



How social are social media technologies (SMTs)? A linguistic analysis of university students' experiences of using SMTs for learning



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ABSTRACT

This study investigated how 20 university students described their collective and individual learning experiences using social media technologies (SMTs). Data consisted of transcribed focus group discussions, which were analysed for students' use of first person singular and plural pronouns as well as for the kinds of verbs they used to describe their learning. Findings indicate that none of the participants used first person plural pronouns more frequently than first person singular pronouns to describe their learning experiences. Students also used possessive, stative and passive verbs in addition to verbs denoting more traditional learning behaviours associated with cognitive, psychomotor, affective and conative activities when discussing their learning. We conclude that, although evidence of a clearly definable 'collective intelligence' was lacking, co-occurrences of both group-oriented and self-oriented utterances were evident. Students' use of verb types highlighted issues of ownership, identity and control as additional features of their SMT enabled learning experiences.

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1. Introduction

There has been a significant history of research conducted into collaboration in educational settings that strongly supports the development of "collaborative knowledge building communities" (Lewis, Pea, & Rosen, 2010, p. 112) for the benefit of both individual learners as well as the learning and teaching institutions themselves (see for example Barron, 2003; Pea, 1994; Scardamalia & Bereiter, 1994). The notion that knowledge is constructed as individuals engage in various forms of social interaction is a central tenet of social learning theory (Henning, 2004). From such a theoretical perspective student learning and knowing are conceptualised as shaped by interaction with others in specific contexts of activity, since cognition is characterised as a socially rather than individually produced process (Hill, Song, & West, 2009, p. 89).

Social media technologies (SMTs) such as blogs, wikis, social network sites and media-sharing sites are web-enabled technologies that have been designed to facilitate content that is "co-created by and for the community of connected users" and represents "collective intelligence" (O'Reilly & Battelle, 2009, pp. 1–2). As we have noted elsewhere (Waycott, Gray, Thompson, Sheard, Clerehan, Hamilton & Richardson, 2010), these technologies have become equated with collaborative and participatory modes of information sharing

and knowledge production. Users can easily publish and share their work, connect with a community of like-minded people, and comment on other users' contributions. Many educational commentators have argued therefore, that social web technologies offer great potential for supporting students' learning in higher education (e.g., Alexander, 2006; Boulos & Wheeler, 2007; Grosbeck, 2009; Huijser, 2008; McLoughlin & Lee, 2008). The centrality of language to these web-enabled modes of information sharing, learning and knowledge production has also been widely recognised by scholars in the fields of linguistics, computer-mediated communication and digital technologies (Androutopoulos, 2006; Baron, 2008; Gillen & Merchant, 2013; Mills, 2011; Thurlow & Mroczek, 2011).

The interactive and 'participatory' nature of SMTs may create ever more viable and desirable learning environments (Hill et al., 2009, p. 100) that enable users to gain greater insights into each other's worlds and experiences. However, Lewis et al. (2010) claim that this feature of SMTs fails to provide much scope for "interaction between these worlds [and] little possibility for the melding of or co-creation of worlds" (p. 112). What actually happens, they suggest, is that despite the fact that participants may be able to see, hear or follow myriad multimodal traces of each other online, each remains as an individual with his or her own set of personal objectives rather than becoming a member of a group engaged in dynamic collaborative processes and activities that foster common experiences, shared goals and generative learning communities that lead to the production of public knowledge (Lewis et al., 2010, p. 113).

Although some sources suggest that SMTs may foster the development of "collective intelligence" (e.g. O'Reilly & Battelle, 2009, pp. 1–2), it is not clear whether these claims might be supported empirically. In

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other words, although learning activities using SMTs may be designed to encourage students to interact together in knowledge building communities to produce collectively co-constructed artefacts, this may not accurately reflect the nature of the learning that is actually taking place. The need to investigate the potential for such a potential disjuncture and lack of alignment has given rise to the following questions that drive the present study: Do SMTs facilitate collective, collaborative and co-constructed forms of learning? How do students characterise their experiences of using SMTs for learning? Do they identify with these experiences in collective and group-based ways or as autonomous individuals? Is a conceptual framework that opposes 'group' and 'individual' in such a binary way useful in helping us to understand more about the kind of learning that may occur using SMTs?

1.1. Aims and research questions of present study

The purpose of our study is to investigate collective and individual student experiences arising from the use of SMTs as part of formal learning.

To do this we address the following research questions:

1. Do students represent themselves as members of a group with shared learning goals and common experiences, or as autonomous self-directing individuals with their own set of learning objectives?
2. How do students describe their collective and/or individual engagement in terms of different kinds of learning activities?
3. What kind of pedagogical framework might support the kind of learning evidenced by findings to questions (i) and (ii) above?

To investigate these questions we reviewed the literature, and developed a methodological approach to investigation through a linguistic analysis of the spoken discourse of university students who had completed a semester of study using various SMTs for assessable learning activities. Our data were elicited in student focus group discussions. Our interest in these questions was an outcome of a larger project that investigated academics' use of SMTs for assessment of student learning (Gray et al., 2012). The present study seeks to explore how 'social' the student experience of these SMT-based pedagogies was.

2. Literature review

As the educational use of interactive technologies has strengthened in popularity, so has the need for research that can provide insights into the distinctions and the connections between social and individual learning. Educational researchers have employed various conceptual lenses to look at questions of individual and social learning in contemporary online learning environments. Researchers such as Henning (2004) have highlighted the interactional aspects of social learning to explain how knowledge is constructed while individuals undertake various activities that require engaging with and responding to others. Such interactions, as argued by Hill et al. 2009, p. 89, have the potential to develop cohesive communities of learners. Research by Fahy (2002) focussed on the ways in which linguistic qualifiers (such as 'I think' or 'maybe') and intensifiers (for instance 'very' or 'only') related to gender differences in communication styles in online discussion boards. The value of this linguistic approach to computer-mediated communication research in creating greater awareness of the importance of the role played by language in social learning theory, and in the formation of web-enabled learning communities, is also emphasised by Hill et al. (2009, pp. 93–94).

Westberry and Franken (2013) used an "ecology of resources" model to interpret university students' accounts of online learning, determining the resources required to produce social interaction of a type that guaranteed learning would occur. In their review of the field,

Salomon and Perkins (1998) put forward three ways of understanding the relationship:

1. Individual learning can be less or more socially mediated learning.
2. Individuals can participate in the learning of a collective, sometimes with what is learned distributed throughout the collective more than in the mind of any one individual.
3. 1 and 2 can interact over time to strengthen one another.

As Petreski et al. (2011) argue, technology-enabled social learning reflects a shift in pedagogical focus from the design of learning content to the ways in which this content is co-created and shared (Petreski et al., 2011), thus opening up questions about the potential for SMTs to lead to the production of various kinds of collective intelligence. Collective intelligence has been defined as a form of intellectual engagement and cooperation between human collectives that can lead to creativity, innovation and invention (Lévy, 1997, 2010; Surowiecki, 2004; Tovey, 2008). Researchers such as Lévy (2010) highlight the importance of communication media and "human-centric social computing" (Lévy, 2010, p. 93) practices such as social tagging through the use of blogs, wikis and other forms of SMTs in the development of a culture-driven collective memory, which in turn claims Lévy, will play a major role in the shaping of personal and cognitive abilities. Lévy (2010, p. 72) further asserts, that the invention of different kinds of digital social media, which facilitate the sharing of unlimited amounts of data that represent the cultural output of infinite numbers of past and present communities, is likely therefore not only to impact on the cognitive abilities of individuals, but also to lay the foundations for the evolution of various forms and expressions of collective intelligence.

According to Lévy (2010, p. 82), collective intelligence can be defined as a series of six networks that are characterised as representing different kinds of capital: (i) the will networks consisting of the ethical capital of governance including values, rights and duties; (ii) the power networks denote the practical capital associated with finance and competence; (iii) the bodily networks which refer to biophysical capital and include equipment, technology, health and environment; (iv) the personal networks consisting of the social capital associated with trust and social roles; (v) the documentary networks relating to cultural capital which include the media and messages; and (vi) the knowledge networks consisting of epistemic capital associated with the Arts and Sciences.

In discussions about the interrelationships between groups and individuals in relation to text creation and production when using SMTs for learning, the question of who is speaking becomes central (Fløttum, 2005, p. 41). In interactive online contexts, being able to identify who is speaking may not be straightforward, since if SMTs are indeed redefining time/space relations, this will in turn affect an individual's sense of 'self' (Kramsch, 2009, p. 159). Further, Kramsch argues, notions of the autonomous individual who is actualized through their interactions with others are gradually being replaced by "a networked self, whose cognition and emotions are distributed across an electronic web of global connections, and for whom time and space have been collapsed through a keyboard on a computer screen" (Kramsch, 2009, p.159).

Determining how to engage in pedagogically effective ways with the multimodal processes and products that are generated in social and multimedia environments also raises issues that challenge traditional understandings of what constitutes 'text' and 'data', as well as concerns about how notions of individuality might need to be re-conceptualised (Herring, 2013). In SMT enabled learning environments framing questions about speaker identity in mutually exclusive and oppositional terms, such as 'individual' as opposed to 'group', may serve to hinder our explorations into the ways in which students talk about their uses of SMTs for learning.

Little empirical research has been reported thus far into individual and social learning in educational uses of SMTs. In their study into computer-supported collaborative learning (CSCL), Järvelä and

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