

An exploratory study of undergraduate law students' experience of online peer and self-grading: Towards an experiential perspective

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ABSTRACT: Many studies have reported on the use of online technology in teaching and learning to engage students and to overcome limitations in time and place. However recent research has found integration of technology to be less successful in fostering quality student learning. This study suggests to further our understanding of student participation in learning activities involving online learning by use of the participatory qualities framework. The qualities reference the degree to which expressivity, exposure, investment, sociality and persistence is present in a learning activity. Research on this subject is still in its exploratory stage, thus the exploratory research question: How do students experience the structuring context for participation in the learning activities they engage in online. Data was collected through focus group interviews with a purposive sample of students (N=8) in an undergraduate Law programme at Aarhus University, Denmark. During a first semester course, students were invited to participate in a learning activity, which involved online peer and self-grading. Six elective assignments were offered to 74 students throughout the semester. Following almost full participation in the first assignment, the number of students participating decreased throughout the rest of the course. Preliminary data analysis suggests that students experienced the activity to involve high commitment (investment), while exposure, expressivity, and sociality were perceived to be low. It remains to be explored how student perception of participatory qualities influences student learning.

1 INTRODUCTION

1.1 The potential of technology in teaching and learning

The use of technology in Higher Education teaching has evolved rapidly. Several institutions have made a strategic decision to promote technology in educational practices due to its perceived potential to transform learning environments and learning process in a significant way (Garrison & Kanuka, 2004). In particular, technology in learning situations is associated with making learning material more accessible for students, and provide feedback in a more manageable way (Kirkwood & Price, 2011). Despite the potential, recent research have found educational practices that make use of technology, to be less successful in fostering deep learning and cognitive presence (Bayne, 2015; Garrison & Cleveland-Innes, 2005; Kirkwood & Price, 2014; Kreber & Kanuka, 2006). For example, a review study by Kirkwood and Price (2014) conclude that evidence of impact of technology in empirical studies mainly focuses on structural and quantitative improvement. That is, teachers may effectively use technology to improve student activity and flexibility. However, when it concerns promoting deep learning and engagement among students, knowledge is less clear.

The fundamental question of “*how do students learn in online learning environments?*” (what is done, and why) has been the subject of considerable research. In a study on qualitative differences in the ways students conceive of, and approach, learning through discussion in blended learning contexts, Bliuc and colleagues (Bliuc, Ellis, Goodyear, & Piggott, 2011) found that students approaches “*varied considerably, with respect to their associated intentions. Some students described participating actively in discussion in order to get a better understanding of the topic, by integrating theory and practice and by critically listening to other people’s opinions. Other students described their participation as minimal – intended only to receive some feedback about their views and to meet course requirements*” (p. 859). Another study by Delialioglu (Delialioglu, 2012) showed that variation in students’ approaches to learning were affected by variation in instructional strategies and learning environment. Other research into effective educational practices have found student anonymity to enhance student participation in online learning activities (Miyazoe & Anderson, 2011). However, students approaches to online courses and learning may also stem from general expectations towards

online courses. Tichavsky et al. (Tichavsky, Hunt, Driscoll, & Jicha, 2015) found that students' perceived face-to-face courses a better delivery format than online classes. Students preferred face-to-face learning due to their perception of online learning as involving less interaction with instructors and peers, and higher requirements for self-regulating skills.

The research draws our attention to the question of how to account for student meaning making of learning online, and the increase in use of online and face-to-face learning experiences highlights the need to intensify our research focus on key aspects of these experiences from a student perspective.

1.2 Exploring student agency

Recent research suggests that the notion of student agency may further our understanding of student learning (Ashwin, 2008; Klemenčič, 2015, 2017). As introduced by Klemenčič, student agency refers to the "quality of students' self-reflective and intentional action and interaction with their environment" (Klemenčič, 2015, p. 1). Building on Bandura's notion on human agency (Bandura, 2006), students are seen as agentic. From this perspective, student behavior is temporally embedded, informed by past habits, judgement of the present and projections of the future. Following this, students construct their agentic behaviour in light of what seems meaningful within a temporally embedded framework. This theoretical tool provides an analytic focus on the dynamic and interactive aspects of teaching-learning processes (as suggested by Ashwin, 2012). It furthermore draws our attention to micro processes in learning, such as how different learning situation may enable or hinder students in being agentic.

Nevertheless, the empirical challenge of agency is how to locate and compare different structuring contexts of action. Several studies, which explore agency, have made use of very different measurements considering their research focus. As an example, agency has been explored through engagement surveys related to students' experience of a course (Lindgren & McDaniel, 2012), newly developed scales assessing course-specific agency (Jääskelä, Poikkeus, Vasalampi, Valleala, & Rasku-Puttonen, 2016) and through analysis of emotions and discourse (Maxwell & Aggleton, 2014). However, to the best of our knowledge, a tool for exploring how students perceive the structuring context for participation in learning activities is missing. That is, a tool that may assist us in conducting micro analysis of the experiential aspects of participation.

2 RESEARCH AIMS

The aim of this preliminary study is to explore how students experience the structuring context for participation in the learning activities they engage in online.

The study is undertaken by the use of the "the participation gestalt framework" provided by Dalsgaard, Halskov and Iversen (Dalsgaard, Halskov, & Iversen, 2016). The framework builds on Goffman's examination of performative behaviour in public places and related socio-cultural research showing how participation is related to identity maintenance and socio-cultural norms (Dalsgaard et al., 2016, p. 1; Goffman, 1967; Packer & Goicoechea, 2000). The framework encompasses five dimensions of participatory qualities; *expressivity, exposure, investment, sociality and persistence*. Each dimension is measured along a continuum from low degree, medium degree to high degree. Expressivity concerns the degree to which interacting with a digital, interactive object allows participants to express thoughts and feelings. Exposure concerns the degree to which interacting with the object attracts others' attention/ is visible to others. Investment focuses on the degree to which successful interaction with the digital object requires resources and effort (commitment). Sociality is the degree to which the interaction offers opportunities for engaging with others. Finally, persistence reflects the degree to which the outcome of interaction is accessible to others (timespan). Some of the dimensions are known from existing models. As an example, expressivity and sociality is very similar to 'social presence', from the Community of Inquiry model (Garrison, Anderson, & Archer, 1999), described as: "the ability of participants (...) to project their personal characteristics into the community, thereby presenting themselves to the other participants as "real people"" (Garrison et al., 1999, p. 89).

3 METHOD

3.1 Case

Data was collected from focus group interviews with first semester law students enrolled in a bachelor degree programme at a large Danish university. The course targeted approximately 460 students. The teaching involved lectures (2 x 2 hours of lectures each week), and small class teaching (4 hours per week, approximately 35 students in each group). Throughout the semester, students were given different types of assignments enabling them to develop the necessary competences and skills required for the course. In order to provide students with the opportunity to reflect on their own learning progress, and reduce teacher workload in relation to assessment of individual assignments, a selected group of students (N=74) were invited to submit their individual assignments online followed by anonymous and online peer-assessment and self-assessment. The assignments involved identification and application of facts and rules in judicial cases. The online software application used for this process was Peergrade.io. Six assignments were added as elective assignments throughout the semester. Students were asked to assess assignments from two fellow-students in addition to assessing their own by the use of a rubric. The distribution of peers was conducted automatically by peergrade.io among students handing in the assignment. All phases of peer grading involved full student anonymity. Initially, the activity fostered high level of student participation numbers. However, student engagement decreased significantly during the semester. Given this, the teachers involved hypothesized that student engagement was related to student motivation and student learning outcome.

3.2 Participants

Eight participants were selected through purposive sampling combining students known to have participated in the online peer and self-grading activity as well as non-participating students. The selection process was supplemented with snowball sampling to increase student numbers (e.g., we asked the students to recruit additional students for the interview).

3.3 Data collection

A semi-structured interview guide, based on previous research students perception of blended learning activities (E.g. Bliuc et al., 2011; Ellis & Goodyear, 2010), was used to guide the discussion concerning students' motivation in relation to choice of study, students' experiences of studying and students' perceptions of the online learning activities. Students were asked to describe the perceived value of the educational programme (e.g., *Why did you choose to study Law ?*), their experience with the programme (e.g., *what are your study experiences so far?*), their perception of the assignments (e.g., in your own words; what do you think is *the purpose of the assignments?*), and their perceptions of and approaches to the learning activity involving the use of Peergrade.io (e.g., *describe what you have been asked to do, and what you have done*). After the first group interview, questions relating to self-efficacy were added to the interview guide (e.g., *do you think, you will be able to pass the exam successfully*). Participants were asked to fill out an online survey before attending the meeting. This concerned background information such as gender, age, previous education, grade, and whether the educational programme was the student's first or second priority or lower than this. Finally, students were asked to rate the participatory dimension for the peer-grade assignments.

All interviews were conducted in Danish during autumn 2016 and video recorded with the permission of the participants. Informed-consent forms were signed by the participants and explained at the beginning of each focus group. The first author facilitated the focus groups with the assistance of the second author who observed and posed questions on neglected issues which emerged during the sessions. All interviews were transcribed verbatim.

3.4 Data analysis

Data used for analysis in this paper only relates to the participatory qualities of the online peer and self-grading activity. This includes students' rating of dimensions for participation in the mentioned assignment (Table 1).

	Low	Medium	High
Expressivity: The degree to which interacting with the learning activity allows students to express thoughts and feelings			
Exposure-peers*: The degree to which interacting with the learning activity attracts peers' attention/ is visible to peers			
Exposure-teacher*: The degree to which interacting with the learning activity attracts the teacher's attention/ is visible to the teacher			
Investment: The degree to which successful interaction with the learning activity requires resources and effort (commitment)			
Sociality: The degree to which interaction with the learning activity offers opportunities for engaging with peers			
Persistence-peers*: The degree to which the outcome of interaction with the learning activity is accessible to peers (timespan)			
Persistence-teacher*: The degree to which the outcome of interaction with the learning activity is accessible to the teacher (timespan)			

Table 1. The framework of participatory qualities with seven continua. In order to apply the framework to the study context, dimensions exploring aspects of interacting with others were elaborated, resulting in new dimensions (marked with (*)).

4 RESULTS

Eight students participated (Table 2). Participants were asked to rate the participatory quality dimensions for the peer-grade assignment. The individual statements were identified and located on a continuum for each dimension.

Focus group	Participants (total)	Participant number
1	3	(1, 2, 3)
2	3	(4, 5, 6)
3	2	(7, 8)
Total	8	

Table 2. Sampling result.

Table 3 reflects students' responses of the degree to which a dimension was present in the peer and self-grading activity. As reflected in the table, the distribution of responses were fragmented. Missing statements from participants concerned either: Lack of student participation in the learning activity, lack of verbal student statement during the focus group interview, or researchers' decision to exclude the dimension during the focus group due to difficulties in addressing the dimension in a clear way. The latter mainly concerned the dimension of 'Persistence'.

In general, the students' statements concerning 'Sociality' and 'Expressivity' were related to how they *approached* the dimension and/or their general *perception* of possibilities of the dimension. Consequently, the sub-dimensions, student approach (SA) and student perception (SP), were added post-hoc.

Dimensions	Investment		Exposure-teacher	Exposure-peers		Sociality		Persistence-teacher	Persistence-peers	Expressivity	
	AS	FE		AS	FE	SA	SP			SA	SP
Participant 01	+	*/-				-				-	*

Participant 02	+	*/-	-	-	+	-	+				
Participant 03	+	*/-	-	-		-				-	
Participant 04 [^]											
Participant 05 [^]											
Participant 06 [^]											
Participant 07	*	+	-			-	+			-	*
Participant 08	+	+	-	-		-	+	-	-	-	*

Table 3. Distribution of students' rating of participatory qualities. Explanation: (AS) Assignment, (FE) Feedback, (SA) Student approach, (SP) Student perception, (+) High, (*) Medium, (-) Low, (^) Students, who during the interview, reported not to have participated in the assessed activity.

4.1 Perception of participatory qualities

Figure 1 summarizes the results of the perceived participatory qualities of the online peer and self-grading based on participants' ratings. First, students' rating indicate a discrepancy in investment between the experience of engaging with the assignment (mainly perceived as high) and of engaging with the feedback (in general perceived as medium). Second, the activity was rated as low on exposure-teacher and exposure-peers, concerning the degree to which interacting with the learning activity attracted the teacher's attention or the attention of peers. Third, students, in general, perceived the possibilities of sociality and expressivity to be higher than their self-reported approach.

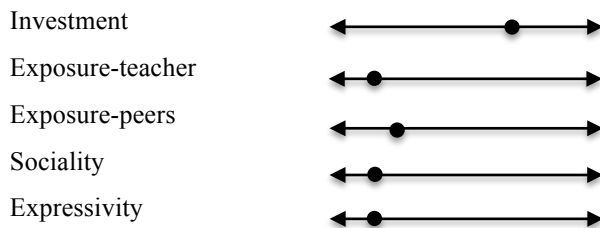


Fig. 1. The seven continua of participatory qualities related to online peer and self-grading. Persistence - peers and - teacher are not reflected in the figure due to the low number of ratings.

5 CONCLUSION AND REFLECTIONS

In order to better assist teachers in developing effective educational practices in higher education teaching and learning settings, we have argued that there is a need for more knowledge concerning the experiential aspects of participation in learning activities' involving online learning. In this study, we therefore conducted a micro analysis of possible structuring contexts for student participation in online peer and self-grading. Our preliminary results revealed an imbalance between the participatory dimensions present in the activity. While investment appeared to be present to a medium/high degree, the remaining dimensions appeared not to be present or only to be present to a low degree. High commitment was mainly related to activities leading to development of students' own understanding, whereas less commitment appeared to be related to provision of feedback to peers. Whether the particular structuring context of participation can explain the relatively low participation in the peer-grade activity remains to be analysed. Nevertheless, the data reported here seem to support findings from earlier studies, e.g. Tichavsky et al. (Tichavsky et al., 2015) on student perception of online learning. Elaborating on the study by Mizazoe and Andersen (2011), our study suggests that anonymity or low exposure may not induce higher student participation per se in peer-grading activities with high to medium commitment.

Finally, our study explored the conceptual framework of participatory qualities. Surely, revisions to the framework are necessary. Among others, we suggest to revise the dimensions presented to students as questions addressing "the extent to which the student engaged with peers in the learning activity" or "the extent to which the student expressed his/hers' thoughts and feelings during the learning activity" (as an example). To further research into participatory qualities of blended learning, future research should apply the framework consistently to a sample of students. In addition to this, further analysis is needed to explore the scope of participatory qualities.

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