

## WEB MENTORING: PEER-TO-PEER (P2P)

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### Abstract

A recognizable division appears between students with a comprehensive knowledge of the Web and those that are less certain about its resources. This is where, the teaching innovation *Web Mentoring: Peer-to-Peer* has been developed to help the students to cope better with the demands of media education. Furthermore, this presents the opportunity for master's degree students to begin mentoring undergraduate students. Mentoring sessions have already been carried out successfully in the previous two semesters and are being presented, evaluated and discussed.

### Introduction of the Learning Innovation

The idea for the teaching innovation *Web Mentoring: Peer-to-Peer* is based on two observations that were made in previous semesters at the faculty of Media and Information in the University of Offenburg, concerning the behavior and the interaction of students with web technologies.

- There are some students who have an in-depth knowledge about the latest developments on the Internet and also utilize this in their studies. They blog, use Twitter, utilize the collaborative tools and can organize presentations online with freely accessible software. Furthermore, they use data banks and tutorials from varying platforms. In contrast to this observation, there are students who use these tools in a much more minimalistic manner and appear to only know about some resources of the Web.
- Students often form a group among peers, within which encouraging themselves in their mutually acceptable behavior. This can be clearly seen with regard to the user's behavior on the Web. At one end of the scale are the intensive users, while at the other end are seldom users; both organizing in homogeneous groups. Using one another in the peer group as a model, they emulate and thus amplify the respective media behavior. In some instances, within groups that use the Web intensely, they can disclose and combine constantly new tools and possibilities of utilization. The adverse of this results in the tools of the Web not being prevalent in the peer group. Within this second category, non-users or seldom users form rather rigid patterns of utilization that rarely change.

One can hardly speak of the much-cited Generation Y or the so-called *digital natives* here. It appears rather, as if the digital ditch is not necessarily a question of age or generation, but a competence ditch. One cannot assume the fact that students automatically bring a media competence that is ascribed to them by different future studies (König, 2009).

For some years most students who are coming to university or high school have grown up with digital media, and their everyday personal and student lives are strongly marked by it. As previously stated, it is often unclear as to what standard of digital competence the students really bring and whether this competence is distributed heterogeneously or homogeneously. Furthermore, it is uncertain from where these competencies come from and which kind of digital media and sources of information are really used by students.

Meanwhile, scientific work relies strongly on several computer-based media (searching tools, data banks, tutorials) and communication on the Internet (blogs, Twitter, social media). A basic ability constitutes filing and reflecting of information presented on the Web. How can a socialization of academic work and a reflected use of digital media in this context succeed? In the modern environment scholastic aptitude seems to be a question of digital media literacy.

The Internet plays a central role in nearly all private, cultural, business and scientific areas. It is essential to be able to move competently in the net; furthermore it is increasingly a key ability to be able to participate actively in the society. Not only in educational institutions has this knowledge asserted itself, but also on a political and economic side the importance of digital competence is increasingly stressed. In a report from the BMBF to Media Education, an expert commissioner explained the following: "Digital media requires every individual to steadily grow and change competence, with mediation as a state educational order" (BMBF, 2010, p.5). Also the EU sees need for action in the field of the digital (media) education, stressing in a report to the initiative "Opening up Education":

The EU lacks a critical mass of good quality educational content and applications in specific subjects and multiple languages as well as connected devices for all students and teachers. A new digital divide in the EU, between those who have access to innovative, technology-based education and those who do not, is on the rise as a consequence of this fragmentation of approaches and of markets. (European Commission, 2013, p.2)

### **Web Mentoring: Peer-to-Peer as a Teaching Innovation**

The appearing problem is worked on at the University of Offenburg by the introduction of the teaching innovation *Web Mentoring: Peer-to-Peer*. In addition the possibility is presented for the Master course of studies *Media in Education*, within the scope of seminars and exercises, for the Master students to furnish a mentoring program for bachelor's degree students in the Faculty of Media and Information.

The students should realize the following objectives and competencies:

- Strengthening of the media competency and skills of the bachelor's degree students of the course Media and Information by mentoring. They will receive support with the appropriation of a "clever" use of Web in the study: socialization in scientific work, construction and care of an online reputation.

- Strengthening the competency of master's students in the area of mentoring (possibly a later occupation) and research-based learning (preparation for master's work and eventual academic career).

Another aim can be formulated for research in Media Educational Theory and university didactics:

- Generating knowledge, concepts and material creation, as well as the construction of an accompanying online course to lay the basis for successful stabilization and transferability of the mentoring.

The following considerations are central to the formulation of the innovation.

### **Mentoring**

The title of *Peer-to-Peer Mentoring* is charged with two meanings. On the one hand, the master's students who have, as student tutors, a special affiliation with the bachelor students, carry out the mentoring. The master's students of the course Media in Education are in the second semester and have considerable experience with what concerns practical handling of the Web, as well as the didactic and educational knowledge to carry out the mentoring.

On the other hand the title refers to the different peers involved from the undergraduate students: *common users* and *seldom users* will, in small groups, undertake the program together. Both groups of peers can become acquainted and profit mutually from the others' views. Also, in respect to the peers, the increasing diversity can also broaden the students' perspectives.

Therefore, mentoring is chosen as a concept to make clear that it is a matter of seeing the individual before his/her respective cultural and social background and of not just imposing an overall media use. A leading aim is to investigate the values of the different peer groups and to determine together a clever use of the Web within the study. Hence, as a research position the qualitative social research is chosen (Gücker, 2007).

### **Generating Knowledge and Education through Research**

For the mentoring, required knowledge is built iteratively by two different approaches of the master's students:

- The subject matter on the web and the conditions under those that it can be used, are open for continual change, accordingly the media educational recommendations must change for competent use of the web. Here it is a matter of compiling an overview, of absorbing the present research and of providing from it, materials and didactic considerations for the mentoring.
- It is to be assumed the students have developed quite astonishingly competent interaction patterns for a use of the web. With an open minded researching position this competence should be questioned and reconstructed to find an entrance point in the material pool for the mentoring and an accompanying blog.

### **Method of Delivery**

The mentoring is offered every semester for the bachelor's students (within the course of Media and Information) by master's students (within the course of Media and Education).

In their third semester, the bachelor students view the lecture "Aspects of Person to Computer Interaction." This is a required module in the course Human Computer Interaction." The mentoring is inserted as a part of the lecture accompanying exercises.

The mentors are the master's students of the course of studies Media in Education. The mentoring is carried out in company with the lecture "Reception Oriented Application of Media Education." A part of the lecture covers an introduction to the researching, learning and compiling of draughts for the mentoring.

### **Special Approach of Mentoring**

Students are independently acting beings that make their own patterns in respect to their individual study situations. In the research, this perspective along with other uses and gratifications developing is sped up. Then we will ask with the help of qualitative elevation methods, why the students do not use certain media and which reasons they have for that.

The mentoring is intended to run as follows:

- Identification and getting to know their respective peers.
- Understanding of the use or non-use of the Web. Perhaps there are good reasons not to use the Web. A reasoned and reflected non-use, however, is always better than a naive denial.
- Mentoring of reasons such as technology anxiety, communication anxiety, gender issues, etc.

Gender sensitivity and an open understanding are necessary for essential areas of the mentoring. Therefore, an intensive training of the mentors is planned in cooperation with equality in mind.

### **Development of the Teaching Innovation**

From an educational point of view, equating a lot of use with desired action, and lesser use with deficient action, is short sighted. Any action develops from the perspective of the individual. An approach to media should occur in relation to the position the subject takes.

For example, which reasons could play a role? In web mentoring sensitivity should exist, in particular, for the following points:

- It can lie in the origin of the students. Students from non-graduate households use the Net less and possibly have this form of media competence with less experience.

- It can also lie in the gender. In this case it would be considered whether a cross-gender mentoring or another approach make sense.
- The lifestyle approach and the increasing diversity of the students can also better be suited by the allocation to a peer group learning space.

On the other hand, particularly distinctive and intensive use of the Web may need to be viewed in a technical regard or possibly even a moral-ethical regard. An intensive and at the same time naive use can be injurious by a lack of clarity, or more directly, of negative results. The uses of the Web are also marked by private economic interests of third parties.

### **Implementation of the Teaching Innovation**

The teaching innovation is constantly being adapted and extended. It consists of the mentoring of three successive building phases together, which are repeated each semester (a mentoring cycle):

- The first phase is to obtain bachelor's degree students with access to the topic so that they can develop a sense of it and find potential areas for problems. The mentors meet with them, moderating impulses and attempting to encourage exchange between the different peers.
- In the second phase is the joint development of a specific aid measure for use, even after the mentoring undergraduate students have access.
- An informative evaluation is the third phase of the mentoring cycle.

Supported by specifically chosen media contents that debate net topics, the mentors try to determine initial impulses towards problems found in the first phase. This should inspire the bachelor's degree students to reflect not only upon their own user behavior, but also compare it to other peers' and to question rigid patterns of utilization. Previously used media of the last mentoring units contained, for example, a cutting from the series "The IT Crowd," the TEDX talk "Filter Bubbles" by Eli Pariser, "Map of Online Communities" as well as the "Web Literacy Standard" of Mozilla Project Organisation. On the basis of these media impulses, the mentors present to discussion groups, wherein the undergraduate students argue critically about their own Web use. The deliberate comparison with the patterns of utilization of other peers should lead to the development of an individual definition of one's own digital competence.

In support of James Surowiecki's title *Wisdom of the Crowd* (2004) a platform should be created in the second phase of the mentoring for the exchange of information and uses. This platform becomes a sort of tool box for students, which can be extended by students constantly and which stores this information according to demand, tools required and exchange possibilities. As an inspiration platform the website "Me and My Shadow" from Tactical Tech, a hacker's group from Berlin, was utilized. This website collects clearly formatted information, Plugins and recommendations on the subject of net security and anonymity. Tactical Tech discusses on this site so-called *toolkits*. In principle, the toolkits of "Me and My Shadow" are more than just a link collection on a certain subject. Indeed, this link collection was processed

structurally and provided with short and clear description texts, so that users can select certain uses for themselves and their topical needs fast and without ambiguity. Apart from the clear structuralisation, the toolkit offers the advantage that is influenced by a sort of peer review. Students' own Wordpress blogs were put into the mentoring toolkit collection. This offers the advantage of the constant availability (in comparison to perhaps access limited e-learning).

Every mentoring cycle is accompanied by informative evaluation methods. A steady comparison can be carried out by direct feedback and anonymous questionnaires, between the needs of the bachelor's degree students and the mentoring concept.

### **Formative Evaluation**

Overall, both mentors and students value the teaching innovation as interesting and informative. The mentors see other needs, regarding specific training, to be linked up with online learning. Here all possibilities do not seem to have been yet exhausted, nor possibly perceived. Also on the subject, the mentors appreciate how the content processing is named as an expandable point.

Nevertheless, in the present analyses results of the mentors, it is expressed clearly that the mentoring appears to them as a suitable way for the improvement of web competence. This improvement refers to mentors, and to students. Through the staggered approach, an enlargement and adaptation to other situations is easily possible, such as in other universities and faculties.

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*Medien für Kinder und Jugendliche: Medienpädagogische Konzepte und Perspektiven* (pp.120-132). Bielefeld: GMK.

Surowiecki, J. (2004). *The wisdom of the crowds - Why the many are smarter than the few and how collective wisdom shapes business, economies, societies and nations*. Flushing: Anchor Group Publishing.

Online Resources Used:

The IT-Crowd:

<https://www.youtube.com/watch?v=iDbyYGrswtg>

Map of Online-Communities:

[http://xkcd.com/802\\_large/](http://xkcd.com/802_large/)

Me and my shadow:

<http://myshadow.org>

Wordpress-Blog:

<http://miforum.wordpress.com/>

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