



PROMOTING AWARENESS AND OWNERSHIP IN DIGITAL PROCESSES OF TEACHING AND LEARNING

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Abstract

This paper addresses the challenge of teaching and learning in a blended, collaborative Digital Context. It reports on a case study in which the promotion of learners empowerment and meta-learning are key objectives. The findings of the case study suggest the presence of a promising potential in a marriage between theory-led designs, digital technology, and dialogic collaborative knowledge building for cultivating and enhancing student empowerment.

Introduction

Collaborative digital e-learning communities and the cultivation of student empowerment through digital technologies are phenomena constituted on the premise that individual learners bring to the learning community knowledge and experience with the aim and potential of generating in a shared endeavour new knowledge for the group. Especially, this is important in domains where new knowledge is developing at a fast pace.

In digital e-learning communities learners are able to generate and share new ideas and concepts in relation to knowledge they have already acquired, and to associate the new generated knowledge with their own professional contexts. In digital e-learning communities, both the individual learner and the entire group of learners gain new knowledge and understandings.

This paper reports on a case study, – a blending learning course where 18 learners with full-time jobs engaged in an online course using a variety of digital environments and Web 2.0 software to facilitate their collaborative learning process. The paper outlines the research design and its ethos in terms of student empowerment. The digital design of the course is described, and the use and delivery process is analyzed.

The findings of the study suggest a promising potential in the marriage between theory-led designs, digital technology, and dialogic collaborative knowledge building in communities of communication and learning for cultivating and enhancing student empowerment.

Empowering Dialogic Potential of Digital Environments

The general empowering interactive/dialogic potential of networked communication technology for educational purposes is widely recognized (e.g. Conner, 2004; Miyake & Koschmann, 2002, Bang & Dalsgaard, 2008). The educational usage includes communication technologies as e.g. so-called Virtual Learning Environment (VLEs) and Virtual Meeting Environments (VMEs) (Sorensen et al., 2008). Less sustained is the recognition of a similar educational potential of Web 2.0 technologies. While Web 2.0 technologies (also known as Social Software) over the last years have conquered the digital arena in many use contexts, a similar conviction of a potential for education remains to be seen. Nevertheless, according to Dalsgaard and Sorensen (2008), a powerful potential for two main areas of an educational process seems indisputable (Figure 1): (i) *Participation* (dialoguing and stimulating the creation of communicative networks and awareness); (ii) *Production* of digital resources (creating and sharing products).



Figure 1. Digital environments for organizing dialogic/communicative processes and resources (Dalsgaard & Sorensen, 2008)

Wegerif (2006a, 2006b) adds a final affordance to the educational visions related to digital technologies when he emphasizes the essential fit between digital technology and education in stating that digital networks offer the possibility for designing environments for teaching and learning in which the facilities of the technology contribute to promoting basic democratic skills, such as learning how to listen to other voices.

Empowerment and Dialogic Democratic Awareness

Empowerment of learners may be viewed as an essential feature enabling citizens to become active participants in a 21st century global intercultural society (Brown & Davis, 2004; Holzl, 1999). Empowerment may be defined as the power to control and ability to control ones own life in a manner that makes space for understanding, influence, and meaningfulness in a way that promotes insight, transparency and ability to act as an active citizen. Empowerment is both a process and a goal in itself (Hoskins et al., 2006; Meyer et al., 2007).

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Both sense and actions of citizenship may be very subtle and personal issues, and becoming an active citizen is likely to be the result of a continuous lifelong process formed by history and relations with others.

A sustainable teaching and learning approach for educating citizens in such a society must feature digitally enhanced pedagogic architectures, which rest on at least two empowering pillars: dialogic participation / negotiation and meta-learning / awareness. The specific characteristics of the competencies cultivated by the two pillars are (Figure 2):

A. Dialogic participation/negotiation:

- Cultivation of competencies to initiate and participate in digital discussion and shared generation of knowledge (one is active to achieve a common goal) (Stahl, 1999; Sorensen & Takle, 2004; Sorensen, 2008);
- Cultivation of ability to listen to other peoples' opinions and apply *democratic attitudes* and *Ethos* in the negotiation of meaning accompanied by a resulting *intercultural insight*;
- Promotion of a global, *co-existential Ethos* (Sorensen & Ó Murchú, 2006).

B. Meta-learning/awareness:

- Creation of *awareness* of own learning processes (personal and collaborative e-learning methods);
- *Personalization* in terms of promoting process independence and ownership (Gibson, 2006; Sorensen & Ó Murchú, 2004, 2005) – in a perspective, which is “true” for you (Colaizzi, 1978);
- *Awareness* that you construct your own theories/hypotheses and test them continually in your own life, both in empirical experiments (practice) and in theoretical “experiments” (thinking and thought);
- Meaningful demonstration that whatever you learn is relevant to you, as it is connected to your prior knowledge on the issue;
- Digital meta-learning creates *awareness* of the nature of ones learning processes (Bateson, 1976).

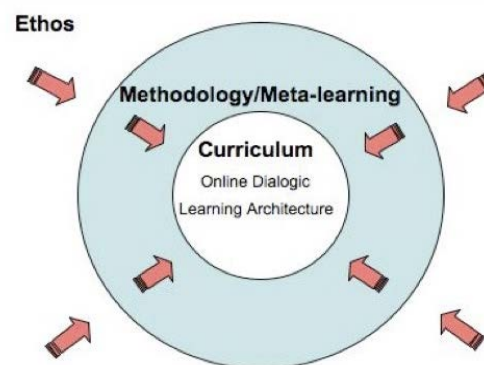


Figure 2. A Meta-Dialogic Approach (Sorensen, 2009)

A digital technology combined with a dialogic teaching/learning strategy is likely to support the education of citizens through conceiving some essential democratic attitudes and intercultural skills of a global citizen, simply because it is likely to leave significant indirect “imprints” (meta-learning) on learners in terms of their self-perceptions and radius of action in their process of becoming global democratic citizens.

Less in focus of dialogic learning is its possible evolvement at the meta-learning level (Bateson, 1976), if invited by the methodology of the curriculum. The learning that is acquired from the methodological level, i.e. “the way things are learned”. Only in the very rare case is it consciously employed (and its value envisioned) in the design of e-Learning curriculum. In other words, the *meta-dialogic level* seems a neglected space of learning.

Case Study

Pedagogical approach

The pedagogical approach is derived from a theoretical tapestry composed by a Batesonian understanding of the role of learning through reflective communication and meta-dialogue (Bateson, 1976) and the Wengerian view that it is not possible to design learning – only FOR learning through processes of negotiation and legitimate peripheral participation (Wenger, 1998). This means that problem orientation and communicative/dialogic activities are essential, and that the design of the curriculum need to emphasize and incorporate manifestations/activities of *dialogic participation / negotiation* and *metalearning / awareness*.

While the promising profile of new technology and e-learning networks is beyond any doubt, the empowering effect for learners depends to a high extent on design decisions and on the extent to which the new technologies are implemented carefully in the design. These decisions in turn are susceptible to underlying theoretical philosophies and pedagogical methodologies of teaching and learning in ways that may indirectly promote or, alternatively, hamper the advancement of non-authoritarian democratic processes and students’ activity (Sorensen, 2004); in other words, those aspects of the instructional/learning process that are pertinent to aspects of empowerment, i.e. the promotion of learner initiative and entrepreneurship.

This course analyzed in this case study is a master course (15 ECTS) at the graduate level. It is a course on how to design communication and learning processes using digital technology (including Web 2.0). There were 18 participants, all of which were people working full-time in industry and public service areas.

The goal of the course is to provide insight into the challenges related to pedagogic design and facilitation of processes of eCommunication & eLearning in various use contexts. The overall course objectives are that students acquire the skills and competencies to: (i) reflect on and to build and share insights gained through collaborative dialogue, (ii) arrange and organize pedagogically appropriate learning environments across physical and digital spaces, and (iii) design, facilitate and moderate (collaborative) processes of eCommunication and eLearning.

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The overall *pedagogical intentions* of the course design are in line with the overall theoretical ambition reported on in section III focusing on promoting learner empowerment and emphasizing meta-dialogue and dialogic behaviour. More precisely, these pedagogical intentions include:

- To promote the view of “*dialogue as the curriculum*” (in both small and plenary groups);
- Promoting meta-dialogue;
- *Bringing self-experience and self-reflection* up-front, as the course itself was an example of a “design of communication and learning”, incorporating all of the digital technology treated as part of the subject area;
- *Operationalizing and sharing of learners prior knowledge* coupled with theory in the shared knowledge building process online (small groups identified problem and presented/debated in plenary);
- Supporting *peer-review* processes between groups;
- Promoting the concept of the course as a laboratory for *experimentation*;
- Promoting an understanding of the teacher’s role as a *cultivator* to fertilize the ground for learning, a *co-participant* to co-experience co-interact and share, a *weaver* and a *facilitator* to sort out during the delivery process as-we-went-along.

Design of module

To indicate the importance of dialogue, the overall proposed understanding of the course was “dialogue as curriculum” (Sorensen & Ó Murchú, 2006). The traditional 12 3-hour face-to-face lectures were broken down to only 3 full-day face-to-face meetings, while the remaining teaching and learning took place using a variety of *digital technology*:

- AULA (the basic course space);
- CONNECT (a desktop conferencing system, with whiteboard, used for presentations and mediated face-to-face dialogue);
- AULA-plenary text fora and meta-fora (for both involved and meta-level dialoguing and debate);
- AULA-small group fora and spaces (for managing process and for creating and preparing “items”);
- AULA-chat (a real time text-chat feature of AULA, used for summaries);
- Weblogs (for personalization and reflection);
- Skype (for supervision).

The *resources* of the course included all kinds of relevant digital material and research papers available online as well as other online applications and resources. It also incorporated through more formal presentations at the face-to-face meetings experiences and insights of the work contexts of participants.

According to the assignment given, the participants, in the two-week preparation periods, had to, individually, make themselves familiar with the literature/resources given and prepare in

their small groups plenum presentations to be presented mediated face-to-face using the desktop video conferencing system, CONNECT. They were asked to finalize their presentations with a set of related questions/problems for succeeding debate in the AULA forums.

Following the CONNECT presentations and based on these final problems raised, the groups continued the debate through text-based dialogue and negotiation in the AULA plenum fora. The small group members were asked to distribute a set of roles among their small group (on average consisting of 4 participants). The roles were supposed to form, support and guide their later discussion and to give the participants a concrete point of departure in the discussion. Some were presenters, some moderators, etc. The description of the roles was clarified in detail in the assignment. Both teacher and students agreed on committing themselves to attending the text-based discussions for a minimum of five times a week over the two weeks of debate. In the debate period each of the groups were asked to present, in the plenum forum, an identified problem related to literature, experience, etc. They were asked to initiate, conduct and wrap up the succeeding online plenum discussion that evolved from the problem of their group. In parallel with the discussions, the participants and the teacher were engaged in continuous individual reflections (using weblogs) and meta-reflections and meta-communication in a meta-forum (in AULA) to reflect and discuss the experiences and the observed processes of their own communicative behaviour, as it evolved.

To explore the AULA-chat feature, the groups presented their wrap-up summary dynamically in a text chat session. The next task in the delivery plan was to work on (in the small groups) and hand in an assignment, using AULA. Finally, the small groups prepared their feedback on each other's work to be presented at the next face-to-face meeting.

The module went on with a second iteration of the above described cycle, before finally starting to prepare the exam paper, while receiving, in parallel, supervision from the teacher. The participants were graded, as described in terms of both quantity and quality of their contributions (Stahl, 1999; Sorensen & Takle, 2004). In this case, the teacher defined "active participation" (and succeeding pensum reduction for the final exam project) on the basis of the following participation criteria:

- Attending 2 of 3 face-to-face meetings;
- Weblog contributions: minimum 5;
- In 2 times 3 weeks of online discussion period: 5 contributions per period per person. 2 should be initiating and 3 responding;
- Collaborate on group assignments A + B;
- Attending 2 out of 3 Connect meetings.

Design of module3? – Findings

The delivery process (following the outline in Table 1) mirrored a student-centred, open process in which knowledge resources entered dynamically from outside (student's work contexts, student's experiences, student-identified resources from the internet, etc) via the

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participants as well as through the teacher. This process was driven and motivated by participants and their individual prior knowledge and engagements. The latter is an important fact in adult education, where all participants are “experts” in each their individual working context.

The course was evaluated using a semi-structured questionnaire and free style comments in an online evaluation forum in AULA. The evaluation produced 12 (of 19) student responses. There were four options for replying in the structured part of the questionnaire: a) yes, to a high extent, b) yes, to some extent, c) yes, to little extent, d) no, not at all. The following table shows the students’ responses to two focus areas (Table 1):

Table 1: Student evaluations

	a) yes, to a high extent	b) yes, to some extent	c) yes, to little extent	d) no, not at all
1: YOUR OWN LEARNING Students were asked if they felt they had acquired the qualifications and competencies described in the course objectives (i.e. had the 3 course objectives been fulfilled)	4	7	0	1
2: COLLABORATION AND ENGAGEMENT Students were asked if they felt the course had enhanced their ability to communicate and collaborate with others (i.e. had they achieved an increased level of empowerment)	6	5	1	0
3: DESIGN OF THE COURSE (LEARNING ARCHITECTURE/ENVIRONMENT) Students were asked about the form of the course (incl. variation and whether the course invited independence, initiative and ownership)	5	6	1	0

Some additional qualitative free style comments were:

“It was difficult to grasp the focus of the course, but it was exiting that the course construction itself was an integral part of the course”

“Too much reading”

“The learning achieved came especially through group work”

“One part of the learning was disturbed by CONNECTs limitations. This was sometimes frustrating, when the participants had spent time on preparation, which was sabotaged technically. But – having second thought considerations – this is exactly the situation that we are likely to put people in”.

“I have experienced great engagement and commitment in both the small group and large group activities”

“I have been happy for both face-to-face and online activities, my study group has functioned very well. Lots of praises to the teacher for the handling of the group selection process”

Viewed from a teacher perspective, the content of the discussions turned out to be of a rather good quality. The delivery of the course was characterised by a high degree of student participation, self-experience and self-reflective dialogic engagement. Interests in the experiences and engagement was driven by peers, as was operationalization of these in the shared dialogic process characterized by participant “ownership”, equality in teacher and learner roles (dynamically interchanging roles), and assessment of dialogic process and product. The teacher occupied a role in the discussions equal to the students. Only in the meta-forum, the teacher shifted between the role of participant and the role of “the expert”. The teacher’s role became one of a cultivator to fertilize the ground for learning, a co-participant to co-experience co-interact and share, a weaver and a facilitator to sort out during the delivery process as-we-went-along.

The evaluating comments from the participants documented that, in general, the course had been perceived as a positive experience. Some participants initially found it to be a stressing experience, especially due to a too large amount of readings. A smaller part of the participants expressed some frustration that the course did not have the more traditional roles of a teacher (the one who knows) and a student (the one learns from the teacher). Nonetheless, most of the time the course delivery process produced dialogic presence and engaged communicative participation.

Conclusion

This study has investigated the challenge of teaching and learning at a graduate level in a blended, collaborative digital learning context, composed by face-to-face elements, a virtual learning environment (AULA), a desktop video conferencing facility (CONNECT), a chat facility (in AULA), a weblog facility (blogger.com). The underlying ambition behind the course design was to try to design for an indirect promotion of learner empowerment, meta-learning and reflective meta-dialogic behaviour.

A tentative conclusion is that the findings from this case study (student responses from the questionnaire) show some indication that this course and its combination of pedagogical design, digital learning architecture (including Web 2.0) and (meta)dialogic collaborative knowledge building promotes development of learner empowerment and meta-dialogic learning and awareness. Dialogic meta-awareness and the resulting visibility to meta-inspect ones own competencies and communicative actions seem to create the personal initiative and the transparency needed to implement and maintain democratic forms and attitudes in intercultural participation, negotiation and dialogue.

It seems nearby to conclude that the course to a certain degree seem to have increased student empowerment through enhancing student initiative and incitement to express opinions and

dialogue with peers. However, a remaining issue to investigate further and possibly to resolve is the more specific affordance of each technology in this respect, and to identify more the more specific correlations between each of the technologies and the activities implemented in the blended learning architecture across spaces and media.

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