



THE VIRTUAL CLASSROOM FOR EDUCATIONAL ACTIVITIES: UNDERSTANDING INFRASTRUCTURES FOR LEARNING

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Abstract

Online learning is a reality for higher educational institutions around the globe. Since the beginning of the 21st century, many universities in Sweden have begun to offer online courses at a variety of levels completely online, including synchronous meetings. This study aims to contribute by investigating (a) how space, in terms of educational infrastructure with a range of affordance for learning, is co-created by the participants in a open online course and (b) how a range of activities are mutually shaped by the course design and by the learning space(s) where the course is offered. The data we focus upon come from project KSSL (combination course for students and lifelong learning) and consist of recordings of online seminars from a course in Pedagogy in higher education. The seminars were conducted through Adobe Connect, a multimodal environment which offers synchronous oral communication, with cameras for (limited) access to paralinguistic cues, and textchat. Students' texts and the transcriptions of the asynchronous discussions in the course homepage are part of the data along with the course homepage, as well as tracking of the social media presence of the course in Facebook and Twitter. By using an (n)ethnographic approach, the analysis highlights the ways in which learning spaces as infrastructure shape and are shaped by the range of activities that are part of the course, but also by the openness of the space itself, which affords the emergence of alternative pathways for participation and thus, we argue, for learning.

Introduction

As online learning is becoming more and more a part of our everyday lives (at least in the global North), we are endowed with the possibility of engaging in communication everywhere we go and with whomever we wish to, without bothering about logistical issues. Students engaging in online courses like the one focused in the present study (an open, online course offered by a Swedish university) do not need to physically commute to the location of the institution providing the course. In the virtual space of the online course, there is no common locality beyond the pieces of local spaces that individuals can enter (Messina Dahlberg, 2015). Such disrupted space is what frames (in terms of constraints and affordances) participation and learning in online communities. The openness, flexibility and high potential for inclusion are indeed characteristics that have made online education very appealing for a range of different institutions and for a variety of reasons: they aim to open their doors to a wider range of cohort of potential students, and to "educate the masses", offering online courses open for everyone with an internet connection. Big scales projects like MOOCs (Massive

Online Open courses) are the result of a long process of digitalisation of education, from distance courses where almost only written texts were sent back and forth between students and tutors, to other kinds of texts, which afford participants to communicate multimodally and (a)synchronously through digital technology. Thus, we argue, online educational practices are required to become more flexible for larger student cohorts who are (im-)mobile for a range of reasons. Some are constantly on the move for reasons other than studying, yet still want to be able to attend weekly online lessons; others prefer to stay at home (Messina Dahlberg, 2015). Learning spaces need to address heterogeneity with regard to how the online virtual classroom can be framed in terms of a space for learning and a space as infrastructure (Edwards, 2012; Thomas, 2010).

Participants in the data-set focused upon in this paper have access to a range of semiotic resources and literacy practices e.g. videoconferencing platform, forum discussion, social media practices. From a sociocultural perspective (reference), it is neither interesting nor fruitful to see the semiotic and the technological dimensions of learning as separate entity or as a fusion of the two. Such a socially oriented position recognises interaction and the deployment of tools (including digital technologies) as a central and fundamental dimension in processes of socialisation and identification of individuals. That entails an understanding of learning as a dimension of human life that cannot exist in a social vacuum or in some neutral fashion (Messina Dahlberg & Bagga-Gupta, 2016). Rather, a central tenet behind this view is a conceptualization of the human mind as hybrid “half analogizers, with direct experience of the world, and half symbolizers, embedded in a cultural world” (Donald, 2001; p.157). Culture is, thus, a link between the two modes, the sensory-cognitive system of the brain and the symbolic one (Donald, 2001). This linking is instantiated through the use of symbolic systems and language, being the tools of tools (Vygotsky, 1978), in a process called mediated action.

A sociocultural perspective on learning centre-stages communicative practices and the use of tools as the conditions that shape the ways in which human beings understand and relate to the world out there allows us to frame educational activities as: (a) socially oriented, (b) not bounded to individual’s biological conditions and c) distributed across networks of activities across time and space (see Hutchins, 1995; Resnick, 1994, Rogoff, 1990). Here, we argue, language and thought are in symbiotic relation to one another. From that follows that learning (in terms of creation of knowledge and a broader repertoire of experience) is only visible in the interaction among people and their cultural tools. Hence, a focus on the communicative aspect of the education experience is needed in order to create and design learning environments that allow learners to participate in meaningful ways in education.

This study aims to contribute by looking at a) how space, in terms of educational infrastructure offering a range of affordance for learning, is co-created by the participants in a open online course and b) how a range of activities are mutually shaped by the course design as well as by the learning space(s) where the course is offered.

Theoretical and methodological approached

The ability to access large amounts of information has had huge repercussions on how we think about learning and instruction. The concept of social learning used by Lankshear and Knobel (2011) and Buckingham Shum and Ferguson (2012) frames an understanding of learning as a process that occurs in and through social interaction. While their take on social learning clearly stems from a Vygotskian perspective, what is interesting for the aim and key issues of this study is how the concept of social learning emphasises access not only to educational content but to other people who share similar interests in that content: “It is within and through shared practice that meanings—significance—ideas, categories, evidence, tools, tests, techniques, and all the other things that constitute knowledge come into being” (Lankshear & Knobel, 2011; p.218). Bliss and Säljö refer to the symbiotic nature of interaction between individuals, tools and artefacts and social practices: “we shall be striving to develop a new theoretical framework which can account for, and thus attempt to explain, the nature of this interaction in order to better understand the role of context and situation in thinking, learning and reasoning” (1999; p.10). However, shaping (and (re)searching) environments in which a shared and collaborative practice is implemented can be a challenge for both (educational) social platform designers and educational institutions. The study of such challenges is one of the main interests in computer-supported collaborative learning (CSCL) research (see for example Suthers et al., 2010; Suthers & Rosen, 2011; Suthers et al., 2013, Kjellström, 2009). Nevertheless social learning, and its extension, online social learning, is also interested in the “non-academic contexts in which it may take place (including the home, social network, and workplace) and the use of free, ready-to-hand online tools, with no neatly packaged curriculum or signed-up peer cohort” (Buckingham Shum & Ferguson, 2012; p.9), thus adding an important dimension in the scholarship of CSCL. Here the concept of ‘orchestration’ is used to frame the ways in which, similar to instruments in a musical score, the single educational components enhance one another and provide space to one another (see e.g. Koschmann, 1996; Järvelä et al., 2015; Guribye, 2015; Thomas, 2002). Also in the classroom, to orchestrate is a useful metaphor to address the use and combination of a palette of methods to shape the appropriate pedagogical environments for learning. Following this line of thoughts, along with the pedagogical framings in the course, the infrastructures for learning are also shaped by the choice of learning platform in terms of how a course can be envisaged and designed. Also the competence of the instructors, access to support and the support itself are framing factors in the course design and implementation, along with the students’ prior experience in curriculum-based courses (Guribye, 2005; 2015). All the dimensions outlined above are equally constitutive of the course (infra)structure and affect its structure, including the affordances and the constraints therein.

The virtual classroom as learning space – the KSL project

The data we focus upon come from project KSL (combination course for students and lifelong learning) and consist of recordings of online seminars from a course in Pedagogy at basic level offered by a university in Sweden. The aim of the project is the creation of a course design in terms of space as infrastructure that would entail the possibility to include both

students regularly enrolled in a course, together with an open version of the same course (an open track), similar to a MOOC. This, in turn, would allow enrolled students and the participants in the open track to constantly meet, discuss and create networks, thus opening up the doors of the course to other groups in society. The course, of the duration of ten weeks, is envisaged in terms of a series of recorded lectures, synchronous meetings, participation in forum discussions and text production. The content of the course deals with basic concepts in educational philosophy as well as the study of Education as practice. The course material (lecturer, links to open education resources, texts etc.) is made available through an open homepage. A learning management system is used by the enrolled students for asynchronous communication between students and instructors as well as in concomitance with the assessments of the course final task. The four seminars (open for both enrolled students and the participants in the open track) are conducted through Adobe Connect, a multimodal environment which offers synchronous oral communication, with cameras for (limited) access to paralinguistic cues, and textchat. The environment also includes a notepad and a whiteboard where documents can be uploaded and commented on. Students' texts written in advance for seminar discussions as well as transcriptions of the asynchronous discussion from the course homepage are part of the data. The study also includes the analysis of the course homepage as well as the Facebook page and the Twitter posts related to the course hash tag.

Preliminary findings and discussion

In the course included in the KSSL project, the creation of a space for learning that would accommodate a combination of the open and closed tracks in the course has been a challenge in a range of different ways. Firstly, the course has been reframed to attend to the openness of the course and the creation of lectures and other material that could be framed in terms of reusable learning objects (RLOs). Secondly, the design and implementation of the course entailed the orchestration and collaboration across different communities within the university (both faculty members and staff at the coordination and communication office). Finally, the heterogeneity and fluidity of the course and the spaces involved imply that alternative methodologies are needed in order to investigate and follow the mobility of people, texts, tools and ideas across a variety of sites. By using an (n)ethnographic approach, the preliminary analysis highlights the ways in which learning spaces as infrastructure shape and are shaped by the range of activities that are part of the course, but also by the openness of the space itself, which affords the emergence of alternative pathways for participation and thus, we argue, for learning.

The questions that are brought to the fore by this course design are however still many and we are only at the beginning of this journey. What are the implications for learning (also in terms of lifelong learning) of the combination of enrolled students and the open track participants? What are the ways in which the encounter of these two course forms (now merged in one) affects the collaboration across sites, mediated by digital technology? Social learning analytics (Buckingham Shum & Ferguson, 2012, Messina Dahlberg, in press) offer valuable tools to map the interaction in such online collaborative sites. Suthers et al. (2010, 2013) propose an analytical framework that accounts for the co-occurrences between what they frame in terms

of events, activity, uptake and contingency in the study of human interaction. Contingencies are here framed in terms of “how acts are manifestly related to each other and their environment” (Suthers et al., 2010). Such a focus on the importance of context in terms of the sequentiality of the utterances and their relation to their environment is relevant also to our interests in mapping and investigating the range of activities that are focused upon by the participants in the course (both enrolled and in the open track). Similarly, a focus on communicative practices and their sequentiality in space and time is crucial for understanding the organization of interaction in online (a)synchronous environments (see also Trausan-Matu & Rebedea, 2010; Dascalu, Trausan-Matu & Dessus, 2013). To conclude, we argue that one of the main contributions of this paper lays in its focus on the situated, but also fractured, activities of the participants in the KSSL project and the combination course included in it. A study of the tensions and contradictions in terms of what we call the geography of the learning spaces in higher education, are at the core of the project in terms of its openness but also partial closure between the enrolled students and the participants in the open track. This, it is suggested, will also illuminate the ways in which spaces are constituted by and for learning in terms of the creation of infrastructures that are stable but, at the same time, fluid and easily accessible for global participation.

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