Adult Learner's Motivation for the Use of Micro-Blogging During Online Training Courses

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Abstract—In this article we discuss our key idea that informal exchange in twitter contributes to the motivation of participants in online courses. Micro-blogging (via twitter) was introduced to groups of educators that participated in three online courses on the use of Web2.0 technologies and Online Didactics in educational settings. We used qualitative as well as quantitative methods to investigate their use of twitter and found out that informal exchange in twitter contributed to the motivation of learners during their participation in the online course. The participants extended their relatedness within the group, reflected their personal growth and supported others via acknowledging their inputs in a certain extent.

Index Terms—e-learning, micro-blogging, twitter, motivation

I. INTRODUCTION

Micro-blogging[1] is an online Social Networking Service that combines the functionality of Short Message Services (SMS) of mobile phones and the functionality of blogs. The so called "micro-bloggers" contribute short text messages (up to 140 characters) that appear on a website in a reverse chronological order, mostly for informing the world, and specific the people who follow their contributions, about their current activities, interests and plans[2] but also for pursuing business or educational interests[3]. The input device is either the micro-blogger's mobile phone or a text field on the micro-blogging internet site. As both of these technologies, SMSs and Blogs, have become daily practices that enrich and facilitate our life, we wished to investigate the potential of micro-blogging for enhancing learning processes in educational settings.

The system we chose for the purpose of our endeavours is the micro-blogging service twitter[4], which has an easy to use application programming interface and encourages the development of a very wide range of applications, like for example the merging of twitter messages with personal photo galleries[5] and bookmark sharing applications.

II. LITERATURE REVIEW

One very interesting example of the use of micro-blogging service has been the live twitter stream at ED

MEDIA 08 conference. Conference participants could instantaneously comment the presentations at their mobile devices and all comments were collected at one website (enabled by the "Twemes"[6] application that merges twitter contributions according to pre-defined topics named global tags). In this way active participation of and interaction between the conference audience was facilitated and visualised.

The same approach has also been tried out in formal educational contexts. At the University of Vienna P. Pugathofer and W. Reinthaler used a variety of Web2.0 tools, one of which was a micro-blogging system, to facilitate the exchange between up to 1000 students during a lecture [1]. According to the lecturers report this application did not lead to a meaningful instructional activity. Drawbacks have been that the majority of postings did not relate to the content of the lecture, as well as that participants were confronted with technical problems.

M. Ebner and M. Schiefner investigated if micro-blogging can be useful in teaching and learning processes and recommended using it selectively [8].

Another report of a twitter activity in an educational setting has been tried out at the University of Portsmouth, where students were asked to use micro-blogging to informally update their supervisor about their progresses in the projects. In that setting initial results showed positive effects on learning.

III. HYPOTHESIS

Our interest was mostly caught by the intensive use of twitter around the world[7] and we focused our interest in the behavior of adult participants, who take part in online collaborative courses. Our hypothesis has been that active participation in twitter during online courses nourishes participants' motivation for learning.

Motivation is defined broadly as the innate tendency of participants towards personal growth and development. According to theories of motivation factors - [4],[5],[7] - that enhance the initiation, direction, intensity and persistence of learning behaviour are strengthened in contexts that satisfy participants' needs for relatedness, self-actualization (growth) and transcendence (helping others to self-actualize). To investigate the extend to which the micro-blogging environment twitter has offered an educational context that nourished participants motivation for learning we had a closer look at the motivation theories

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and came up with a list of indicators for relatedness, personal growth and transcendence.

Indicators for relatedness: belongingness, acceptance, affection, relationships, work-group affiliation, autonomy, showing of own achievements, status, responsibility, reputation and competence

Indicators for personal growth: knowledge acquisition, meaning, self-awareness, innate acceptance, self-fulfillment, competence, achievement of higher goals

Indicators for transcendence: helping others to self-actualize.

IV. PILOT STUDY

For the aims of this learning experiment we used a range of participant observation methods that helped us become an overview of the existence or absence of the indicators that nourish motivation. Methods involved were: a) our own participation in the micro-blogging environment as part of the group, b) a collective discussion with the course participants about their experience and the potential of their practice, c) analysis of the contributions and interactions in twitter, as well as d) a questionnaire at the end of the course.

37 educators from Austrian and German universities as well as trainers from companies and school teachers participated in five online courses from autumn 07 to summer 09. The course contents were "Learning and teaching with web2.0" and "How to design a blended learning course". During the course participants experienced the use of different web2.0 tools (blogs, wiki, rss-feeds, meshups, social bookmarks), they collaborated extensively on shared activities, developed shared concepts for integrating web2.0 tools into teaching and gave valuable feedback to each other (the course design was based on the 5 stage concept of Gilly Salmon – [6]).

In this context and as part of their online activity participants were invited to actively engage in the micro-blogging environment twitter. 31 persons were active in these "twitter experiments". 26 of them answered a questionnaire and 28 participated in an audio conference to reflect the use of twitter. The learning objectives of this twitter experiment were:

- to get to know a new web2.0 tool
- to use this tool extensively as a group
- to reflect the use of the tool
- to differentiate the use of twitter and the use of a blog
- to have fun – free use of the environment according to own needs and ideas

V. RESULTS

A. Usage of twitter

31 course participants contributed actively to the twitter experiment (4 of them participated in 2 courses, 2 didn't experience twitter).

About 60% didn't use twitter extensively: 3 persons choose a twitter identity but didn't write any contributions (so-called tweets), and 16 contributed less than 20 times. About 40% were active in twitter, and 2 of them wrote more than 100 tweets (both participants attended 2 courses) (Figure 1).
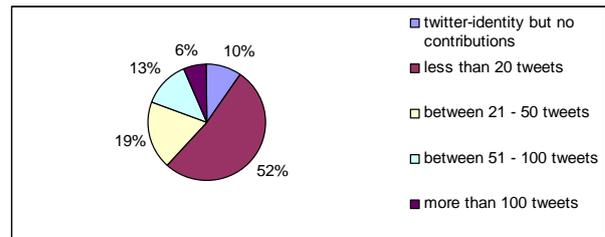

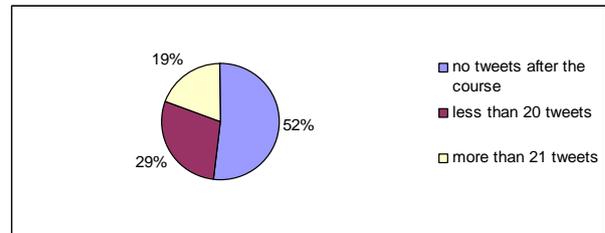Figure 1.   Usage of twitter in total (during and after the courses)

Figure 2.   Usage of twitter after the courses

6 participants (19%) continued to use twitter after the course as well.

B. Analyses of the contributions and interactions in twitter

Our hypothesis has been that active participation in twitter during online collaborative courses nourishes participants' motivation for learning. To investigate the extend to which this hypothesis is valid we developed an evaluation questionnaire[8] to assess

- relatedness – in twitter: say hello, reply to others, express personal disposition / mood,
- personal growth – in twitter: address issues in regard to course content
- and transcendence – twitter: support others, acknowledge the achievements of others

The participants shared contributions to show their relatedness (69% often used twitter to "say hello", 42% often answered on other contributions, 46% sometimes). Furthermore they reflected their personal disposition / mood (46% often, 23% sometimes). Reflecting these percentages we perceive that most of the time twitter was used to signal online presence by saying "hello", to express own personal disposition or mood and to reply to others. Interesting to mention at this point are the participants considerations about the creation of their online identity, choosing a picture and a nick name in twitter. All of these activities are indicators for relatedness and suggest the nourishment of belongingness, relationships with peers and affection. This use of twitter can be a factor with a very positive effect on motivation for online courses, in which lack of physical contact rouses the feeling of being alone. The expression of own feelings also shows a great potential of twitter in embedding emotional aspects into learning processes.

Less often postings were referred to issues of the course contents (12% often, 31% sometimes). The activity of addressing issues of course contents is an indicator for personal growth, suggesting the nourishing of knowledge

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[8] Please note that our list of indicators is not indented to offer a complete list of all possible factors that affect motivation.
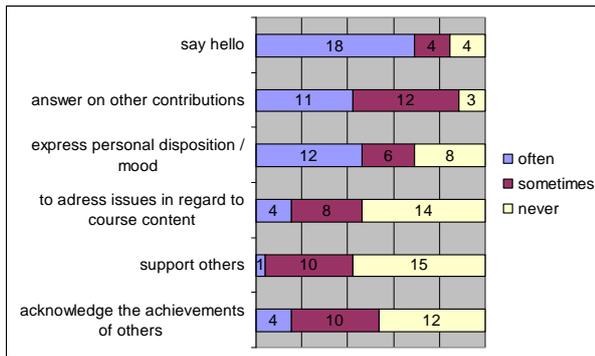
Figure 3.   Intention of twitter tweets

acquisition and meaning, as well as self-awareness of own competences and the achievement of higher goals. An indicator of self-awareness is also suggested by the participant's considerations in creating their online identity in twitter.

Twitter was sometimes used for acknowledging achievements of others (15% often, 38% sometimes) and for supporting others (4% often, 38% sometimes), activities that are indicators of transcendence and suggest nourishment of helping others to self-actualise, taking responsibility for the learning processes of the group and strengthening social bonds within the group.

C.   Results of the audio-discussions with the course participants

During the audio conferences the participants reflected their use of twitter, developed first ideas of learning scenarios with twitter and discussed their twitter identities. About half of the participants had great fun using twitter. They appreciated the possibility for informal exchange beyond the course topics and they believed that Twitter could be used for brainstorming processes in class. An important aspect of twitter was the freedom to use a personal nickname and attach any picture they wanted to. They invested some time to choose their twitter identity and commented on other virtual identities.

Twitter became one of the activities during the course that participants enjoyed and although it started as a learning experiment it became a core practice during the course. We assume that is also the reason why participants were irritated when the micro-blogging environment had technical difficulties.

VI.   DISCUSSION

During our pilot study we made a first attempt to find out in which ways regular, short, informal contributions in a micro-blogging environment can have a positive effect on participants' motivation during a 3 week online course. Our preliminary findings suggest that micro-blogging activity has a great potential in increasing the motivation of participants in e-learning courses and that there is a great potential in the application of the tool in educational settings that still needs to be explored.

In this short overview of the use of the micro-blogging environment twitter the users took cautious steps to contribute within this new web2.0 feature. They had fun and extended their relatedness within the group. Some of them reflected their personal growth and supported others via acknowledging their inputs. According to our findings

micro-blogging environments can nourish participant's needs for relatedness, personal growth and transcendence and suggest the creation of strong social bonds within groups of participants in e-learning settings

In the reflection via audio conferences they were insecure if micro-blogging could contribute to learning scenarios and if it would support them in their personal development.

Very interesting is that some of these participants remained active in twitter after the end of the course. In this way a small twitter community was established, which is joined by new members after the next course. Within this community knowledge chunks were exchanged intensively and there is a visible benefit of being a member of this community. In a next step we want to analyse this potential of micro-blogging in a continuous online community.

This has been a small learning experiment which offered us many insights on the potential of micro-blogging; nevertheless the analysed data and the observations presented are constrained by a number of limitations, such as the limited time the micro-blogging environment was in use. Our pilot study however raised many implications for the instructional design of e-learning courses and identified issues for further research.

Further research is needed to explore the ways in which the use of twitter has an effect on the collaboration of participants within their course working groups. We expect that course participants of online courses, who regularly use micro-blogging to keep in touch and inform each other about their current activities, will have an advantage in group building for collaborative activities and will collaborate in more constructive, productive and efficient ways, as course participants of online courses who do not use twitter .

Another area of further experimentation is in the design of instructional activities that attract mindfulness to the use of micro-blogging for enhancing learning processes in educational settings. We believe that such an approach is needed to overcome issues raised by Purgathofer and Reinthaler [1] that reported that the majority of students' postings did not relate to the content of the lecture.

The potential of twitter was also brought up during the collective discussion with the course participants. The practicing educators in universities, training companies and schools, suggested following applications of twitter in educational settings: a) twitter for communicating personal disposition/mood of the learning group, b) for a fast exchange of ideas, c) for reflection of learning processes, d) for coming to the point and reporting conclusions in short, e) for Brainstorming and f) for exchange within a working group. A factor that should not be undermined is that micro-blogging is great fun!

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