

Learning Web 2.0 – The Relation between Individual Learning Styles and the Usage of Social Software for Advanced Vocational Training

Tina Ganster, Nicole Sträßling, Nicole C. Krämer,
Sophia A. Grundnig, Bao N. Trinh, Jenny-Maria Issel, Marc Mannsfeld
University of Duisburg-Essen
Forsthausweg 2
47048 Duisburg, Germany

ABSTRACT

The present survey is concerned with the use and potential of social software tools for advanced vocational training. An online survey was conducted to assess (N=101) in how far learning strategies and competencies as well as social software use for private reasons and are associated with the actual and intended use of social software for learning and vocational training. Results indicate that while the actual use of social software for collaboration is predicted by an experimental learning style, the intended use of new online technologies for vocational training is only related to the private use of according software. Implications for system design are discussed.

Categories and Subject Descriptors

CSS J.4 [Psychology]

General Terms

Human Factors

Keywords

Web 2.0, collaborative learning, informal learning, learning style

1. INTRODUCTION

The rapidly changing economic and social situation - induced by globalization and technological changes - is accompanied by a corresponding rapid change of demands on part of employees and professionals. Essential for the adaptation to this change is a process of lifelong learning, as employees have to continuously develop new skills and knowledge [1]. When addressing lifelong learning, the focus shifts from formal to non-formal and informal forms. While formal learning can be seen as institutional learning within the regular educational system, informal learning takes place (often unintentional) through daily activities [2].

Until recently, these forms of learning have been regarded as competing paradigms [3]. However, with the increasing use of the Internet for learning purposes, the boundaries are starting to blur as online technologies nowadays enable entirely new forms of collaboration and exchange between users [3], using so-called

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social software (e.g. Wikis, blogs [4]). Through peer interaction, the “social software tools open up a new dimension of knowledge processes” [4, p.459]. This has “important effects both on individual learning and collaborative knowledge building” [4, p. 459]. The respective consequences do not only affect the formalized educational system but also the conceptualization of lifelong learning. This results in new requirements for adult education and vocational training. The present survey is particularly concerned with the use of social software for learning in the field of advanced vocational training. This form of education is addressed to adults, who might be less familiar with Web 2.0 applications than the so-called net-generation. Consequently, the question arises to whom the use of social software appeals and to whom it can potentially be of benefit. In the following, potential predictors of social software use for vocational training are identified based on previous findings and hypotheses/research questions are derived accordingly.

2. BACKGROUND

Redecker and Punie [6] identified the tendency for self-directed learning as a reason for using social media in formal education and training. Here, self-directed learning is defined as the degree of a person's ability to control his/her learning process without any aid of authorities [7]. The ability for self-directed learning was found to be determined in particular by methodical (e.g. organization) and personal (e.g. motivation) competencies [8]. It is thus assumed that these competencies are positively related to the actual and intended use of social software for learning (H1). Based on the findings concerning self-directed learning, other forms of learning strategies are assumed to be of relevance for the use of social software for collaborative learning as well: In this context, the individual learning style [9], learning strategies [10] and the preferred perception mode (Vester, 2001, cited in [11]) might be influential when considering to use online peer-to-peer learning. The last aspects included in the analysis refer to the extent of social software use for private reasons. As already mentioned, the commonplaceness of technology use and according media literacy may be subject to variations within the sample. As the frequency of Internet use and the intention to use social software for learning purposes have already been found to correlate [6], this aspect needs to be considered. Apart from testing H1 we will therefore further follow an exploratory approach to investigate the role of social software use for private reasons as well as participants' age along with the question which type of learning style predicts the actual and intended use of online social software for exchange and learning (RQ).

3. SURVEY

3.1 Sample and procedure

To test the derived hypothesis and research question, an online survey was conducted during the period of Oct. 4 until Oct. 22, 2010. The questionnaire was advertised on German bulletin boards concerned with advanced vocational training, lifelong learning or education in general. Participants (N=101) were between 16 and 68 years old (M = 31.3, SD = 10.80). Most participants had a high school diploma (34%) or went to middle school (24%) or university (27%).

3.2 Measures

To assess the actual use of social software in the context of this type of education, participants were asked which channels they use to communicate with other course participants (9 items, if not indicated otherwise, all measures were rated on a five-point Likert scale). An exploratory factor analysis revealed two factors, referring to online and offline channels respectively. With regard to the research question, only the first factor *social software* (e.g. blogs or chat tools; Cronbach's $\alpha=.72$) was used for further analyses. The scale meant to assess which kind of media participants would like to use for their vocational training consisted of 21 items. From the four factors revealed through an exploratory factor analysis (*rich media*, *social software*, *consultation of experts* and *online information sources*) the aspects of intended use of *social software* (e.g. online communities, blogs; Cronbach's $\alpha=.79$) and *rich media* (e.g. videos and games, Cronbach's $\alpha=.87$) were considered for further analyses. Learning styles, strategies, methodological and personal competences as well as preferred perception mode were assessed using scales proposed by the respective authors mentioned in the last paragraph. Finally, a measure of the active use of these technologies (for private reasons) was added, asking for the extent to which various Web 2.0 activities were conducted (7 items, Cronbach's $\alpha=.739$).

4. RESULTS

Results of multiple regression analyses show that self-directed learning competence were not associated with actual or intended use of social software (H1 not supported). Further results (multiple stepwise regression analyses) indicate that the actual use of respective tools was best predicted by and positively related to the learning style of active experimentation ($R^2=.05$, $\beta=.224$, $p<.05$). With regard to the intended use of Internet technologies for learning, a holistic learning style serves as best predictor for the desire to use enriched media ($R^2=.078$, $\beta=.279$, $p<.05$) while the intention to use the Internet for collaborative peer exchange was not associated with any particular learning style, but with the active use of social software for private reasons ($R^2=.078$, $\beta=.084$, $p<.05$).

5. DISCUSSION

Findings suggest that specific individual learning styles are associated with the actual and desired use of social software for advanced vocational training. This implies that the use of social software for training could particularly increase motivation for people with an experimental learning style. People with a holistic learning style could be motivated by also including rich media. Online, these two aspects are often combined in the form that users can comment and discuss rich media content. However, to address and to appeal to different kinds of learners, the employment of Internet technologies in vocational training should

not only offer opportunities for collaborative learning but also provide guidance for the efficient use of the respective tools. The finding that active use serves as relevant predictor suggests that for the efficient use of social software, especially in the case of learning, media competence is an important prerequisite.

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