Personal Learning Environments, Social Media, and Self-Regulated Learning: A Natural Formula for Connecting Formal and Informal Learning

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Abstract: A Personal Learning Environment or PLE is a potentially promising pedagogical approach for both integrating formal and informal learning using social media and supporting student self-regulated learning in higher education contexts. This paper (a) reviews research that support this claim, (b) conceptualizes the connection between PLE, social media, and self-regulated learning, and (c) provides a three-level pedagogical framework for using social media to create PLEs that support student self-regulated learning. Implications for future research in this area are provided.

Literature Review

The 2010 EDUCAUSE Center for Applied Research (ECAR) study of undergraduate students and information technology revealed that students' use of social media has steadily increased from 2007to 2010 and that college students are integrating social media in their academic experience both formally and informally (Smith & Caruso, 2010). Additionally, there is strong evidence that social media can facilitate the creation of Personal Learning Environments or PLEs that help learners aggregate and share the results of learning achievements, participate in collective knowledge generation, and manage their own meaning making. Overall, the research suggests that social media are being increasingly used as tools for developing formal and informal learning spaces or experiences that start out as an individual learning platform or PLE, enabling individual knowledge management and construction, and evolve into a social learning platform or system where knowledge is socially mediated (Dabbagh & Reo, 2011; Johnson, Adams, & Haywood, 2011; McLoughlin & Lee, 2010). The research also suggests that social media use in higher education is enabling the creation of PLEs that empower students with a sense of personal agency in the learning process. More specifically, a PLE can be conceptualized as a cognitive space that has cognitive characteristics such as student investment in their studies, sense of efficacy, and motivation (Underwood & Banyard, 2008; Valjataga, Pata, & Tammets, 2011). However, in order to successfully leverage social media towards the creation of PLEs, students must acquire and apply self-regulated learning skills because PLEs are built bottom-up starting with personal goals, information management, and individual knowledge construction, and progressing to socially mediated knowledge and networked learning (Dabbagh & Reo, 2011; Turker & Zingel, 2008). Kitsantas and Dabbagh (2010) suggest that social media have pedagogical affordances that can help support and promote student self-regulated learning by enabling the creation of PLEs and that the relationship between PLEs and self-regulated learning is interdependent and synergistic requiring the simultaneous, progressive, and transformative development and application of self-regulated learning skills using social media.

Goals and Objectives of Practice Session

The goal for this practice session is to describe how PLEs can serve as platforms for both integrating formal and informal learning and fostering self-regulated learning in higher education contexts.

Description of practice to be exemplified

To assist higher education faculty and instructors in scaffolding student self-regulation skills in the creation of PLEs we developed a pedagogical framework for social media use based on the levels of interactivity that social media tools enable. These levels are: (1) personal information management, (2) social interaction and collaboration, and (3) information aggregation and management (Dabbagh & Reo, 2011; Kitsantas & Dabbagh, 2010). Table 1 provides examples of how instructors can guide students' use of social media at each level of the framework. The goal of this framework is to inform college faculty and instructors how to engage students in a transformative cycle of creating PLEs that support self-regulated learning. In doing so, PLEs can become effective pedagogical tools that influence students' cognitive processes in addition to serving as vehicles for informal learning (Turker & Zingel, 2008).

Table 1. A Framework for Using Social Media to Support Self-Regulated Learning in PLEs

	(Level 1) Personal information management →	(Level 2) Social interaction and collaboration →	(Level 3) Information aggregation and management →
Blogs	Instructor encourages students to use a blog as a private journal to set learning goals and plan for course assignments and tasks	Instructor encourages students to enable the blog comment feature to allow for instructor and peer feedback enabling basic interaction and sharing	Instructor demonstrates how to configure a blog to pull in additional content and how to add the blog to RSS aggregation services
Wikis	Instructor encourages students to use a wiki as a personal space for content organization and management	Instructor encourages students to enable the wiki's collaborative editing and commenting features for feedback	Instructor demonstrates how to view a wiki's history to promote student self-evaluation of their learning across time
Google Calendar	Instructor encourages students to use Google Calendar for personal planning	Instructor encourages students to enable the calendar sharing features to allow feedback and collaboration to complete course tasks	Instructor demonstrates how to archive personal and group calendars to promote student self-evaluation regarding time planning and management
Social Networking Sites	Instructor encourages students to create an academic and career profile on LinkedIn	Instructor encourages students to connect to online communities related to their professional goals	Instructor asks students to engage in self-reflection with the goal to restructure their profile and social presence

Discussion

A PLE can be entirely controlled or adapted by a student according to his or her formal and informal learning needs, however not all students possess the knowledge management and the self-regulatory skills to effectively use social media in order to customize a PLE to provide the learning experience they desire. Teaching students to become effective self-regulated learners may help them acquire basic and complex personal knowledge management skills that are essential for creating, managing, and sustaining PLEs using a variety of social media. Although this three level framework has not been tested empirically, it is hypothesized that as students engage in a self-oriented system of feedback with the help of the instructor and their peers they become empowered to create effective and sustainable PLEs to achieve desired learning outcomes and enrich their learning experiences.

References

Dabbagh, N., & Reo, R. (2011). Back to the future: Tracing the roots and learning affordances of social software. In M.J.W. Lee and C. McLoughlin (Eds.), Web 2.0-based e-Learning: Applying social informatics for tertiary teaching (pp. 1-20). Hershey, PA: IGI Global.

Johnson, L., Adams, S., & Haywood, K. (2011). The NMC Horizon Report: 2011 K-12 Edition. Austin, Texas: The New Media Consortium. Available from http://www.nmc.org/pdf/2011-Horizon-Report-K12.pdf

Kitsantas, A., & Dabbagh, N. (2010). Learning to learn with Integrative Learning Technologies (ILT): A practical guide for academic success. Greenwich, CT: Information Age Publishing.

McLoughlin, C.,& Lee, M. J.W. (2010). Personalised and self regulated learning in the Web 2.0 era: International exemplars of innovative pedagogy using social software. Australasian Journal of Educational Technology, 26(1), 28-43.

Smith, S.D., & Caruso, J.B. (2010). The ECAR study of undergraduate students and information technology, 2010. EDUCAUSE Center for Applied Research (ECAR). Available from http://www.educause.edu/ecar

Turker, M.A., & Zingel, S. (2008). Formative interfaces for scaffolding self-regulated learning in PLEs. eLearning Papers, 9. Available from http://www.elearningeuropa.info/files/media/media15975.pdf

Underwood, J., & Banyard, P.E. (2008). Understanding the learning space. eLearning Papers, 9. Available from http://www.elearningeuropa.info/files/media/media15970.pdf

Valjataga, T., Pata, K., & Tammets, K. (2011). Considering students' perspective on personal and distributed learning environments. In M.J.W. Lee and C. McLoughlin (Eds.), Web 2.0-based e-Learning: Applying social informatics for tertiary teaching (pp. 85-107). Hershey, PA: IGI Global.