

# ePortfolio system for post gradual courses in teacher education

Peter Großböck

University College of Teacher Education in Lower Austria, Baden

**Abstract**—In this article I want to describe the way I use Mahara for our post gradual master studies on University College of Teacher Education in Lower Austria. This system shows a simple possibility to use the ePortfolio software Mahara without any other software such as Moodle for instance. As a consequence our teacher students don't have to learn and use the basic technical functions of a second or third software which is important for us because the students are on very different computer skills. This system contains three parts: the course-ePortfolio, the learning platform and the personal learner's ePortfolio. The first part, the course-ePortfolio, contains all basic information to the content of the course, the modules, the curricula and the date and place of seminars in the course. For the second part we use the group functions to create a learning platform for the course. Administrators manage the members of the group and their roles. Members, tutors and administrators can easily work together with "normal" group members in forums, have got a system for their file management and other possibilities to collaborate. The centrepiece of this system definitely is the third part, the personal learner's ePortfolio, in which the teacher students can show their learning progress and personal interests. Aware of the fact that all of those students that are working with this system are becoming mentors for young teachers in future, self-reflection in a learner's diary (blog), collaboration and creating a learning community is a very important part in their personal ePortfolios.

## INTRODUCTION

Since many years Blended Learning is used in courses of post gradual adult education. So for instance Blended Learning is used at Austrian University Colleges especially in teacher education and at Danube-University in Krems, Austria (Baumgartner, Himpl, & Zauchner, 2009). Normally platforms like Moodle and Mahara are used together to organize, communicate, discuss and to hand in learning products (Himpl, 2010). Moodle is often used as a kind of main platform and Mahara in for portfolio work and the assessment, because students include their learning progress as a blog or learner's diary into their portfolio views and their learning products (Baumgartner & Himpl-Gutermann, 2010). In this article a system is shown that you don't necessarily need more than one platform by using Mahara as a single solution.

## THE COURSE-EPORTFOLIO

The course-ePortfolio consists of views that are made by the course management and leads students and tutors through the whole process of learning. On the main view which can be compared to a wrapper of a paperbased portfolio the students can see the structure, the parts and the single modules of the course including workload and ECTS. The leading team of the course is introduced, a possibility to get in contact with those

people is given and the curriculum can be downloaded there. This view is a central base of information for students and tutors. Additionally you can find a view for each module in this course and views that give information about the online-learning in each module:

a) The module views give organizational and content information about the modules. A description of the content, the goals and an introduction of the consultants can be found here. Last but not least there is a precise plan of date and time of meetings and the phases of online learning. Presentations and documents can also be shared here.

b) The views of online learning contain a detailed work order and the documents the students need for it.

## THE LEARNING PLATFORM

Students and consultants are added as members in the Mahara group. Administrators can give and change roles of the members. Forums can be made for discussing literature or newspaper articles for instance. One forum can be used as a general forum for the course. All students can start discussions if they want to. The group function of Mahara also allows using a file storage together, but always think of the rights students have. Students who are allowed to upload files can also unintentionally delete files. In this file storage students can upload their personal learning products for an online learning activity.

The students can also create ePortfolio views in collaboration which remind of a wiki. At the end of a course a collection of those views can be made easily. That can be used for presentation and for personal knowledge management (Buzinkay, 2008). For communication a mail system is integrated.

## THE PERSONAL LEARNER'S EPORTFOLIO

Basically ePortfolios are digital collections in the web in which a learning progress can be shown. An individual process of development of the learners through self-reflection, content and tasks deepens the learning outcome (Bisovsky & Schaffert, 2009). The thought of self directed and individual learning which is based in paperbased portfolios as well is also included in ePortfolios and additionally offers digital possibilities in embedding pictures, videos, mp3s or RSS-newsfeeds. To all artefacts feedback can be given by other group members. That's how a community learning process can be started (Baumgartner, 2005).

All above ePortfolios serve for representation of skills, experiences, achieved milestones, for a planning of goals, presenting learning progress and findings, the written reflection, the collection of additional information on specific

areas, to communicate with teachers and peers and for assessment (Buzinkay, 2010, S. 2).

In this concrete course a development portfolio is created that can and shall be changed into a presentation portfolio at the end of the course (Himpsl-Gutermann & Bauer, 2011, S. 26).

#### A. Reflection in ePortfolios

To meet those challenges that come along with our rapidly advancing society, the ability of critical reflection is a key skill for lifelong learning. Reflection itself is seen as a form of thinking that takes place, when a problem occurs in the learning process. When reflection takes place, the problem should be viewed from different angles to find new aspects and approaches. When working with ePortfolios, in which individual and self-directed learning are in the foreground, reflection can enable a change of perspective of the learner. Attention is directed at a higher level - at one's own cognitive processes. On this meta-cognitive level "reflecting-in-action", reflecting on concrete problems in the labour process, and "reflecting-on-action," reflecting on their own learning, takes place. "Reflecting-on-action" is seen as a review of their own learning activities. Through detailed analysis of past and present learning activities conclusions can be drawn for future learning (Himpsl-Gutermann, 2012).

Teachers are often exposed to strong temporal and psychological pressure in their first assignment. For this reason critical reflection of one's own patterns of action in this very formative period could probably be missed out. Young teachers run the risk of internalizing actions that are not or just little practical in an unreflected way. If this happens they will later find it difficult to refrain from these habits (Herrmann & Hertrampf, 2000). Mentors could support young teachers in the prevention of internalization of inappropriate behaviour patterns by encouraging them to reflect and by accompanying them in their reflective processes.

Those self-reflections seem to be important for all phases of teacher education training. Students generally should be able and willing to question and develop their beliefs concerning knowledge and learning. Otherwise their beliefs could also turn out to be a hindrance (Himpsl-Gutermann, 2012). This reinforces the argument, that reflection is of essential importance not only for a self-directed process of lifelong learning, but also for basic teacher education and induction of teachers.

By writing reflective reviews about their own learning progress, for example in a cover letter or a conclusion, the teachers would reflect on the creation of learning products like written documents and think of the resources they used, of any wrong ways, criticism of the task or comments on an eventual teamwork. Such contributions are in the nature of "reflecting-on-action". Entries in learning journals or diaries on the other hand are usually "reflecting-in-action" and in most cases short reports on the status of learning difficulties, motivation or the state of mind. Also mixed forms of both types can occur (Himpsl-Gutermann, 2012).

In addition to the above mentioned reflections, reflections on the planning of further learning can be integrated in the

ePortfolios. In times of basic education this could be forced and promoted by the seminar leaders or tutors. During the induction phase of teachers that would be up to the mentors to lead and focus the young teachers to self-reflection on the future of their own learning. For the processes of teacher training and lifelong learning this would be of great importance, too. This could bring clearness about their personal future career priorities. Additionally these own individual ideas shall be set in accordance with school administration and the development plan of the educational management.

Aware of the fact that in all phases of teacher education many ePortfolio views could be created it would be of great importance, that correlations between different educational phases, long term changes and developments and of teachers are emphasized. As a consequence it would be relevant to consciously create stops in the process of teacher education for reflecting and reporting about personal development, further expectations and goals. Beside a cover letter at the time of study entry, the end of the introduction phase (S.T.E.P.-phase), the end of basic teacher education or the end of the induction phase would be good occasions to stop and reflect about this particular period of time and to give an outlook on future goals. Cross-references and linkages between some ePortfolio views can be used to highlight thematic relationships and connections and to present the personal development of the students over a longer educational period (Himpsl-Gutermann, 2012).

The structural model of Himpsl-Gutermann illustrates the role of reflection in learning with ePortfolios. It shows the basic structure of ePortfolios in three layers. This model consists of the three layers Products of Learning, Process of Learning and Representation of Learning (see Figure 1).

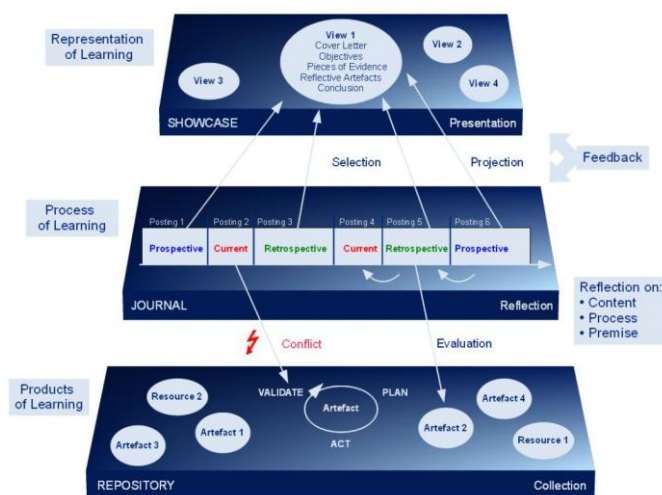


Figure 1. 3-layer-structure of ePortfolios. (Himpsl-Gutermann 2012, p.239)

For Himpsl-Gutermann (2012) the process of reflection in ePortfolios takes place in the middle layer, which he calls "Process of Learning". In the lowest layer, the so-called "Products of Learning", artefacts and used resources are integrated in a repository. That is a storage where artefacts and

learning outcomes can be saved and collected. These artefacts are learning outcomes which are created in individual learning activities of learners. The lowest level can be compared to the step "Collection" in the process components of ePortfolios by Häcker (2004). The layer "Process of Learning" includes planning, monitoring and control of own learning and self-evaluation. It corresponds to a learning journal or a learning diary, in which reflective postings, mostly in a written way, are drawn up in chronological order. Depending on temporal alignment these postings can be classified in present, retrospective and prospective. In this sense current reflections normally correspond with "reflecting-in-action", retrospective are "reflecting-on-action". Prospective reflections are directed into the future in formulating planning, expectations and hopes for the upcoming learning process. Reflections can deal with the content using the question word "what?", with the process using "how?" and the premise using the question "why?".

At the beginning of the process of ePortfolio work, a forward looking preview of own expectations, interests and goals shall be written. After that learning and additionally the writing of entries in the learning diary starts. If disturbances occur in the learning process reflective artefacts about current problems shall be created. However, this requires the willingness of students to honest self-assessment with reflections on the "what?", the "how?", and eventually also on the "why?". However, the written formulation of the problem can lead to a solution or a new idea for a solution. Otherwise the students can ask for help from peers or tutors. If learners receive appropriate feedback, the problem can be solved. When learning products are completed, retrospective reflections are written by the authors. In these contributions, the reasons for the selection of artefacts in the ePortfolio views are added and eventually a self-assessment on the quality of the work. In the following learning period current and retrospective reflections can alternate. Additionally, forward-looking prospective postings can be written, for example when - after having received feedback from a peer or a tutor - changes in the learning product are planned. All these reflective postings shall be linked to the corresponding artefacts and stored in the learning diary. These postings are to be seen as artefacts themselves and are called reflective artefacts. At the highest level of the reflective work in learning with ePortfolios, which is called "Representation of Learning", all artefacts that are selected by the author of the ePortfolio view are presented. This serves as proof of skills acquired in a particular area. Now the ePortfolio view shows a collection of artefacts and reflective artefacts. In these reflective artefacts self-assessment of the students is included, in which they have a critical eye on the quality of their learning products, the learning curve and the progress they made in learning. There is also the possibility that peers or teachers evaluate the work of teachers or bring suggestions for improvement. Additionally the views that represent the learning progress of the students can be taken as a basis to assess the students' work.

#### **B. Content and structure of this development portfolio**

In the following a structure of ePortfolios is introduced. The **profile view** is a site to welcome the readers, a wrapper. If

peers or teachers want to have a look at the ePortfolio they always start at this page. That's the reason why the students also should introduce themselves there shortly. They come to the profile view using the search functions or the management of members in the group.

In the view **My Motivation For The Course** the students shall reflect about their previous experiences concerning the course:

- Why I am interested in this training?*
- What knowledge do I have on that topic?*
- What previous experience I have already gained?*

On the other hand reflections on personal expectations and goals concerning the course shall be made:

- What are your expectations in terms of content of the course?*
- What about my development of knowledge?*
- What do I want to do with the new knowledge after the course?*
- How important is the function of the learning group for me?*
- What short-term and long-term goals do I have?*

The students shall create **a view for each module**. There can be twenty or even three. That shall be in each view:

- Short description of the seminar and the topic.
- Cover Letter: What are my expectations before the module or the seminar?
- Reflection about personal expectations and goals concerning the seminar.
- Reflection about the seminar, the content and the online learning activities:
  - What about my expectations before?*
  - Have I come closer to my goals?*
  - Was I satisfied with seminar and content?*
  - What about the online tasks in this module?*
  - What were the peer group activities like?*
  - What did I learn?*
  - Description of the online tasks.*
  - Description of the activities of the learning community.*
- Learning products (e.g. word-documents, pictures, ...) out of online learning activities.
- Conclusion:
  - What learning progress did I have?*

After reaching milestones written self-reflections concerning the whole learning phase shall be added to a view called **My Resumé**. Such milestones can be the end of a study section for instance. Those questions could be relevant:

- What about my expectations?*
- Have I come closer to my goals?*
- Was I satisfied with seminar and content?*
- What does my future look like?* (Groißböck 2013:88–91)

## REFERENCES

- Baumgartner, P. (2005). Eine neue Lernkultur entwickeln: Kompetenzbasierte Ausbildung mit Blogs und EPortfolios.  
[http://www.peter.baumgartner.name/material/article/eportfolio\\_und\\_weblog.pdf](http://www.peter.baumgartner.name/material/article/eportfolio_und_weblog.pdf)
- Baumgartner, P., Himpsl, K., & Zauchner, S. (2009). Einsatz von EPortfolios an (österreichischen) Hochschulen: Zusammenfassung - Teil I des BMWF-Abschlussberichts "EPortfolio an Hochschulen": GZ 51.700/0064-VII/10/2006. Forschungsbericht. Krems: Department für Interaktive Medien und Bildungstechnologien, Donau Universität Krems.  
<http://www.peter.baumgartner.name/schriften/publications-de/schriften/publications-de/pdfs/ePortfolio-projekt-zusammenfassung.pdf>
- Baumgartner, P., & Himpsl-Gutermann, K. (2010). Implementierungsstrategien für EPortfolios an (österreichischen) Hochschulen. In T. Meyer, K. Mayrberger, S. Münte-Goussar, & C. Schwalbe (Hrsg.), Kontrolle und Selbstkontrolle: Zur Ambivalenz von ePortfolios in Bildungsprozessen (1. Aufl., S. 203–224). Vs Verlag.
- Bisovsky, G., & Schaffert, S. (2009, Januar 14). Lehren und Lernen mit dem EPortfolio – eine Herausforderung für die Professionalisierung der Erwachsenenbildner/innen. Deutsches Institut für Erwachsenenbildung Leibniz-Zentrum für Lebenslanges Lernen. <http://www.die-bonn.de/doks/bisovsky0901.pdf>
- Buzinkay, M. (2008). EPortfolios - Schatzkisten für persönliches Know-how. <http://www.buzinkay.net/texte/eportfolio-wissensmanagement.pdf>
- Buzinkay, M. (2010). ePortfolio & Identität - Praxis 2010. <http://www.buzinkay.net/texte/ePortfolio-eBook.pdf>
- Groißböck, P. (2013). ePortfolios in der LehrerInnenbildung: Einsatzmöglichkeiten in der (österreichischen) PädagogInnenbildung. AV Akademikerverlag.
- Häcker, T. (2007). Portfolio: ein Entwicklungsinstrument für selbstbestimmtes Lernen: Eine explorative Studie zur Arbeit mit Portfolios in der Sekundarstufe I (3., unveränderte Auflage.). Schneider Verlag Hohengehren.
- Himpsl, K. (2010). EPortfolio-Konzept im Lehrgang eEducation4. <http://www.mahara.at/artefact/file/download.php?file=123995&view=16105>
- Himpsl-Gutermann, K. (2012, Jänner). EPortfolios in der universitären Weiterbildung - Studierende im Spannungsfeld von Reflexivem Lernen und Digital Career Identity. Alpen-Adria-Universität Klagenfurt, Wien.
- Himpsl-Gutermann, K., & Bauer, R. (2011). Kaleidoskope des Lernens - EPortfolios in der Aus- und Weiterbildung von (österreichischen) Lehrerinnen und Lehrern. Zeitschrift für E-Learning, Lernkultur und Bildungstechnologie, (3/2011 - 6.Jahrgang), 20–36.