Developing Technical e-Portfolio Construction Process

Harri Hämäläinen, Jouni Ikonen and Jari Porras
Lappeenranta University of Technology
P.O. Box 20, FIN-53851 Lappeenranta, Finland
Firstname.Lastname@lut.fi

Abstract

The role of portfolios has lately become more important in universities as a part of learning and professional growth. We believe that successful adoption of e-portfolios require two fundamental issues. Firstly, valuable information is created during the courses. Importing this information to the portfolio from various sources and describing it with metadata should also be made as simple as possible to ease the maintenance and motivating the students. Secondly, portfolio has to be well-organized. Organizing may be completed in various ways and for varying needs, but a good starting point during the creation is to follow students’ personal study plans and defined structure. Visible structure gives also better chances for successful representation or re-organizing of existing portfolio. In addition to this, bringing course pre-requisites and tacit information as a part of portfolios can deepen the presentation of provided information and description of personal knowledge.

1. Introduction

In the beginning of their studies many university students do not have a clear picture what they are going to study and what they will specialize for. Universities set certain rules that must be followed, but there are still lots of choices to be made to form appropriate study blocks. Freedom and responsibility to make the choices in the early stages may seem confusing and naturally the choices and goals are sharpened step by step. To reduce the required time for graduation, universities have started to pay extra attention to the personal study planning, containing an estimation of schedule and the courses to be completed. Even if these plans are adjustable and change time to time, this forces students to think and plan their future goals from professional point of view.

At the time of graduation transcript of records and certificates provide the evidence that a person has completed his or her studies in a certain level, but those may not necessarily demonstrate what actually has been done and how. Nevertheless, employers are more concerned about what actually has been learnt. People have to be able to describe, what they know and how experienced they are in required skills.

Portfolios have been used for a while as a collection to demonstrate the personal skills and information that has been learnt. The ability to maintain digital portfolios opens new possibilities for the use of portfolios in different professions. Various tools and learning environments are probably used in courses to produce and collect information and to complete the given tasks. The role of portfolio should not be just collecting this information but also representing, describing and reflecting it to personal goals and needs.

Our research question is if the students can be helped and motivated to pay more attention for the process of creating their personal portfolios by providing technological solutions. We believe that there are a couple of requirements that need to be filled to help the students to build more competitive portfolios voluntarily: 1) providing sufficient platform that enables information description and organization and is not only linked with external applications but also the systems that are used in university for different needs, 2) supporting external internet based tools, that students are using in their everyday life, 3) providing more valuable information about the studies and unique courses to ease the selection of courses, and 4) guiding the students to create better portfolios by finding out the needs and expectations of the industry more deeply.

2. The process of constructing e-portfolio

When constructing a personal portfolio, effective management, organization and information binding are the core requirements. Personal study plans and categorization based on the study structure can be used as a basis to help the creation. These narrow study plans evolve towards realization over the time. This information also provides the student a tool to link the
learned topics and courses to each other thus forming a manageable entity of the learning outcomes.

Personal learning environments (PLE) can be described as environments of a new generation. This term was first introduced in the year 2004 [1]. When Wilson published his conceptual model during 2005 for a new type of system called “VLE of the future” [2], the time for the personal learning environments begun [3]. Whereas virtual learning environments (VLE) provide a closed system with selected internal tools, PLEs’ goal is to integrate external applications together. The model presents a new system as an integration point where the other, often web-based, applications are connected into.

As the road of learning environments has been heading from organization centric systems towards more user-centric solutions as a part of Web 2.0, the same type of development can be assumed to happen with e-portfolio tools in the future. The information gathered from different tools and learning environments can be used to collect and link the learning outcomes to the realization of studies. Based on Zubizarreta [4], portfolio should contain three fundamental components: documentation, reflection and collaboration. Zhang et al. [5] discuss about the potential benefits of integrating Web 2.0 services into e-portfolio systems. One of the issues they strongly point out is the group collaboration.

In Figure 1 we present the idea of the e-portfolio development and construction process and the trend from organization centric approach towards more user centric applications. In our opinion, e-portfolio is not just an unconnected or separate document or pile of information but directly related to the tools and the information that was born during the learning process. Information technology provides an opportunity to integrate these applications to each other, constituting a larger entity of the information.

The role and need for e-portfolio is probably even more important after the graduation. Therefore there is a need for a solution which can be used later on. There could be at least three possibilities to solve this problem: 1) e-portfolios are not maintained with university applications but the responsibility is left for the students, 2) universities provide e-portfolio tools for their students and alumni, or 3) universities provide tools only for their students when e-portfolios have to be exported from the platform before graduation. This is to be considered, since universities are probably willing to provide the tool for their students only.

3. Conclusion

We believe that producing a competitive portfolio requires not only the open-ended study plans as a basis but using narrow, organized study plans as a base the organization and manageability can be made more efficient. This also empowers the creation of different views from the e-portfolio for varying needs rapidly. For reflection the information of open-ended study plans plays an important role. When creating a representational view of personal portfolio, the core is the produced information but the role of metadata that has been produced on a side with the actual information is valuable and often a requirement for efficient searching, auto-organizing and partial sharing. Each of the presented applications and phases has an important role while forming a successful e-portfolio.

4. References


