Web 2.0 Deployed: Wikis and Tacit - Female - Knowledge

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The present contribution provides an overview of the Web 2.0 debate and the gender concept. Using the example of Wiki technology, it demonstrates how criteria for success of innovation and equality in the relevant educational and vocational contexts can be materialized.

Web 2.0 in the Gender Context

Since the Web 2.0 conference in 2004 that was initiated by Tim O'Reilly, the term Web 2.0 spooks around the web. The buzz word Web 2.0 is used as a key term for the second growth phase of the internet and represents an easy to use communication idea: information provider and consumers do no longer face each other in an opposite and asymmetric fashion. Rather, the goal is that communication takes place both interactively and in a symmetric way. Working and communicating in a networked fashion is practiced by all participants. In addition, it can partially result in a role-reversal. Users and designers of a Web 2.0 application can change roles. Contents are no longer generated centrally, but can also be developed in a decentralized location. Web pages are not uploaded statically, but are dynamically generated. What matters is not one technology, but the merging of various technologies. Hence, it is proclaimed that closed and restricitve systems are replaced by participation and collaboration. A crucial prerequisite for the creative use of information technologies in the context of education and the work environment is that users feel comfortable with the technology. In Web 2.0 the fundamental idea of the web gains in importance once again: user friendliness, standardization, participation, continuing usefulness and as a side-effect, economic viability.

With regard to these characteristics, pronounced parallels to gender research in the natural and engineering sciences can be drawn. Since the 90's, openness, user-friendliness, participatory design were emphasized in those domains, especially relating to technical learning and work contexts (see Schelhowe, 2001). While in gender mainstreaming strategies in order to achieve gender democracy and participation of both genders are to be realized by means of catalogues or guidelines, within the scientific community -in contrast - the technology-gender discourse focuses on participation and de/construction (see Wiesner, 2004). Whether strategy or research, it has become evident that the gender difference model which regards gender only as a polarizing conception is of limited value. It is therefore not surprising that approaches that emphasize how gender is expressed and which views gender both in terms of biology and social behavior that can be

expressed depending on the environment, rather than as a fixed fact, are gaining in importance (Butler, 1995; Mauss, 2000).

Until the 90s and beyond, proximity to technology was almost exclusively associated with masculinity and distance to technology with femininity. This dualistic conception was guiding the research in many institutions. Currently, new perspectives have emerged that no longer correspond with the prior conceptions. In this context web.2.0 can be viewed as a "passage point" of the technology-gender-discourse. It is notably female users who have embraced Web 2.0. The demarcation line between proximity to technology and distance to technology is therefore less linked to gender, than to cultural and habitual factors. Cell phones, for example, do not foster communication alone, but rather represent "technical actors" that induce the users to grapple with technical details in order to master emerging communication needs (for a detailed description on the concept of technology as a didactic agent" see Wiesner-Steiner, Wiesner & Schelhowe, 2006)

Web 2.0 creates a similar effect. WYSIWYG "What you see is what you get" – becomes the crucial experience and simultaneously becomes the jump-start for an increased curiosity in technology. This participating effect is not only limited to the learning context and the daily lives of many youth, but can also contribute to innovations in higher education and corporate environments.

(Female) Tacit Knowledge

In many corporations, departments of public administration, and other organizations, communication, information and knowledge management systems were developed with the intention of making operating processes transparent and easy to use for personnel. It entails the transfer of information and data, which is the basis for acquiring knowledge, and to communicate this newly acquired knowledge to all participants in a transparent fashion. Staff becomes an essential knowledge carrier. Should a team member leave or be transferred, the entire accumulated knowledge of the departing person would get lost. Knowledge occurs when human beings merge data and information into a meaningful connection. Many routines of operating processes contain aspects of integrated tacit knowledge (Polanyi, 1985). Tacit knowledge can be defined as knowledge that consists of the applied competency of a person which finds its expression within a given context. Implicit knowledge is therefore difficult to formulate and only becomes visible when tangible actions are required. At this point knowledge management is employed and the attempt is being made to transform implicit to explicit knowledge (Prost, Raub & Rohmhardt, 2003). In spite of the increased relevancy of knowledge management, the question arises as to why knowledge management is rarely used. Forty per cent of the knowledge of personnel can be characterized as informal knowledge that is linked to a specific person. Nevertheless, only 5 – 7% of companies possess structures and instruments like knowledge database and yellow pages to internal and external experts that are independent of a given employee (see Tsakiridou, 2005, 28; Nohr, 2000).

Principally the question arises why individual employees should pass on their exclusive knowledge to other individuals or systems, considering that the immediate benefit to them is entirely abstract and only corresponds with the generally stated goals of a given company or organization. Of crucial importance is an atmosphere of mutual trust between employees and the company. One can therefore assume that the road to a successful transformation from implicit to explicit knowledge can only be materialized in companies that are "capable of learning" (Modrov-Thiel, 1999). In these companies staff is continuously educated, and in exchange, staff also receives responsibilities and scope for design for and within the company. Mutual trust and structures for recognition of accomplishments are essential factors for the successful introduction of knowledge management systems.

However, the informal remains largely invisible and vice versa. While within the domain of knowledge management, knowledge and their carrier are treated independent of sex, gender studies in the context of society and work analyze the actors within the dimension of gender relations in an integrated fashion.

3Wikis and Making Implicit Work Visible

At the core of the debate of the invisibility of women's work is the reproductive family contribution that is by and large being carried out by women (see Aulenbacher, Funder, Jacobsen & Voker, 2007). It is the view of authors of the present paper that the thesis of the "invisible work by women" can also be applied to gainful employment. The occupational activities of women in public administration, organizations and companies are characterized by assistance and organizational tasks that are often invisible and lack adequate recognition. This is conspicuous in fields of work within economic sciences: Carl, Maier and Schmidt (2008) have provided evidence that women with identical education in economic sciences are frequently utilized for their "tacit skills". Given equal qualification to those of men, women are frequently employed in positions requiring fewer qualifications and also earn less. Women's "tacit skills" are utilized, but not honored financially. In addition, these tasks are connotatively viewed as female in nature, are intransparent and are only rarely included in the knowledge management systems, project reports and publications of a given company or organization. In the case of both wage-earning and parenting mothers a double invisibility of women's work can be recognized: on one side, in the occupational domain, they are subject to a difference in wages with fewer opportunities for advancement and on the other side, they also receive inadequate recognition for their work in the domestic arena (see Weber & Schaeffer-Hegel, 2000; Biesecker, Elenser ,Grenzdörfer & Holger, 1996).

Therefore, there is a tendency for women's work to consist of assisting, organizational and coordinating activities, which are all part of invisible work. This indirect depreciation of women's work corresponds to a dualistic, gender-linked hierarchical conception of work and society.

As hidden (invisible) work within a Wiki becomes transparent, the authors regard Wikis as a means for making such invisible work clearly retraceable. For example, using the tool of comparing versions of a project or document, every footnote and every thought can be linked to a given author. This feature allows not only for "free-riders" to be easily exposed, but also allows for thoughts and propositions for structuring to become transparent in their evolution. It also becomes feasible to make the work of inconspicuous persons and of those making the "legwork" visible. In this respect, both women and men whose efforts are not transparent benefit, as their contributions become visible in their entirety and are recognized accordingly. Thus, the contributions of each author can be inerasable recorded in each and every article.

If the empirical results of knowledge management and gender studies were closely related and analyzed, this could not only have effects on the group tasks, but also on traditional, sex-linked hierarchical status and structures of organizations. Also, when reviewing employees' performance-based tasks, the increased transparency could lead to changes within a given organization.

4Conclusion

In regards to knowledge management, a company's management has to recognize the necessity of creating an environment that fosters a continual knowledge exchange among employees. Without doubt, knowledge management systems can thereby be of help. Through the availability of knowledge that is not limited by time and space, or by social and cultural limits, the employed software in the area of knowledge management, in interaction with the participating users, assumes a "formative" role.

This participative "line of attack" is groundbreaking, because keeping an eye on the objective of maintaining an open, interconnected knowledge organization, capable of transformation as required by the demands of globalization, is essential for (future) activities of a given company. Also, the gender-aspect is "registered" and if the rules of the game are honored, all individuals are not only taken into consideration, but they are also actively shaping in a participative fashion. This transformed perspective, namely to not only regard women and men not as so-called end-users, but as actively shape and transforming software, provides all participants with the opportunity to experience software less as a product, and more as a

process.

The new impulses originating from Web 2.0 entail in this context socio-technical room for innovation in education and the work place. They also contain the potential, frequently male dominated organizational structures to be "gendered". This represents a notable democratization in the area of equal opportunities by way of the backdoor – both an innovative and economically promising development.

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