1. Introduction

This Special Issue focuses on learning through peer discussions in the most prominent social network site (SNS) in the world that has divided society into enthusiastic users and sworn opponents: Facebook. It catalyzes an international discussion consortium (Germany, Israel, United States). Broadly, this consortium seeks to understand social interactions in online communities and associated learning and cognitive processes, personality and human development at the individual and group level. Online social networking in social network sites like Facebook, is the dominant, technology-mediated, leisure-time activity among teenagers in different countries (Geocartography Knowledge Group, 2011; Rideout, Foehr, & Roberts, 2010) and, arguably, exemplifies social learning through social interactions that may host it (Bingham & Conner, 2010, p. 7). In these spaces, users share emotions and social information that can foster social aspects of academic life and actual friendships (Bennett, 2010; Pempek, Yermolayeva, & Calvert, 2009; Ryan, Magro, & Sharp, 2011; Selwyn, 2009). Beyond such social exchange SNS users can also engage in collaborative discussions, sharing knowledge on their studies (Wodzicki, Schäffelmein, & Moskalik, 2012, p. 7), and actively seeking information (Lampe, Vitak, Gray, & Ellison, 2012). Thus, SNSs hold promise for facilitating argumentative learning processes — when friends argue — but it is not yet known how and if this promise can be realized.

As Facebook is an integral part of high school and college students’ routines, designed applications that exploit these routines may help students to bridge formal and informal learning by situating learning opportunities within their everyday social contexts and appropriating peer interactions on both curricular and extra-curricular topics. SNSs also provide an authentic opportunity for researchers to observe social processes of learning and test theories of learning that conceive of learning in the broader sense of human development. As such, Facebook is attracting interest from educators, educational technology designers and learning scientists, and is viewed as a promising platform for online learning (Greenhow & Li, 2013; Greenhow, Menzer, & Gibbins, 2012). A recent literature review on Facebook as a potential learning tool, revealed that among the 23 reviewed studies, in higher education at least, instructors are mostly adopting Facebook for student discussions, sometimes in lieu of traditional learning management systems (Manca & Ranieri, 2013). Consequently, social network sites, such as Facebook, reside outside of, but are satellites of formal education.

However, conceptualizing Facebook as a learning platform, and designing Facebook applications for learning poses challenges. Researchers have warned against using Facebook for learning and found negative influences on academic performance (e.g., Junco & Cotton, 2013; Kirschner & Karpinski, 2010). On the other hand, there are studies suggesting that how Facebook is used makes a difference in whether academic outcomes are positive or negative (e.g., Junco, 2012). Which interactions may facilitate learning most and how can we support them? Far from suggesting that Facebook or SNSs in general should be used for formal learning, the authors of this Special Issue address the question of whether this is possible and what the psychological determinants and outcomes of learning in such informal or semi-formal settings are, as well as the methods for exploring them. The main articles and the two commentaries critically assess the importance of this line of research, the need to pursue it further, and the interesting directions it may take.

The studies in this Special Issue build on and extend existing research. They explore the dialogic and collaborative character of Facebook featured in the social interactions and focus on a particular type of learning: learning from peer argumentation in social network sites. Learning from argumentation has been of longstanding interest in the learning sciences (Andriessen & Baker, 2015; Chinn & Clark, 2013; Schwarz & Asterhan, 2010). It has been extensively studied in face-to-face settings (e.g., Asterhan & Schwarz, 2007, 2009; Herrenkohl & Cornelius, 2013) and in online discussion platforms specifically designed to facilitate argumentation in educational settings (e.g., Digalo, Belvedere, LASAD, ARGUNAUT, LARGO; Scheuer, Loll, Pinkwart, & McLaren, 2010). However, it has proven difficult to exploit the potential of peer learning from argumentation in already time-strapped classrooms (Sadler, Barab, & Scott, 2007) or in formal, course-related online discussions. The goal of this Special Issue is, then, to present and synthesize recent research on learning from and through argumentative discussions in Facebook to harvest its dialogic nature and exploit its learning potential. This issue presents a set of articles that offer a methodological balance between external and internal validity. The articles either isolate and scrutinize specific characteristics of Facebook that are theoretically relevant to argumentative learning in controlled studies, or explore the potential of authentic Facebook activities for argumentative learning.
The four empirical articles in this Special Issue focus on various aspects of typical Facebook interactions like passive vs. active argumentative processes, spontaneous vs. solicited participation, and private (observing) vs. public communication formats. They study how such interactions affect learning processes, learning through argumentation, and how they contribute to learning as attitude change. They define instructional support that leverages ‘native’ social and dialogic Facebook processes, inspired by existing learning science models (e.g. vicarious learning, group awareness support, and scripting argumentative knowledge construction) (Asterhan & Hever, 2015; Puhl, Tsovaltzi, & Weinberger, 2015; Tsovaltzi, Judele, Puhl, & Weinberger, 2015). They investigate how vicarious observing as a common form of passive participation in Facebook discussions may lead to individual learning and how this learning is, in turn, influenced by rhetoric. They critically evaluate how well models of argumentation tested in formal computer-supported collaborative learning environments fit informal learning contexts, such as a Facebook application that facilitated debate of socio-scientific issues (i.e., climate change issues) (Greenhow, Menzer, & Gibbins, 2015). They investigate the effects of group awareness support (e.g. the awareness that peers read and critically assess posts) as a main affordance of Facebook, how this affordance interacts with argumentation scripts, and if Facebook affordances are compatible with such support (Puhl et al., 2015; Tsovaltzi et al., 2015). They explore how knowledge co-construction and epistemic communication may occur among Facebook-using youth (Greenhow et al., 2015; Puhl et al., 2015). They investigate how argumentation and social aspects of communication influence declarative and argumentative learning outcomes (Asterhan & Hever, 2015; Greenhow et al., 2015; Puhl et al., 2015; Tsovaltzi et al., 2015), but also how they relate to attitude change (Puhl et al., 2015).

Together, the four main articles suggest that Facebook with its social character and broad use offers a unique arena for learning sciences research. Insights on leveraging Facebook for learning show great potential, but also possible pitfalls. The articles suggest that to describe a framework for using Facebook as a learning platform, unproductive aspects of Facebook need to be identified and counterbalanced, and new structures, designed educational features or social supports need to be introduced. For example, disputative argumentative discussions may increase initial interest and draw readers into argumentation processes, but they reduce learning effects in comparison to deliberative argumentative discussions (Asterhan & Hever, 2015). Group awareness support may engage learners and make them aware of their social context (e.g., that others will interact with their work), but it may induce over-cautious argumentative behavior that hinders learning (Tsovaltzi et al., 2015). Individual preparation may reduce process losses related to the extra load of simultaneously deliberating on individual arguments and arguing collaboratively, but may also reduce knowledge co-construction (Tsovaltzi et al., 2015). Adolescent Facebook users may voluntarily join Facebook applications that deal with issues in which they are highly interested, but only a minority may elect to participate in conflict-oriented or integration-oriented consensus building in argumentation around key issues (Greenhow et al., 2015). Facebook discussions may foster learning especially if additional group awareness is supported, in which case communication attitude change correlates with learning (Puhl et al., 2015).

In the first commentary on these articles, Kirschner (2015) argues that the opinions of Facebook users tend to align with the majority opinion in their respective social networks and that this does little to facilitate critical argumentation and discussion of alternative viewpoints. Kirschner strongly suggests that research on learning in and from SNSs should focus on and specify what types of learning SNSs are suited for best, especially in their commonly used form, without apps and educational interventions. He thus opposes the idea that Facebook and SNSs should be considered as learning platforms or as platforms for debates. In this sense, Kirschner challenges the central question posed in the main articles: are there promising approaches to argumentative learning in SNSs?

The authors of the second commentary (Clark and Martinez-Garza, 2015) argue that the insights from this series of studies apply beyond Facebook and SNSs to other forms and settings of informal learning. They suggest differentiating between normative and non-normative outcomes of learning in order to provide a more detailed account of what processes of learning are influenced from different learning interventions in SNSs. Similarly, they suggest that framing the issue in the main articles is important to adequately tackle the emerging research questions. Such framing may include taking into account user expectations and problems of credibility as well as looking into possible polarization of opinions triggered by a disputative sentiment in such contexts. Moreover, Clark and Martinez-Garza point out that the main articles reflect how difficult it is to increase specificity of designs and warrant commensurability, especially in this learning setting. This is due to the intrinsic complexity of SNSs. On the other hand, they stress the need to preserve the authenticity of SNSs, which was initiated by and is still driven by youth. The authors argue that since the research presented in the main articles applies to any specific interest site, data-mining is a viable methodological approach to overcome this problem and investigate the research questions posed. Applying such methods to argumentation and social media discussions also presupposes dealing with their complexity. Clark and Martinez-Garza suggest that given the right data, a lot can be learned through data-mining from the behavior of passive learners. This analysis, however, is only possible in environments that allow more control over the kind of data logged, like MOOCs, and is not feasible in Facebook or other popular SNS. The question is raised whether the social character of SNSs is also preserved in other specific interest sites, or whether specific interest sites can and should be enriched with more social aspects prominent in SNS.

In conclusion, the six articles in this Special Issue provide a comprehensive discussion of collaborative argumentative learning in SNSs. The main articles identify the affordances and tensions of learning in SNSs, helping the field to advance toward understanding learning and argumentative learning processes, in a range of contexts. They argue that the rich context of Facebook may host and even accelerate socio-cognitive processes, allowing researchers to log, trace and examine them for the first time, thus offering a breakthrough in scrutinizing influential social learning theories, such as social constructivism (Vygotsky, 1978) and communities of learning (Wenger, McDermott, & Snyder, 2002). For example, what are the social aspects that influence learning (e.g. rhetoric style, group awareness, communication competence and attitude)? How do cognitive and social forms of learning interact (e.g. declarative learning gains and communication attitude, argumentative knowledge and civic behavior)? What instructional design can promote this interaction (e.g. deliberative discussions, argumentation support)? To what extent do formal and informal learning processes in SNSs interact and mutually benefit or inform each other? As such, these articles represent the view that future research on learning in SNSs should address core issues such as learning in the standard formal sense, learning as informal and personal.
development, and the interactions between these. Furthermore, given the role of Facebook and other social media in recent political developments worldwide, understanding such processes might facilitate our own learning to deliberate in these spaces and becoming more engaged learning scientist-citizens. The two commentaries challenge different aspects of this research. They align in their view that SNSs might not be the best platform for investigating learning in its formal sense (Kirschner, 2015), and that additional methods of analysis such as data mining may offer better insights into how and what learners learn in the context of online interest groups.

References


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