

FACEBOOK AS TOOL FOR COLLABORATIVE LEARNING: OBSTACLES AND OPENINGS

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December 2017

Abstract

This paper reports preliminary findings of a pedagogical research project funded by the Faculty of the Social Sciences at Lund University. The project concerned the role of social media for fostering collaborative learning in higher education by examining the process of using of Facebook as a communication tool on a course in social science research methods. The findings show that the interaction between lecturers and students on the Facebook platform predominately involve sharing content and information. Moreover, the study highlights that teachers and students differ in their expectations on how to use Facebook in a learning setting. In order for collaborative learning to occur, common standards and guidelines for social media use in higher education need to be developed. The paper ends by giving suggestions on what such guidelines may entail.

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Introduction

Social networking sites (henceforth social media) have gained interests as education tools in higher education teaching and learning. The appeal of social media platforms to educators is due to that it is relatively easy and cost-efficient to incorporate in academic settings, since platforms can be personalised to suit specific tasks and goals. Social media are used for content generation, sharing information, interacting and, socialising (cf. Chugh & Ruhi, 2018). The two-way communication model that underpins social media, however, challenges the authoritatively driven teaching and learning model (Rodriguez, 2011), and leads to new expectations on learning patterns and communication between lecturers and students. In addition, students' adeptness in digital technology has motivated the use of social media as a toll in learning, so as to empower the pedagogy (Maisiri & Hikwa, 2013). In particular, previous research demonstrates the usefulness of social media as tool for collaborative learning. Collaborative learning is centred on the student and how to make her or him more involved in the learning (Vygotsky, 1978). Learning is viewed as occurring in and through processes of interaction. Wheeler, Yeomans, and Wheeler (2008) investigated how student-generated content on social media platforms could enhance collaborative learning. They argue that the primary benefit of using social media is for encouraging collaboration among students, or extending student engagement outside the classroom. Their findings demonstrate that student involvement in content creation and distribution makes the learning process more active and independent. Collaboration improves when teachers act as facilitators or moderators on digital platforms. In a similar vein, Hoffman (2013) means that social media contribute to increased student orientation in education by enabling students' cooperation and interaction. When students are involved in creating the course content together with the teacher and other students, they are

considered to be able to make better use of the content. However, Greenhow (2011) maintains that in order for collaborative learning through social media to be considered effective, the learning process needs to be structured and managed. While social media may enhance accessibility and interaction in teaching and learning, there are also pitfalls in using social media tools. Junco (2012) found that social media has a negative impact on grades (Junco, 2012) and distract students from acquiring knowledge (see also Bugeja, 2006). It has also been argued that social media may have a negative impact on student engagement (Hew 2011; Mazer et al., 2007), and partly on collaborative learning (Gikas & Grant, 2013), due to the marginalization of students, lack of privacy, misuse of information and bullying. Even though there are a number of studies on how to incorporate social media in higher education, the research is scattered and in an early stage. Few empirical studies explore the relationship between learning and teacher-led use of social media and more nuanced knowledge is needed about the potential of social media and its challenges in relation to learning (cf. Hew 2011).

The research aim in the present study is to increase the knowledge of the role of social media for collaborative learning in higher education. The study examines the process of using Facebook as a communication tool in order to promote learning on an undergraduate course in social science research methods guided by the following research questions: (1) What characterises interaction between lecturers and students on Facebook in higher education teaching and learning? (2) How do lecturers and students perceive using Facebook? (3) What are the implications of using Facebook for their relationship? Facebook is here used as an example of an interactive mode of communication and learning typical for digital platforms. At present social media is used to complement traditional classroom-based teaching methods, but there is an ongoing discussion within higher education pedagogical research on how to merge

analogue and digital modes of teaching. Yet, the knowledge on how teachers and students engage on digital platforms is limited and more research on the characteristics of the interactions between teachers and students on digital platforms are needed. Digital modes of teaching may of course vary in nature; however, digital platforms imply a more interactive view on communication and learning than analogue modes.

The paper is structured in the following way. First, we present a review of previous research on student-centred learning and social media. Second, we introduce a mixed methods research approach to examine the use of Facebook in a learning setting at a Scandinavian university. Third, preliminary findings of the study are highlighted and categorized according to two main themes. The findings point at that the interaction between lecturers and students on the Facebook platform predominately involve sharing content and information. Moreover, teachers and students differ in their expectations on how to use Facebook in a learning setting. In order for collaborative learning to occur, common standards and guidelines for social media use in higher education need to be developed. The paper ends by giving suggestions on what such guidelines may entail.

Previous research on social media and collaborative learning

The horizontal view on communication implied in social media is viewed to enhance collaborative learning by increasing interactions between educators and students as well as among students (Chugh & Ruhi, 2018). Collaborative learning includes “a variety of educational practices in which interactions among peers constitute the most important factor in learning, although without excluding other factors such as the learning material and interactions with teachers” (Dillenbourg et al., 2009: 3). In collaborative learning, “students are working in groups of two or more, mutually searching for understandings, solutions, meanings, or creating a product” (Smith & McGregor, 1992: 11). Hence, students take active part in the learning process by

discussing with peers, exchanging viewpoints, questioning beliefs, and providing feedback. Since learning mechanisms are triggered by certain interactions among people, collaborative learning environments should be conducive to these interactions (Popescu, 2014). Social interaction is thus key to collaboration. If there is collaboration then social interaction can be found in it, and vice versa, if there is no social interaction then there is also no real collaboration (Kreijns et al., 2003). Technology is often considered as one of the main factors that enable interaction among students and teachers; however, one cannot take for granted that social interaction automatically takes place just because it is technologically possible. Hallett and Cummings (1997) suggest that environments need to be designed to promote collaboration. They write:

... by having the majority of assignments in public forums with the entire class posting at a given time, and with numerous prompts and encouragement from the instructor, it was hoped that interaction among students would occur naturally. This was not what took place.
(Hallett & Cummings, 1997: 105)

Digitalization is changing learning environments, as we currently know them. The technological development is shaping the way both individuals and organizations, including higher education institutions, communicate. Despite an expressed need for interactional design in social media-based learning environments, there is a lack of empirical examples of digital sites that actively promote interaction. Researchers put forward that the current generation of students, born in the 1990s, has been raised in the context of digital technologies, in a world of communication with wide availability of information. According to Popescu (2014), this generation of students has different patterns of work, attention and learning preferences than previous generations. Therefore, there is a perceived need to adapt traditional teaching methods to the habits of this generation of students, in particular with reference to collaborative learning.

Dede (2005) argues that these students are used to learning style characterized by

... fluency in multiple media and in simulation-based virtual settings; communal learning involving diverse, tacit, situated experience, with knowledge distributed across a community and a context as well as within an individual, also a balance among experiential learning, guided mentoring, and collective reflection and expression through nonlinear, associational webs of representations as well as co-design of learning experiences personalized to individual needs and preferences. (Dede, 2005:7)

Everson et al (2013) further describe this learning style as including frequent opportunities for reflections and student-centred settings and relationships. The advantages and disadvantages of social media as a learning tool have predominately been examined from the learners' perspective. Few studies concern teaching conditions and teachers' roles in courses where social media is applied. How can social media promote student engagement in learning? What are the expectations on social media use in among teachers and students? How can teachers' facilitate collaboration on social media sites? These questions are explored in the present study.

Facebook in higher education

Previous research has examined how Facebook may encourage student engagement and collaboration in learning (e.g. Bahati, 2015), however few studies explicate the kind of activities that lead to increased engagement. An exception is Junco's (2012) study, which measured Facebook activities like status updates, likes, comments, links sharing, posts, photos, and views, etc. His study shows that communicative activities (e.g. commenting) were positively related to engagement with educational materials, while non-communicative activities (e.g. checking up on friends) were negatively related to it. In a similar vein, Balakrishnan and Shamim (2013) found that students used Facebook for instrumental purposes, for instance, to ask questions and find answers about a

specific course and course assignment details, to share information about projects, to share lecture notes, and to communicate with teachers. Students' attitudes towards Facebook may also influence how they use the platform and how they perceive learning and communication supported by the corporation. Bosch (2009) shows that the main benefit of Facebook use for students is the instant access to teachers. Mao (2014) argues that there is an inconsistency between positive attitudes towards Facebook and the understanding and adoption of social media among students. Students generally hold positive attitudes towards Facebook (Bosch, 2009; Lewis & West, 2009), but do not regard it as an education tool. For example, while students may view interacting via Facebook in positive terms, this interaction is not being considered as connected to learning (Lewis & West, 2009). An argument against using Facebook in learning settings concerns privacy. Rodriguez (2011) discusses the risks with moving private discussions that used to be held within the private confinement of the classroom into the online public sphere. Images and comments posted in what students and teachers perceive as a private social media space could later come back and haunt them. Acquisti and Gross (2006) argue that students are usually not aware of privacy options in their personal profiles.

Digital environments change the traditional authority-based figure of the lecturer. Previous research give clues to how to best support technology-based education in, for example, online courses and courses that involve social media. The roles and competencies suggested for online teaching, however, have had limited impact on the professional development programs that address teachers' needs, individual dispositions and capabilities within their unique teaching contexts (Kreijns et al., 2003). In digital environments, the role of the teacher is linked to facilitating and encouraging social interaction, user-generated content, and collaboration. Teachers' attention shift

from focusing on the individual learner to the learning patterns of the group. Thus, the role of the teacher changes from a knowledge distributor to a facilitator of learning. Therefore the design of digital learning environments should focus on facilitating learning processes (Ebner et al., 2010). In comparison, Burge (1994) suggests that the teacher's role in digital education settings involves creating a structure for collective collaboration, giving fast and relevant technical help, sending timely and individualized content-related messages and feedback.

The relevance of process knowledge increases in digital learning environments, since the time factor plays a less important role (Ebner et al., 2010). Process orientation refers to a loose structuring of the learning process and the possibility of trying out a range of learning strategies and reflecting on these. Teachers' role in social media-based education tends to be double-egged. On the one hand, social-media based course designs require the teacher to relinquish control and avoid dominating the discussion (Clark, 2000). In order to increase interaction with students on social media sites, the role of teachers should focus on organising, prompting, exploring, rather than on controlling and assessing (Chugh & Ruhi, 2018). Teachers need to lead the implementation of social media in learning; it is not enough to merely provide access to the device. Without structure, social media can negatively impact student learning (Gikas & Grant, 2013).

Previous studies provide suggestions of strategies for structuring learning environment so as to motivate students to engage with them (Cevik et al., 2014; Chugh & Ruhi, 2018). Recommended guidelines for teachers in designing a learning environment that integrates Facebook use, concern making content available on a regular basis, posting multiple choice questions, encouraging students to add content to the group, devise a reward mechanism to encourage engagement, and add images and

videos to meet diverse learning styles (Chugh & Ruhi, 2018).

Methodology

The process of implementing the social media tool Facebook in teaching was examined on a second-year undergraduate course in social science research methods at a university in Sweden and analysed during one month in 2016. The course in social science research methods was selected for several reasons. One important reason was that students had previously experienced the course as difficult and less relevant than other courses for their future professional life. The course was also selected to serve as a case in point across various disciplines within the social sciences.

A mixed methods research approach

The research questions on how collaborative learning may be promoted through the use of social media in higher education were addressed through a mixed methods research approach combining qualitative and quantitative methods (Maxwell & Loomis, 2003; Maxwell, 2016). Mixed methods are regarded useful when the aim of research is to examine a phenomenon at different levels or to develop and test a new instrument or channel (ibid.).

The empirical material was collected by means of participant observations, document study, and survey methods. It consists of 30 unique Facebook posts with comments and reactions created by teachers and students and 15 survey responses to open ended items concerning students' experiences of participating in the Facebook group. Reactions on the project from two lecturers on the course were captured by means of field notes and included in the analysis.

A closed Facebook group was established by the authors for the purpose of examining how students and teachers interacted on the social media and the conditions

for collaborative learning on Facebook. The group was entitled *Introduction to Research Methods*. Participation in the Facebook group was optional; students and teachers voluntarily signed up as members for the group. The authors approved all members in the group. The participants consisted of 98 undergraduate students and two teachers enrolled in the course. A third teacher was enrolled in the course, but decided in the end to not participate in the Facebook group. The second author was a member of the group, but adopted the role of a passive observer. Most of the students were passive observers and only a small group of around 20 students took active part in the interaction on the platform. Specific written guidelines on how to use Facebook were not provided to students and teachers. Students were asked to use the platform to discuss questions and exchange ideas tied to methodological issues. Students were assigned certain course tasks to complete on the platform and encouraged by the course leader to participate in conversations. Teachers were encouraged to upload additional information as well as posing and answering questions via Facebook. After the course ended, an open-ended questionnaire about how students' experienced their participation in the Facebook group was distributed to the students via email.

Analysing the data

The process of integrating Facebook in learning practices was examined using a qualitative interpretive analysis focusing on identifying recurrent themes and concepts in the Facebook posts and comments, survey responses, and observations (Spiggle, 1994). A structural analysis was used, which focused on dichotomies and tensions between binaries. The themes typically revolved around a set of dichotomies concerning active versus passive participation, the public versus private, personal versus professional, and student versus teacher. Tensions between binaries were approached as posing challenges to, but sometimes also offering opportunities to collaborative

learning.

Results – Facebook and collaborative learning

The analysis reveals patterns of interactions between students and teachers in the closed Facebook group. Two obstacles to collaborative learning were identified: platform interactivity and the preservations of the traditional teaching role and the teacher-student relationship.

Platform interactivity

Social media is commonly viewed as supporting four types of social activities: communication, collaborative work, content sharing, and community building (Fuchs, 2017). Lury (2004) also suggests that interactive technology predisposes the user to certain predictable patterns of actions, “since the user of an interactive machine allows the machine to be active on the users’ behalf” (109). The exchange between lecturers and students in the Facebook group was characterised by interactivity rather than interaction. Lecturers and students predominately shared course and information content among one another. Lecturers typically introduced discussion topics, which students commented, passively viewed, or liked. Passive behaviour by students has been noticed in previous studies (Chugh & Ruhi, 2017). In order to prevent student passivity, active support from teachers is needed. Support may, for instance, involve, regular teacher encouragement and interaction, adequate and clear guidelines on how to use Facebook, and setting tasks that stimulate students to use their higher-order thinking skills (Bahati, 2015; Cevik et al., 2014; Chugh & Ruhi, 2018). There was a difference in the threads started by students and teachers in the sense that students’ threads typically concerned a specific question or a comment, whereas teachers’ posts probed participation involving cultural content, such as art exhibitions and videos in order to encourage students to

engage with methods on a deeper level, challenge their patterns of thinking, or assist them in selecting topics for their course essay.

Considering your recent studies, this exhibition might be worth visiting if you are interested in actively practicing your methodological reasoning and analytical skills. You could for instance apply some of the analytical tools from Rose's *Visual Methodologies* and analyse Woodman's work "On being an angel". 😊 (Teacher, new post)

Teacher-initiated posts received less recognition, in terms of likes and comments, than posts made by students. The post presented here was viewed by 94 students, liked by one student, and received one comment related to another matter. Interacting with other students seemed to be the primary benefit of using Facebook, more important so than interacting with the teachers. It should be noted that students also had their own Facebook group where they discussed course matters without the presence of teachers. The primary function of the Facebook group created for this study was therefore to bring together teachers and students. Student-initiated posts typically involved a concrete question to the lecturers. Bosch (2009) states in her study that students mainly use Facebook to pose questions about course logistics, but also about that which they do not feel comfortable asking in class. In the post presented next, the post was viewed by 88 students, liked by 8 students, and received one answer from a teacher in the comments field.

- Should we include the research questions of our study and the results from the observations in the paper? Or should we only include the when, what, how and why of the observations? (Student, new post)
- The main focus should be on how you conducted the observation and what this method enabled you to capture. It may be that you need to formulate a research question that can guide the observation. (Teacher, comment)

These exemplary posts illustrate the interactivity and interpassivity that characterize the exchange between students and teachers on the Facebook platform. Students and teachers have different expectations on the communication on the platform as well as different interests in using the platform for academic purposes (Kosik, 2007). Bosch (2009) furthermore found that students typically use the platform to contact other students to get information about assignments, while teachers tend to expect a higher level of reflection from the students. Lecturers' motivation of incorporating Facebook in teaching is often motivated by wanting to "meet" students in their social spaces, but sometimes not being fully able to integrate the academic content into these spaces (Stutzman, 2008), which may partly explain the gap between teachers' and students' expectations of Facebook as a learning tool.

The survey results show that for students, the benefits of using Facebook on the course were foremost tied to easy-access of information and as a fast way to reach teachers. Students expected instant access to teachers and complained when teachers' answers did not arrive within a few hours after a question had been posed. In the beginning of the course, teachers played a more important role for activating students on the platform, however, with time, students began to interact more and more with one another, developing a joint pattern of communication. Thus, it took time to establish a mode of communication in the group, which was less teacher-oriented and more student-driven.

To a certain extent, social media involves relatively short and effective messages and is not suited for nuanced and complex discussions. Rather the platform communication is underpinned by binary (or polemic) logic (e.g. like/dislike, emojis, agree/disagree, and so on). This is reflected in the students' posts, which primarily consisted of questions and answers concerning practical issues, rather than providing

reflections and new insights. In this respect, Facebook may not be an appropriate tool for collaborative learning.

Teacher and student roles

I am not sure of how engagement could have been increased in the group. While I like the idea of testing new forums of communication, I view Facebook as something that I wish to keep separately from my education, a place to interact with my friends and classmates and not with lecturers. (Student V)

Lecturers and students registered for the Facebook group using their private accounts. Nevertheless, lecturers did not receive any private friend requests from students, which indicate that students clearly distinguished between the realm of education and the realm of private life. Teachers and students took different roles in communication. For example, the authority-based figure of the lecturer was preserved on the platform by way of that students asked the questions and teachers answered them. While we initially expected their relationship to be more horizontal and symmetrical, this was not found to be the case. Teachers moderated discussions and provided relevant content and information. They prompted students on the platform to post and participate in discussions. Commonly used phrases in teachers' posts were "If you have questions, you are welcome to share them here", "Let us know what you think!", "We want to hear your opinion on this". Still, the platform made teachers share their personal opinions and thoughts in a higher extent than in the classroom. For example, one teacher wrote:

Discourse is a rather fluffy concept that has been defined in various ways, by various thinkers and academics that work in different disciplines and depart from different theoretical perspectives. So it is understandable that it is a hard concept to grasp. I will present some of my own thoughts about how you can think about the concepts of Discourse and Critical Discourse and you can read them if you are interested, it is not compulsory

reading. (...)(Teacher, new post, viewed by 84 students)

While teachers could sometimes address the student group in a personal manner, students kept a formal tone in the forum. All comments and questions posted were relevant to the course. The survey results furthermore revealed that while students experienced that communicating on Facebook with teachers were positive in terms of providing instant access to teachers; they were also aware of the consequences. Some of the respondent indicated that they found the Facebook group stressful in that it constantly reminded them of coursework. The teachers used Facebook differently. One teacher posted occasionally in the group, while another teacher communicated frequently with students on the platform answering their questions prompting them to engage with different social science research methods and approaches. The third teacher did not want to interact with the students on the platform, due to private moral concerns regarding the use of Facebook in teaching. The ASHE higher education report on social media in higher education (2016), state that educators often felt exposed and anxious without clear guidelines on how to use social media (Rowan-Kenyon et al., 2016). Educators felt safer with a code of conduct in place against which to defend their actions if problem should occur. They also experienced that it was difficult but necessary to sensor posts on Facebook, since digital traces are permanent. Thus, educators feared being held accountable later for posts and comments.

Concluding discussion

The research objective in this study was to increase the knowledge of the role of social media, using the example of Facebook, for collaborative learning in higher education.

There are advantages and disadvantages with using social media in higher education.

The advantages are that teachers and students can communicate with each other more

directly and in real-time. There were also indications both in the open-ended survey answers and in the activities on Facebook that the level of student engagement in questions related to social science methods increased. Moreover, Facebook is a useful tool for providing additional examples, inspirations, and illustrations of lecture contents. Nevertheless, students experienced the instant access to the course as stressful, since it blurred the boundary between the personal life and university studies. Safeguarding privacy was also important among teachers; connecting with students via Facebook was in part experienced as problematic. For collaborative learning to occur, however, social media platforms need to be fully integrated with the course aim and structure and used to execute specific tasks. For example, social media may serve as spaces in which to collectively prepare, plan and solve tasks. Unplanned use of Facebook in higher education, though, could be detrimental to collaborative learning, which relies on mutual discussions and reflection. Our study indicates that such discussions need to be organised by the teacher and monitored, at least at the outset. Otherwise, there is a risk that discussions will be characterised by interactivity and turned into mere sharing of content, rather than elevating reflection and a deeper learning of the course content. In order to create a constructive learning environment, clear guidelines of how to use social media in the course needs to be put into place. Without a defined structure that supports collaboration among students and teachers, social media is not meaningful to use for educational purposes. Further research may want to investigate the development of suitable tasks and learning settings for social media platforms.

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