms of when the work is organised relative to when the work is created. This results in three types of e-portfolios:

- The *showcase e-portfolio:* Organisation occurs after the work has been created.
- The *structured e-portfolio:* A predefined organisation exists for work that is yet to be created.
- The *learning e-portfolio:* Organisation of the work evolves as the work is created.

Still some other classifications of portfolios have been made according to its focus. To exemplify, Cooper & Love (2001) distinguish between the summative and formative portfolios whereas the former one is used for keeping track of the learning outcome and the latter one is used as a report to parents in order to demonstrate changes over a period of time. Cooper & Love (2001) make the further classification within the summative portfolios:

- The *competency-based* or *outcomes-based portfolio*: It may show samples of a student's work collected as evidence of his/her skills and knowledge, which is relative to the curriculum or syllabi.
- The *negotiated learning portfolio* in which the outcomes of the negotiated learning processes are assessed through a portfolio.
- The *biographic portfolio,* which is a record of achievement. This type of portfolio may have a collection of work experience of a student which is collected over a period of time and arranged chronologically.

E-portfolios as personal development tools for teachers

Throughout the literature, the value of e-portfolios as a resource for contributing to the teachers' technology skills and reflection on their teaching practice has been emphasized several times. To exemplify, Milman (1999) asserts that working with e-portfolios makes teachers get engaged in activities that don't only reflect sound pedagogical principles via integrating the technology into their classrooms but also support their own learning. So, the value of technology as both a teaching and a learning tool becomes evident in teachers' transferring their enhanced technology literacy skills to K-12 settings (Cunningham and Benedetto, 2002). In a similar vein, Goldsby & Fazal (2000) and Gatlin & Jacob (2002) also assert that teachers working with digital portfolios are better able to create meaningful experiences using technology in their lessons.

As McKinney (1998) suggests reflective practice allows learners "not only [to] step back from experiences but also to form connective links to rethink past experiences in the context of new ones and ideally to develop ways of applying those insights to future endeavours" (86).

One of the major benefits of using e-portfolios is that without any need for being together at the same time and place to share work, one has extended access to a diversity of people via the Internet (Greenberg, 2004).

Moreover, e-portfolios act as repositories for collecting and evaluating learning outcomes as well as storing evidence of competency regarding one's educational or professional growth (LaCour, 2005). By facilitating critical thinking through the use of technology and reflective practice (Levin and Camp 2002; Brown 2002; Devanney and Walsh 2002) broad types of evidence including audio and video can be gathered and reviewed to demonstrate the teachers' growth as reflective practitioners (Cunningham and Benedetto, 2002).

Furthermore, when certification and a demonstration of skills are needed for career advancement such as in K-12 teaching, an e-portfolio can be an important way to present and

maintain information about accomplishments for professional accreditation (Greenberg, 2004). In addition to presenting a wide range of evidence, e-portfolios provide easier management of resources and enhanced flexibility with regard to having access and providing feedback (Oduyemi, Kehinde, Ogston, 2006). As Oduyemi, Kehinde and Ogston (2006) assert that once the skills, knowledge and values are identified, these can be mapped against those for the future career development. Another important benefit of ongoing e-portfolio participation is the opportunity to maintain connections with peers (Greenberg, 2004). Especially, within the context of K-12 teaching, where isolation and the need for ongoing professional development have created significant retention problems it has been observed that e-portfolios can establish an ongoing community of practice that is sustained as teachers pursue their careers (Greenberg, 2004).

Within the context of constructivism, learning is achieved through knowledge construction that is built upon the foundation of prior knowledge rather than the passive transformation of information from one person to another (Vygotsky, 1978). Because of its major benefits such as fostering critical thinking, reflective practice and a questioning attitude, increased understanding of one's own learning process, as explained above, portfolios are essentially constructivist tools, well aligned with modern educational theory, particular the work of authors such as Vyogotsky (1978).

Bearing in mind that human acquire knowledge by actively organizing their experiences e-portfolios are indispensable tools for documenting one's learning and achievement of individual goals as they made one think reflectively about where one is now and where one would like to go (LaCour, 2005).

The context of study

Being a developing country located in the Middle East, there have been many attempts to integrate the ICTs into Turkish primary, secondary and higher education system since 1990. Some of the factors which have affected the effective deployment and utilization of ICTs for educational purposes not only in Turkey but also in Middle East in general can be summarised as (Akbaba-Altun, S., 2006):

- inadequate ICT infrastructure including computer hardware and software, and bandwidth/access;
- a lack of skilled manpower, to manage available systems and inadequate training facilities for ICT education;
- resistance to change from traditional pedagogical methods to more innovative, technology-based teaching and learning methods, by both students and academics;
- the over-dependence of educational institutions on government for everything has limited institutions' ability to partner with the private sector or seek alternative funding sources for ICT educational initiatives;
- lack of effective co-ordination of all the various ICTs for education initiatives.

One of the leading secondary schools teaching in English in Turkey, TVO has put every effort to integrate the computers into its educational system via funding and grants. Apart from numerous computer laboratories with high-speed Internet connectivity one computer exists in every classroom. Teachers also receive regular training about the integration of computers into their teaching process. In short, it can be said that with the initiatives taken by the school governance, TVO managed to utilize the computer-mediated communication mostly with regard to its foreign language teaching process.

The e-portfolio study at TVO

Being inspired by the innovative use of technology for improving the teaching service and realizing the potential of emerging learning technologies TVO's management was willing to embed the use of e-portfolio technologies into the teaching experience in order to contribute to the teachers' success. Due to budget constraints it has been decided to use generic tools such as word processing, HTML editors, wikis or any other commonly used Web 2.0 tools for developing e-portfolios rather than customized systems that involve servers, programming and databases (Barrett, 2000).

Since the e-portfolio to be developed could be categorized as a learning portfolio the teachers were required to include a picture of themselves or a video created on their own, a short resume, a table of contents, good examples of coursework, lessons related to field experience, hobbies and interests and as well as their own reflective notes within their e-portfolio as Ali (2005) suggests. Depending on their preferences, the teachers could also work with PowerPoint by linking diverse types of media such as video clips, audio clips along with other work samples. Most of the portfolios resembled Web sites in design and included a cover that served as an index guiding readers to supplementary files.

One of the challenges during the e-portfolio implementation was that a common set of definitions for standard competencies for teachers across various subjects has not been adopted yet in the Turkish educational system. Nevertheless, essential competencies that can predict the success of the foreign language teachers have been identified by TVO's Foreign Languages Coordinator.

Working as the digital learning consultant in school, the researcher was assigned to teach the introductory course about e-portfolios. When introducing the e-portfolios to the teachers at the beginning of the term, the content and organisation of the e-portfolio depending on its aim was made clear. Since a lack of enthusiasm and commitment from teachers is likely to adversely affect their engagement with the development process of e-portfolio the teachers were also tried to get convinced of the benefits of e-portfolios. The researcher introduced the requirements for the portfolio project and provided technological support for teachers as they worked to complete the requirements.

During the introductory course, the following issues were discussed as Lane (2007) suggested:

- Basic technology instruction, such as how to use the e-portfolio tool, scan and format images for the Web, and perform other basic tasks;
- Models of effective and ineffective e-portfolios;
- Engagement with a variety of media, with discussion of which type of media is best suited for demonstrating particular skills;
- Opportunities to share e-portfolios with peers;
- Discussion of intellectual property issues;
- Evaluation criteria adapted to evaluating Web-based materials.

Once the portfolios were developed at the end of the school term a peer review took also place so that they can learn through their peers' comments (Ali, 2005).

Towards the end of the term, the extent to which the e-portfolios were presentable was also evaluated by both the Foreign Languages Coordinator and the researcher using various assessment models found on the Internet.

Methodology

This qualitative study investigates the experiences of the teachers utilizing e-portfolios for their personal development in a high school in Turkey. This project focused specifically on the

use of electronic portfolios as a tool to facilitate reflective practice and as a way to document the teachers' experiences as they prepared for the teaching profession.

Twenty-four foreign language teachers participated in the small-scale study undertaken in TVO, being one of the major high schools in Istanbul, Turkey.

To look more closely at the process of portfolio development, a qualitative study investigating the experiences of these 24 teachers was conducted. Data was collected via teacher interviews and field observations. Teachers enrolled in the introductory course participated in a focus group interview after completing their initial draft of the portfolio. The focus group interview lasted 45 minutes and centred on the decision-making process. A second group interview was also conducted by the researcher at the conclusion of the class, asking open-ended questions related to choice of media, and possible future revisions. These interviews focused on the process of developing the portfolio, reasons for developing the portfolio beyond the requirements, and changes they would like to make in their portfolio over time.

According to Patton (1982), the fundamental principle of qualitative interviewing is providing a framework within which respondents can express their own understandings in their own terms and therefore for which open-ended, rather than closed, questions should be used as far as possible (Patton, M., 1982).

Patton's style of qualitative interviewing is referred to as the standardised open-ended interview', through which questions are asked in the same way and order, with a minimum of probing by the interviewer (Patton, M., 1982). Use of probes were preferred by the researcher in order to allow the informants to answer more on their own terms (Patton, M., 1982), so the interviewer seeking at the same time both clarification and elaboration on given answers was more free to probe beyond answers (Patton, M., 1982).

Results

Teacher responses covered a range of opinions, with the diversity illustrated by the qualitative feedback from the open-ended questions:

> "In my opinion, we should not be expected to be computer literate, that will be unfair in some instances."

This response was typically related by mature-age teachers with notably lower ICT literacy than the other teachers. Yet, with guidance and training, all teachers were able to produce e-portfolios readily in the weeks following the initial assessment.

Another challenge for these teachers was their different opinions with regard to whether they should only include their experiences relevant to school or any other qualifications such as professional memberships or achievements in sports.

> "It was quite fun to put together the e-portfolio. The assessment of this course also makes things less stressful on us."

Once the requisite publishing skills had been mastered, teachers enjoyed the capacity to individualise the e-portfolios, and in general, invested disproportionate time in graphics representation, despite the fact that it was not rewarded in assessment. Moreover, those teachers having used digital media within their e-portfolios admitted that the digital media made indeed a difference for them since it resulted in robust learning experiences.

> "I think it is an amazing way for preparing job applications in the future. Learning about my personal strengths and weaknesses via the online portfolio, I can work now on my weaknesses."

Similarly, one teacher mentioned that by being encouraged to identify their own strengths they will take responsibility to develop them further and hence got engaged in genuine life-long learning.

Moreover, one teacher stated that *"the good thing about e-portfolio is that it is your own and you don't need to be like someone else. You can write about yourself in a structured way."*

One of the challenges was how to write online when preparing e-portfolio. One teacher stated that *"It was difficult how to translate your ideas about your thoughts into the right words on the web page, but once you get used to it you can put your real life examples which may be helpful for your other colleagues"*. Yet, despite this challenge of selecting the right words, one teacher stated that *"once you start to reflect and record your experiences you think that you feel motivated to enter a new experience into your portfolio."*

In a similar vein, two teachers stated that they can provide others with an understanding of the person behind the resume by giving more detail about who the person is.

The course participants were also encouraged to link single video or audio clips to several different categories or competencies as defined by the TVO Foreign Languages Coordinator when appropriate. To exemplify, audio recordings of their educational background were linked in two e-portfolios to the teaching standards requiring the effective use of technology. As one teacher said, "What better way to convey others about my background than to let them hear my resume in my own words?"

Furthermore, three of the e-portfolios included some video clips of the teachers' interaction with their own students during their fieldwork, and these teachers believed these clips to be the most important component of the portfolio. Additionally, teachers included assignments completed for various classes and materials generated for use in their teaching events, linking them at certain points to corresponding competencies defined by their coordinator.

Depending on how much the teachers got involved in preparing their e-portfolios they pursued different paths. To exemplify, those teachers who were just beginning the process often included PowerPoint presentations they were using throughout their lessons. One third grade teacher mentioned: "As I continued to work on my e-portfolio, I wanted to reflect my own personal beliefs and values as a teacher." As participants continued to revise and refine their work, they felt more motivated by the desire to reflect their teaching philosophy.

Although at the beginning of the e-portfolio development process the teachers would like to know exactly how their e-portfolio should look as if the contents were set in stone they eventually got accustomed to the unpredictable nature of this e-portfolio development process. After the initial evaluation of their e-portfolios participants were told that they should think about the portfolio as an ongoing process as well as revise the content frequently via utilizing the flexibility of the digital media.

Conclusion

This research suggests that e-portfolios may be a valuable tool for teachers' ongoing professional development which is a dynamic and multidimensional process rather than a transmission of knowledge from one generation to the next.

Being versatile teaching and learning tools e-portfolios were utilized at TVO to showcase the professional skills of the teachers. Versatile means that e-portfolio has been used as a technological solution that delivered some major outcomes in making teachers develop both a competitive advantage over their colleagues and reflective lifelong learning skills. Although at the beginning of the development process, there was a resistance from teachers against this new digital media they eventually started to view it as expressing their authenticity. Depending on their level of technology literacy, their medium of expression ranged from

PowerPoint presentation to videos of their classroom sessions. By viewing each others' e-portfolios the teachers also got motivated about learning how to embed these different mediums within their websites. As a result, their web publishing skills increased as well.

Moreover, it is the researcher's belief that by getting accustomed to the use of e-portfolios educators may be also more wiling to teach their students to utilize the Web both as a place for formal learning and to communicate effectively with professional and social audiences later on throughout their professional careers.

In the case of TVO, a full-scale implementation of e-portfolios has not been possible, yet at least a culture of digital documentation has been fostered by encouraging teachers to practice developing simple websites, or storing their content online as Siemens (2004) asserts.

Despite the positive results of this small-scale research study certain questions need to be answered. To begin with, due to the fact that the participant size was small it would be challenging to know how to use the e-portfolios for larger programs since it would require an immense amount of time for interaction between the teachers and related staff as well as resources. Besides, the potential of e-portfolios to further advance the careers of teachers as they receive accreditation in their work should be further investigated.

Finally, the extent to which the flexibility and freedom in e-portfolio design is possible at the earlier development stages needs any further investigation.

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