

COMPETENCY-BASED EDUCATION WITH WEBLOGS AND E-PORTFOLIOS: A CHALLENGE FOR DEVELOPING A NEW LEARNING CULTURE

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***Abstract.** This paper draws on some theoretical considerations of the learning process. In addition to abstract knowledge and practical skills we need abilities and competencies on a meta-level. Especially the capability to control the own learning process and to develop the aptitude of an autonomous learner gains increasing importance. The paper claims that a combination of Weblogs and ePortfolios provides an excellent tool to build up these educational requirements.*

1. Introduction

The process of knowledge acquisition is faced with a radical change. This includes not only the quantity of processing knowledge but also selection, assessment, integration and especially transformation of a huge amount of data into applicable knowledge and skilled performance. The potential of knowledge acquisition is enlarged and radically restructured by the Internet. With the Internet information may not only be processed very fast and in an unlimited way but can also be transformed through participation and interaction into relevant and usable competencies.

The ability of knowledge management [1] or knowledge work [2, 3, 4] cannot only be delegated just to the scientific community. The importance of mastering and critical reflection on these new challenges will grow and convert to a strategic competence in our modern society. Therefore the acquisition of this crucial ability has to become a vital part of our educational system.

2. The gap between knowledge and competence

Even in the daily routine information has to be extracted, processed and transformed from many different sources. “Wicked Problems” [5] cannot be solved through know method and predefined procedures. It is this capability to

identify, to define or – as constructivists would say – to construct problems out of a generic situation which has to be integrated in our educational settings.

Knowledge work is neither an art, which cannot be taught or learned nor a collection of rules and procedures, which just have to be applied. I assume that the difference put forward in the cognitive science between static (declarative) and dynamic (procedural) knowledge does not solve the above problem. Even procedural knowledge (for instance to know how something is done) is just a special kind of theoretical knowledge and does not guarantee the success of the real performance. (I know how to change a tire but I cannot do it, for instance because I'm not strong enough.)

From my perspective the problem consists of the fact that knowledge is simply regarded as a *product* you do own or you do not own. As a result of this wrong conceptualization the *process* of knowledge acquisition and its transformation into physical capabilities as well as the conversion of inert knowledge [6, 7, 8] into practically usable knowledge or skills is excluded from the educational objective.

3. Meta-language for training process

My core thesis is that we need to develop a special meta-language, which effectively supports the training of competencies and capabilities. In the area of the *progression* of scientific thinking, of the knowledge acquisition *procedure* and the control of the own learning *process* we lack an important tool – a training language supporting teaching activities [9].

The predominant teaching culture is still based on the evaluation and assessment of the individually created or generated products (like an essay, a report, a drawing, a computer program etc.) and not on the observation and support of the construction process, the becoming of the product. For this reason it is rather difficult to train the learning process itself. The dilemma is comparable to a (bad) soccer trainer who only evaluates the results of a match (won = good, lost = bad) without giving some hints about the process of playing.

An educationally sound integration of Weblogs and ePortfolio could be a very helpful step in the development of this kind of training language.

4. Weblogs and ePortfolios as a training language

Weblogs are defined as frequently updated websites where the entries – called posts – have a timestamp and are presented in a reverse chronological order with the most recent posts at the top of the page [10]. This has many educational ramifications [11]:

1. A frequently updated website automatically means that it consists of many small parts. Often a post consists of just a few lines. I call this kind of content “micro content”. Small particles of content consist just of one idea and are therefore more focused than long elaborated articles with many interrelated arguments, side tracks and digressions. This is very helpful for a centered and concentrated discussion process: Small chunks of knowledge are easier to discuss and de- or reconstruct especially on a peer-to-peer basis.
2. Normally it is very difficult to refer to specific ideas or lines of thought via the web. There is no way to refer specifically to a certain text passage of a longer web page because the presentation differs for the readers, depending on the width of the browser window, screen resolution and preferred setting like font size and the like. With the special feature of “PermaLink” small text particles characteristic for Weblogs can be addressed and referenced. These PermaLinks are generated automatically and have an URL, which does not change (= permanent Link) even if the Weblog author is reorganizing his or her Weblog.
3. A more philosophical argument why small particles of content are more suitable for a discussion lies in the fact that elaborated thoughts or theories have the intrinsic quality to immunize their arguments against critiques from the outside. As Wittgenstein claims in “On Certainty” [12] the truth of certain propositions is defined in their relation to other internal propositions of the theory and not in the proof of their validity in the external world. It is a system of relations, a kind of worldview, where the different arguments support each other. These sophisticated lines of arguments can’t be destroyed by one or two counter arguments. One has to develop an alternative worldview and oppose it to the theory in question. – And this is much more difficult than to discuss micro content.
4. Another very important feature related to the chronological order and micro content is the possibility to follow the knowledge building process of the Weblog author. Posting many personal comments with a timestamp on a long term basis builds up some kind of diary. The result is a chronological ordered virtual notebook where one can explore and see the personal knowledge history of the Weblog author.
5. Weblogs are especially useful for creating a virtual discussion context by means of the TrackBack feature [13, 14]. Essentially a TrackBack is a

notification between Weblogs. Clicking on the TrackBack link of the a Weblog opens a window with links to other Weblogs. The important thing now is that these links (including the short excerpts) are not generated by the author of the Weblog but are generated automatically. Another Weblog author mentions, elaborates or criticizes a post of the Weblog of author A in her Weblog B. Weblogs are able to automate this notification process. They send “pings”, e.g. a small message from one server to the other server and include the link from the originated Weblog B into Weblog A. It is a kind of notification from author B saying to author A: “This is something you may be interested in.” The TrackBack feature is creating a virtual discussion context: Author A becomes aware that other authors are referring to his posts.

6. In addition to micro content the author could also present and critically discuss some of the work (s)he has done over the last years. These products are special examples of products of the learning process presented as documents or other kind of files. In combination with a continuing critical discussion in the Weblog this leads to an intriguing result for the Weblog author himself/herself: It promotes meta-cognition, supports a meta view on the personal learning process.

5. Summary

Instead of delivering just one isolated work or argument the author is constructing incidentally and casually a web of interrelated thoughts *and* products grounded in his or her personal existence. Weblogs do not only provide insights to the intrinsic motivation of the persons, their preoccupations, anxieties, and hopes, but also to their learning process and its critical assessment by the learner itself.

In combination with an ePortfolio approach Weblogs could be a first step in developing a meta language for the learning process. Features like Microcontent, PermaLinks and TrackBack are potentially able to establish a world wide virtual discussion context on the critical assessment of the learning process of the Weblog author and supports his or her own development to become an autonomous learner.

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