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# FACILITATING ONLINE LEARNING IN PERSONAL PUBLISHING ENVIRONMENTS

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## **Personal publishing in e-learning**

Changes in production, distribution and use of online media lead to new social structures which favour students who develop strategies to process large amounts of information and its relevance in different contexts. One of the most important skills becomes the ability to reformulate and contextualize information that initially is presented in separate contexts, and reformulate this content when producing new “texts” which accomplish specific communication needs.

Composing, condensing and evaluating different sources of information turns into a fundamental part of media literacy. Personal publishing know from weblogs promise to be a virtual learning environment which facilitate development of such skills, making students able to build knowledge within flexible “communities of practice”.

## ***Changing the conception of literacy***

Our understanding of the term “literacy” is changing with networked media. Today textual literacy must be supplied with diverse skills which are needed in order to handle conditions constituted by new media. One has been talking about “digital literacy” for some years, a term which reflects a notion that it is possible to make a distinction between “digital” and other kinds of media literacy. In contrast to “print culture” this approach has been beneficial, but converging new media technologies have made this previous distinction between “digital” and other media obsolete. As long as the production and/or consumption of all media are heavily influenced by digital technology there is no longer a significant difference whether the content is delivered through a digital medium or not.

The skills and knowledge needed in order to take advantage of “new media” is better described as “media literacy”, defined as the “ability to access, analyse, evaluate and communicate information in a variety of forms” (AMLA). A person who is media-literate know the way different media works, he knows how content is produced, the way it is delivered, and the different technologies used in order to access it. Papert and Resnick call these skills “technological fluency” (Resnick 1998) when they describe students’ ability to master all parts of media, not only specific artefacts, but also the social aspects of technology.

It is essential that we understand “media literacy” and “technological fluency” with an awareness of both the consuming and the producing aspects of media technologies. “Fluency” also include the ability to use technology in order to collaborate with others and share knowledge in order to solve problems or out of common interests. Technological fluency is especially important in online, distant learning where the students seldom or never meet face to face with each other or their teachers.

## ***Personal publishing versus large-scale VLEs***

Any online learning environment should be able to scale without disturbing limitations. The overall system (the macro-level) must in some cases be able to handle thousands of users, but on a lower level the task is to serve individuals working in groups (the micro-level) ranging from just a few students up to a couple of hundred. Any social system seems to get serious problems when the number of people in a group exceeds a couple of hundred (Shriky 2003), but these situations will not be discussed here.

Traditional VLEs (Virtual Learning Environments) are made in order to be cost-effective, and they are normally able to scale freely on the “macro-level”. Most systems can handle huge numbers of transactions without severe problems, mostly because of high-end solutions on the server-side.

However, when it comes to performing productive tasks on the “micro-level” scaling can hardly be solved by adding more computational power on the server-side. Most VLEs solve scaling on this level by providing separate tools in order to facilitate different ways of communicating between individuals and in groups. These systems scale by changing the the working-environment in ways which make the students using different tools for different tasks. This may seem sensible, but it is also telling a story about learning environments where the separate parts have limited capabilities when it comes to adapting to changing individual and collective working patterns. In order to finish an assignment the students may have to change tools in the middle of a productive process, facing interruptions in the group’s work-flow.

Students with highly developed “technological fluency” may adapt to these different modes of communication, accessing webpages, using email, discussion boards, and instant messaging etc for different purposes. These are important skills, but still quite a few students find this confusing: Things happens too fast and these students consider the changing interfaces to be confusing instead of tools optimised for specific tasks.

In online, distance leaning there may be additional mismatches between different needs. An example: In order to have a discussion-forum working effectively one may want a large group since most students are “lurkers” and do not participate actively in the discussion. On the other hand, large groups are seldom effective when one are going to collaborate. Even when the participants share common interests collaboration is more effective in small groups or “sub-teams” (Kayler 2003), making it easier to develop more personal relationships together with a better understanding of each participants interests and skills.

This is where personal publishing may be presented as a promising approach. There are several different genres of personal publishing, but in this paper the focus is on weblogs. There already exist a large number of solutions which have proven their potential when it comes to the ability to scale from one-to-one communication up to larger groups, all within the same interface. This is possible because personal publishing in general and weblogs in particular, have attributes that facilitate monologue (individual postings), conversation (comments), and additional context (linking).

Weblogs have several features known from traditional personal genres like diaries and journals, reflecting individual interests. Weblogs are also like personal web-pages with some specific technical characteristics and genre features: The “posts” in a weblog normally consists of short texts which often include quite a few hyper-links. Each post is dated and presented on top of the main page, which contains a fixed number of posts, transferring older posts to an archive. A pointer is linked to each post, providing permanent links even after the posts are moved to the archive.

A weblog is updated regularly, normally from several times a day up to a few times a week. From this follows that the posts in a weblog will be of various length, ranging from short notes, often with reference to other web pages, to longer essays with a large number of hypertext references to online sources. This characteristic encourages readers to expect frequent updates which make them visit a weblog on a regular basis, establishing a kind of relationship between the weblog-author and interested readers.

The content of a weblog is usually provided by an individual or a limited group of “senders” who share an interest in one specific topic. Weblogs form an individual basis which exploits one of the most important features of digital media: Communication through hyper-linking. Thus information exchange is possible, a group can establish a knowledge network with close internal connections and simultaneously having open links outwards on the World Wide Web. The technology allows numerous hypertextual connections which may be used to organize different knowledge networks. Even though maintaining a weblog is primarily an individual activity, production is often closely connected to media consumption. Weblogging often become part of collaborative efforts where a number of people contribute in a multitude of ways, and become a community of shared interests.

As soon as the content is published on a weblog it is normally accessible to all readers, but the editor (s) of a weblog is often able to save a post as a draft or as a private note. Most weblog applications also offer commentary functions where readers are given an opportunity to express their opinions on specific posts. Commentaries may be connected directly to a post, or they may be placed in another

weblog. In the latter case the second weblog (the one edited by the person who makes the comment) notifies the first weblog about the related commentary and establish a hyperlink between the post which is commented and the comment. This functionality is called “trackbacks” and “pingbacks” and is implemented in most weblogging-software. This system enables bloggers to establish discussions between separate weblogs without having to write their comments in other people's weblogs. Trackbacks make it easier to develop and trace a collective information network over a period of time, opening new pedagogical potentials.

Trackbacks / pingbacks use the http-protocol in new ways, making it possible to automate the process of creating links from web pages which the users do not have direct editing-access to. These two-way pointers are important in any hypertext system and reflects the idea of “transclusive links”, first described by Ted Nelson when he introduced the term “hypertext” back in the 1960s (Nelson 1999). Nelson's idea was very ambitious; trackbacks and pingbacks is by far a more pragmatic solution – a link between a new post and the post that comments the content in the original post.

### ***Weblogs as “Learning Management”***

Most weblog-systems provide an user friendly writing-environment, personalization and adaptivity which have made weblogs become an effective way of communicating in in self organising groups. Weblogs have characteristics which have made them easy to use whether as a “producer” (writer), a “consumer” (reader) or both.

Blogs are personal and at the same time they may be shared by people outside the private sphere. The personal aspects are important to blogging, distinguishing the genre from other kinds of webpublishing and content management. This duality makes blog-authoring become a mixture between writing for oneself and for others at the same time. In most cases there are a rather limited number of people who read a specific weblog regularly, making it possible to use the blog in order to mediate personal relationships between the author and his readers, and between readers.

Weblog software may be regarded as a lightweight learning content management system. The solution consists of a database which holds text entries and pictures or sound files and video. The systems have an easy editing-interface, and manage the web-publishing by processing the content using a set of pre-defined templates. The templates hold all the formatting and may be manipulated without affecting the weblogs content. In most weblog- systems the weblog-authors also are allowed to define their own categories which make it possible to provide alternative retrieval methods for selected parts of the content.

Most weblogging tools automatically encode the published content in XML-dialects known as RSS and Atom. RSS- and Atom-feeds can be read by news aggregators / RSS-readers which automatically check subscribed feeds for updates. This makes a weblog-reader able to keep up with large number of sites without having to navigate each weblog. As a teacher one may become able to monitor a large number of student-weblogs without having to use a full-sized learning management system.

### ***Building online learning communities***

Jean Lave and Etienne Wenger model for situated learning is a good place to start when designing a virtual learning environment. Their model of situated learning proposes that learning involve a process of engagement in “communities of practice”. They argue that we are involved in a number of such communities, in some of these networks we are core members, in others we are in the periphery (Lave & Wenger 1991).

New, potential members will have to begin their activities in a community of practice in the periphery. This is just like the situation which meets a student when he log on to a virtual learning environment for the first time. The user-experience is caused by the environments design in combination with the social “rules” made by students and teachers through their actual use of the system. Regardless technical or social reasons some areas of the community will feel easier to enter. In these areas individuals may relate to the community as lurkers without having to participate in direct conversation with others. These parts of the community are extremely important because

lurking often is more common than active participation in online conversations (Nonnecke & Preece, 1999). This is not necessarily a bad thing, it only states the fact that neither students nor teachers want, or are supposed to communicate all the time.

Gradually, while they get familiar with the virtual community's conventions, the new members will become more confident and become active participants in the ongoing communication. Thus learning may be understood as participation in social processes, not only an individual acquisition of knowledge. Learning occurs through this process where individual knowledge are changed through socio-cultural practice (Lave & Wenger 1991:29).

Even within communities of practice communication has to begin with individual initiative. One person begins with an idea and decides to make information accessible to others by adding data from a variety of sources to existing information in a new context. Through this contextualizing of information, new knowledge is constructed and shared among the members of the community who may respond and provide additional information, building knowledge individually and as a collective.



Without effective communication there will never be co-operation, making it essential to take into account the community's different levels of knowledge. Some knowledge will always be "personal", unique to one person's experiences and point of view. "Local" knowledge may be shared among a few people who share experiences, as in a community of practice. Global knowledge exist on a more general level, relying on shared understandings and agreements about communication (Shedroff 1999:5 ).

Shared knowledge forms a basis for individual insight and understanding, or "wisdom". In this sense wisdom is understood as a kind of meta-knowledge based on personal thinking and evaluation based on former experiences. Wisdom occurs on the personal level and may not be shared in the same way as knowledge, but wisdom represents an individual starting point for sharing information with others. Information forms the stimulus of an experience while wisdom can be the understanding of the message gained through the experience (Shedroff 1999:5). In this context sharing, and reflecting upon individual experiences become an important part of knowledge-building.

Knowledge is specific to time, place, and relationships within communities of practice formed by personal relationships of trust and confidence. Individuals' ability to use their knowledge is partly dependent on the fact that each member of the community knows what the other members know. From this follows that knowledge always depend on context, both physical and social. In relation to online learning it is important not to restrict learning to information. Students need to develop their own knowledge, through a process of learning that include procedural information, but which they must relate to various contexts (Williams 2003:2).

Knowledge is a synthesis of the how and the why things are done, whereas information only tells how. Knowledge is by definition contextualised, and therefore less abstract than information (Williams 2003:2). One effective way to contextualize information is through production of individual text in an environment which makes collective discussions possible. Weblogs are made for this kind of contextualised knowledge-building, encouraging reformulation, citation, commenting and linking.

Both "communities of practice" and the lessons learned from information design states that when designing a online learning environment it is crucial to accommodate both individual and collective aspects of communication. Too many systems are designed with technical brilliance, but still failing to meet the communicative needs of the novice or without tools which make individuals able to share

information and knowledge in proper contexts. The most successful virtual communities seem to be those which makes their users able to participate on different levels, socializing new users into the community's publishing culture at a pace adapted to each individual. Personal publishing provide an individual basis that allows this kind of collective participation, blurring the borders between production, publishing and consumption (Hoem & Schwebs 2004:3).

### **Conclusions**

Personal publishing promise to offer production flexibility well adapted to online learning resources, organising information in hypertextual networks, where information is added through participatory knowledge-building. This way knowledge may be created and contextualized by emergent relations between members of an online “community of practice”.

In order to transform ideas and information into individual wisdom students will always have to connect new information to existing knowledge. Students will also have different conditions; some adopt information quickly because they are able to take advantage of former knowledge, others need more time. The personal aspects of weblogging are promising in this respect, possibly facilitating more adaptive learning environments than huge VLEs.

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