Instructor Experiences with a Social Networking Site in a Higher Education Setting: Expectations, Frustrations, Appropriation, and Compartmentalization

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Abstract

Researchers and practitioners have suggested that the use of social networking sites in formal education may be a worthwhile endeavor. Toward this goal, emerging learning platforms have included social networking features. Nevertheless, empirical literature examining user experiences, and more specifically instructor experiences, with these tools is limited. In this qualitative study, we address this gap in the literature by reporting the experiences of five instructors who used a social networking platform in their courses. We find that instructors (a) had expectations of Elgg that stemmed from numerous sources, (b) used Elgg in heterogeneous ways and for varied purposes, (c) compartmentalized Elgg and used it in familiar ways, and (d) faced frustrations stemming from numerous sources. We note that the ways Elgg came to be used "on the ground" is contested and contrasts starkly with the narrative of how social software might contribute benefits to educational practice. In addition, we note that learning management systems may frame the ways through which other tools, such as social media and Elgg, are understood, used, and experienced.

Instructor Experiences with a Social Networking Site in a Higher Education Setting: Expectations, Frustrations, Appropriation, and Compartmentalization

Recent technological, cultural, and economic developments have generated entrepreneurial interest in the development of technological solutions to tackle educational problems. One of the platforms of interest in such endeavors is the Learning Management System because (a) it currently is a central component of higher education institutions (Mott, 2010; West, Waddoups, & Graham, 2006) and (b) the market is dominated by a few select offerings with ample room for innovation. In parallel, the advent of Web 2.0 in recent years has yielded, amongst other things, the emergence of social networking sites (SNS). boyd and Ellison define SNS as "web-based services that allow individuals to (1) construct a public or semi-public profile within a bounded system, (2) articulate a list of other users with whom they share a connection, and (3) view and traverse their list of connections and those made by others within the system" (2007, p. 211). These sites have become popular in recent years, with about three-out-of-four teens and adult Internet users ages 18 to 29 in the United States currently owning an account (Lenhart, Kahne, Middaugh, Macgill, Evans, & Vitak, 2008).

Current visions for the next generation of learning platforms encompass features and affordances that are central to distributed participation and social networking (Mott, 2010). For example, Mott's model of an Open Learning Framework includes "[a] personal publishing space, social networking, and collaboration tools" while initiatives to integrate Learning Management Systems and SNS have existed as early as 2008 (Sclater, 2008). Nevertheless, even though social networking sites are being suggested as a worthwhile technology to explore in instructional settings, existing empirical literature on the topic is scant, especially with regards to instructor experiences on such platforms (Veletsianos & Navarrete, 2012). Importantly, in a study of

faculty members' experiences with social networking sites, Veletsianos and Kimmons (2013) found that the use of SNS in education introduces tensions that arise from the use of technologies that collapse personal and professional contexts and audiences (cf. Marwick & boyd, 2010). Given the increasing use of SNS by institutions of higher education and faculty members, it is imperative to understand instructors' experiences and practices with these tools.

In this paper, we report on the experiences of instructors who used the Elgg social networking platform in their courses. This investigation addresses research gaps in the existing literature while generating knowledge on instructor experiences with a popular emerging technology. In addition to scholarly contributions, this study is of practical significance because it generates knowledge that instructional technology support staff can use in preparing faculty members to teach with emerging technologies in general, and social networking sites in particular. We first present a review of the use of online social networks in formal education. Next we present this study's research goals, context, and research method. We then discuss our findings and implications.

Review of Relevant Literature

Examples of SNS include such popular sites as Facebook, MySpace, and LinkedIn, with Facebook alone currently boasting an active membership of over 800 million people (Statistics, 2011). Surveys of undergraduate students in the United States showed that over 90% of them use Facebook (Ellison, Steinfield, & Lampe, 2007; Roblyer et al., 2010; Stutzman, 2006). It is unclear, however, what is the true impact of SNS on education. Some research has suggested that student use of popular SNS may adversely impact academic performance, because it may conflict with time devoted to traditional studies (Kirschner & Karpinski, 2010). On the other hand, it has been proposed that SNS may offer important benefits to formal education by creating

a space for "identity politics" and the resolution of "role conflicts" that students face in formal educational settings, thereby allowing for a vital "continuation of how students talk to each other in other contexts – such as the chatter of the back rows of the lecture theatre, coffee shop or after-college telephone conversations" (Selwyn, 2009, pp. 170-171). Additionally, researchers have argued that SNS may also provide other socially valuable affordances such as replacing less efficient communication devices in higher education (Towner & Muñoz, 2011), providing a method for instructors and students to "stay connected" with a "metaphorical open door" (Roblyer et al., 2010, p. 138), supporting the conception of a "world without borders" (Levickaité, 2010), and leading to the evolution of a "transformation society" in which "more meaningful human interactions" are encouraged (Gallon, 2010, p. 115). In light of these potential benefits, SNS, and social software in general, are being considered as potential learning platforms in higher education courses for their facilitation of connectivity (Dron & Anderson, 2007; Veletsianos & Navarrete, 2012).

At present, Learning Management Systems (LMS) and Content Management Systems (CMS) are widely used in higher education settings (Lonn & Teasley 2009; Mott, 2010; Paulsen, 2003). In examining the use of LMS at 113 European institutions, Paulsen (2003) found that from the perspective of system managers, the deployed LMS were "good enough" and "work[ed] satisfactorily," though they did not seem to encompass all the functions that the institutions would have wanted. Even though such systems may provide reliable educational supports, researchers have also argued that LMS may undermine effective pedagogy (Lane, 2009; West, Waddoups, & Graham, 2006) and serve as managerial systems that support administrative and delivery concerns rather than valued pedagogical approaches (Dalsgaard, 2006). In surveying the students and faculty at a large university in the Midwest, Lonn and Teasley (2009) found that

instructors and learners valued the tools provided by the LMS, but used communication management tools more frequently than interactive tools, suggesting that efficiency was valued over innovation. The existence of strong pressures to re-use templates and existing content in the name of efficiency (Wilson, Parrish, & Veletsianos, 2008), along with a lack of concern for instructional design fundamentals, has led researchers to describe the majority of LMS materials as "shovelware" or instances where instructors "collect information and shovel it into an application such as Blackboard or a learning management system to create a 'course'" (Morrison & Anglin, 2006, p.64). As a result, LMS have been described as tools that fail to provide users with the individual social presence necessary for more robust and valuable networking experiences that are essential for learning (Brady, Holcomb, & Smith, 2010; Minocha, 2009).

The design of the LMS however, is only partly responsible for potential failures of the technology to support effective instruction. In examining the factors that impact the successful adoption and integration of technology in higher education settings, Birch and Burnett (2009) found that instructors face institutional barriers (e.g., lack of institutional guidance, lack of tailored/specialized training, local policies), individual inhibitors (e.g., lack of time, high workloads, lack of rewards), and pedagogical concerns. West, Waddoups, and Graham (2006) examined the processes that higher education faculty members go through when adopting and implementing the Blackboard LMS, and found that faculty members face technical challenges (e.g., becoming competent in the use of the tool) and integration challenges (e.g., how to use Blackboard tools effectively to support teaching in one's content area). In addition, instructors appeared to rarely adopt all features of the LMS and faced adoption decisions as they evaluated the pros and cons of specific tools within Blackboard. Faculty members who participated in a study conducted by Ge, Lubin, and Zhang (2010) expressed similar perspectives. In particular

these authors studied the experiences of faculty members as they transitioned from one LMS to another and found that the impact of the experience appeared to be related to participants' prior knowledge and experience with past LMS. Participants tended to compare the new LMS with the old LMS hoping that the new LMS encompassed the features of the old LMS that they liked, while also including additional features they deemed to be worthwhile.

As a result of the limitations imposed by the LMS and the opportunities presented by emerging social technologies, educators have explored alternative possibilities for social communications tools that allow for freer discussion of topics and issues within courses (Brady, Holcomb, & Smith, 2010), which may help to improve difficulties associated with learner isolation and alienation (Galusha, 1997). For instance, instructors have combined a mixture of social technologies to create unique online learning environments. Participants in a course offered by Couros (2009), for example, used blogs, microblogs, wikis, and RSS readers to engage in sustained interactions with each other. A principal affordance of these platforms is the user's ability to engage in activities often associated with social networking sites (e.g., profile creation and articulation of lists of "friends"). Importantly, SNS have been viewed as tools that foster the use of participatory pedagogies able to address problems that have traditionally plagued LMS by providing: a greater sense of presence, improved community building, and learner participation in interactive discussions (Brady, Holcomb, & Smith, 2010; Naveh, Tubin, & Pliskin, 2010).

Nevertheless, research on the implementation and effectiveness of SNS in higher education contexts is limited. While Aijan and Hartshorne (2008) found that 56% of faculty studied believed that social networking tools were the most useful Web 2.0 tools for improving student-to-student interaction, 74% did not plan on using them in their instruction. These

findings were supported by Roblyer et al. (2010) who found that students were open to using social networking technologies for education, while faculty were more inclined to use traditional technologies (e.g., email). Though some faculty have experimented with SNS like Ning (Arnold & Paulus, 2010; Brady et al., 2010), Elgg (Dron & Anderson, 2009), and Facebook (Madge, Meek, Wellens, & Hooley, 2009; Wang, Woo, Quek, Yang, & Liu, 2011), empirical research remains scant on instructor experiences and student outcomes with these tools. Nevertheless, research on informal learning within SNS contexts is promising (Greenhow & Robelia, 2009; Selwyn, 2009) and has led to the emergence of crossover practices between LMS and SNS, as in the case of Canvas by Instructure, which is an LMS that allows users to connect their learning experiences within the LMS to their social experiences in SNS (like Twitter). Further, social networking practices have been incorporated into emerging educational support sites like OpenStudy, which connects learners together in a type of virtual study space, and universities are currently being targeted as clients for more academically-focused SNS-type services like GoingOn, which allows faculty and students to construct connected, academic identities online.

Such emerging technologies and exploratory practices are promising for discussions regarding the use of social software in education, but, in terms of research, the area is in its infancy (Minocha, Schroeder, & Schneider, 2011; Selwyn & Grant, 2009; Veletsianos, 2010). For instance, little is known about the process of institutional implementation of SNS for education, the compatibility of SNS with extant instructor practices in institutions of higher education, and resultant student outcomes from integrating SNS into formal education. Table 1 summarizes the empirical literature reviewed in this section and reveals that the majority of the research conducted (a) is exploratory, (b) focuses on a single context such as one institution or one course, and (c) lacks the level of richness and depth that can be found in other areas of

technology-enhanced research. Nevertheless, the embryonic and exploratory nature of existing research on an emerging technology such as online social networks should be expected (Veletsianos, 2010) because the topic under investigation is evolving and such research is inherent in attempts to understand a new development (Dede, 1996). Thus, though there seems to be much promise and excitement regarding the use of SNS in formal educational settings, little is known about how instructors and institutions of higher education are implementing or should go about implementing SNS in beneficial ways (Veletsianos & Navarrete, 2012).

--Insert Table 1 here --

Research Goal

Our goal in this paper is to identify, describe, and make sense of initial instructor experiences with a social networking platform used in higher education courses. Such an understanding will contribute to the extant knowledge base on the topic and inform the literature on how instructors experience an SNS platform.

Context

Elgg Platform

The platform used in this study is called *Elgg* (http://elgg.org), and it is an open source framework that allows designers to integrate a range of social technologies within a single online social environment that, in the case of this study, included collaborative document authoring, file sharing, discussion boards, messaging (see Figure 1), and social networking features like status updates, detailed personal profiles, “friend” lists, and activity streams. The interface developed for this Elgg implementation also included a dashboard that served as a central landing point after login that linked users to their Elgg course groups and other university web-based services such as Blackboard, WordPress blogs, and web-based file storage.

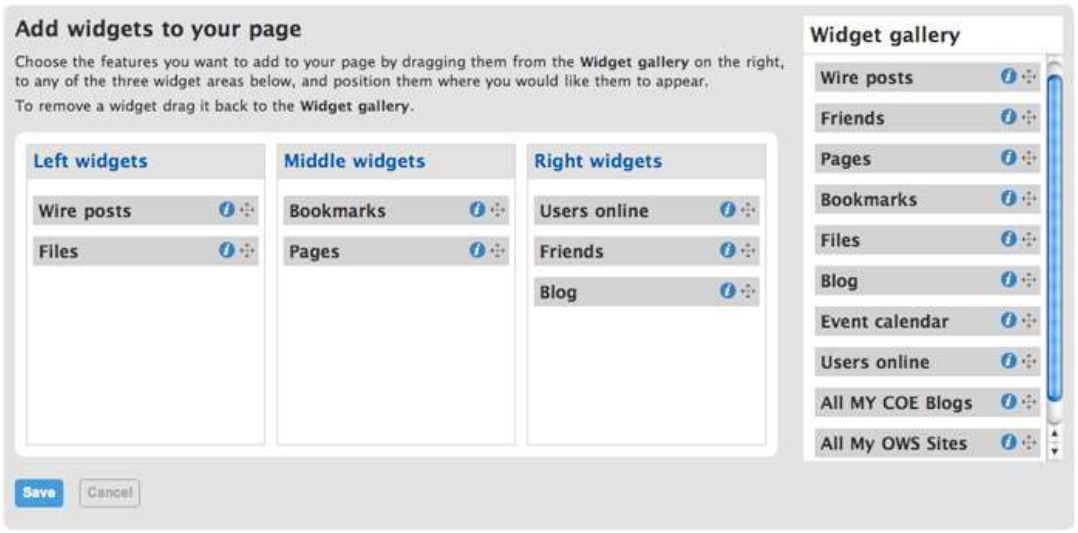

Figure 1. A selection of features available in Elgg.

The Teacher Preparation Program and Participation in the PLACE Initiative

This study occurred in the context of the Personal Learning and Collaboration Environment (PLACE) initiative. Instructors and students in an elementary teacher preparation program in the College of Education at a large southwestern university used to use a groupware communication platform similar to a LMS, which we will refer to as CollegeLMS. The PLACE initiative aimed at exploring the feasibility and value of replacing CollegeLMS with a customizable social networking platform (Elgg). It was anticipated that social networking features would make the experience of using technology in education more intuitive and valuable for students and faculty members, and would allow them to develop supportive and worthwhile online relationships.

The teacher preparation program is organized as a cohort model through which groups of twenty to twenty-five students proceed together through a three-semester professional development sequence. Cohorts take all of their courses together, and instructors within cohorts make an effort to coordinate with one another both concerning what is taught and when

assignments are due. A cohort coordinator oversees student teachers' field experiences in PK-6 classrooms.

To promote the effective use of technology in teaching and learning, the program has included for the past ten years a requirement that students purchase a notebook computer, making this a one-to-one laptop environment. Students do not have a required educational technology course and faculty members are responsible for integrating the use of the laptop and other learning technologies into students' learning activities. To support instructors in their efforts, the college includes an office focused primarily on faculty technology integration support services. In this paper, we will refer to this office as the Technology Lab (a pseudonym). The Technology Lab is distinct from the technical support team and is staffed by a team of doctoral students from the College's MA/PhD educational technology program, who are supervised by a coordinator with a PhD in the field.

The professional development framework used by the Technology Lab emphasizes collaboration between instructors and support staff. Thus, when the PLACE initiative was launched, faculty were consulted often and were expected to provide meaningful input into the selection and implementation of Elgg features that offered promise for supporting pre-service teacher learning. With the exception of one instructor who requested to join the initiative, instructors involved in the pilot were approached by the chair of their department who asked them to volunteer for the project. The timing of a university-wide adoption of Google Apps for Education that replicated some of the functionality of Elgg meant that all but one cohort stopped using Elgg after the initial semester.

Implementation and Support

With the collaborative professional development framework in mind, support staff communicated frequently with participating instructors to ask for feedback and tweak functionality to better suit instructor needs. After an initial large group training session, instructor support was provided and feedback was received through drop-in, phone, and email support services as well as through group meetings. Requests for changes in functionality centered mostly on the messaging services, collaborative documents, and discussion boards. Formatting was also a challenge with collaborative documents. Many of the courses incorporated observation and lesson-planning forms that did not paste well from Microsoft Word, and tables were a particular challenge. To solve this issue, the Technology Lab staff created html templates for the most common lesson plan formats, but tables and formatting continued to be a challenge throughout the semester as users were unable to copy highly formatted documents from Microsoft Word to the html-based collaborative documents. Finally, the format of discussion boards was a highly requested change. The original Elgg implementation included minimal threading, but a tweak to the interface to include more extensive threading was one of the most popular and easiest changes to make.

Another common problem reported was a loss of data when students wrote a long discussion post or when a collaborative document failed to save on the system due to loss of connectivity. To alleviate this problem, support staff encouraged students to write long documents offline first and then paste the contents into Elgg. The Technology Lab staff also added a "save" button to the interface that would refresh and save the page being edited and timed reminders to help students remember to save often.

Method

Participants

Ten instructors that used the Elgg social network in the context of the PLACE initiative were invited to participate in this study, and five accepted this invitation. We refer to these participants by the following pseudonyms: Brenda, Christine, Laurie, Mandy, and Andrew. Of these participants, four were female; Andrew was the only male. Andrew and Laurie taught content area courses, while Brenda, Christine, and Mandy taught methods courses. Brenda and Christine additionally served as cohort coordinators, which meant that they helped oversee student teaching placements and fulfilled other administrative duties that extended beyond their classrooms. All participants held a PhD in an education-related field and had previously taught courses at the university. At the time of the study, Laurie was a tenure-track faculty member; Brenda, Mandy, and Andrew held permanent teaching positions; and Christine was an adjunct instructor. This was the first time that these faculty members used the Elgg platform in their courses, even though they had all used other Learning Management Systems in the past (Blackboard and CollegeLMS). Additionally, though most instructors had used SNS like Facebook and Twitter for personal communications, none had previously used Elgg in such a manner. Our interviews with these teacher educators suggest that these individuals embraced and valued progressive educational ideals and student-centered practices, including critical and culturally responsive pedagogy.

Data sources

The data used in this study consisted of (a) participant responses to semi-structured personal interviews, (b) field notes from two group meetings and eight one-to-one support meetings with participating instructors, (c) observations of participants' use of Elgg. Each data source is described in detail below:

- Interviews lasted between 45 minutes and one hour each and were recorded and transcribed verbatim. Follow-up questions were used to elicit additional or clarifying information and to prompt participants to further discuss and explain their experiences (appendix A).
- Two group meetings and eight one-to-one support meetings were initiated by support staff or took place at the request of instructors for the following reasons: 1) to elicit feedback from participants on issues related to implementation, 2) to allow participants to communicate their experiences and best practices with others, and 3) to provide participants with implementation support (e.g., answering questions, troubleshooting problems, etc.). Group meetings lasted two hours each and one-to-one support sessions lasted between 30 and 60 minutes. At least one researcher was present at all meetings, and researcher notes from these meetings were used as field notes to inform findings. The first meeting occurred one week before the beginning of the semester. The rest of the meetings were dispersed throughout the semester, with the first group meeting occurring within the first month of the instructors using Elgg and the last meeting occurring three weeks before the end of the semester.
- Observations of Elgg in use were a key data source added to this study. In particular, observations examined the ways instructors used the platform, the activities they designed, and the features they leveraged. For each instructor studied, a memo was written describing the use of Elgg within his/her classroom.

Data Analysis

Three researchers were involved in an iterative data analysis process. The first step in analyzing the data was to create a case file for each instructor that included his/her transcribed

interview and any associated field notes. This file integrated each participant's data into a coherent perspective of how s/he used Elgg across the semester. Once these files were created, each researcher analyzed the data independently using the following process: First, we each read the data and engaged in open coding by writing down possible categories in response to the guiding question: "What are the significant aspects of instructors' experience with Elgg?" We employed an open coding process because it allowed us to understand general characteristics of the studied phenomenon (in our case, instructor experiences) and develop such understandings from raw data. Furthermore, the open coding process allowed us to examine all of our data without any limitations, thus enabling us to remain open to multi-dimensional facets of the phenomenon under study. This activity was guided by the constant comparative approach (Glaser & Strauss, 1967). The constant comparative approach allowed us to engage in an in-depth and iterative analysis of instructors' experiences with an emerging technology of which, at present, little is known. We were drawn to the constant comparative method for our analysis because of its flexible analytic guidelines and iterative, interactive, and comparative features (Charmaz, 2011), as well as the fact that it allowed us to conduct comparisons between and across divergent units of data in order to arrive at a deep and nuanced understanding of the phenomenon of interest.

We engaged in the constant comparative approach as follows: Each researcher took a piece of the data and compared it to another piece of data (e.g., a category compared to a category, an interview compared to an interview, a category compared to an interview), examined whether they are similar/different, and generated additional categories to capture similarities and differences. With each new data that entered the analysis (e.g., a new interview),

the researcher compared the data to existing categories and the same process as above was repeated. This analytic procedure generated a list of concepts that described the data.

We then held a team meeting to discuss results, compare notes, and share concepts that each of us discovered in the data. In the first meeting, we shared and discussed 18 potential concepts that captured instructor experiences (appendix B). Next, each one of us re-examined the data independently with these concepts in mind, re-analyzed the data using the process described above, and we reconvened to discuss our findings. We repeated this process six times. At the end of the sixth time, no more patterns could be identified and we felt that the data had been saturated. At that time, we agreed that we had arrived at a set of final coding categories that captured instructor experiences. Data were then coded for these findings and were grouped into four themes described below.

Rigor

To reduce the incidence of individual biases in the analysis and examine the accuracy of the collected data, we analyzed data independently, prior to comparing and discussing our findings. In addition, we made conscious effort to provide enough information and "thick descriptions" of participant experiences so that readers are able to evaluate the extent to which our results are applicable to other populations and "determine how closely their situations match the research situation, and hence, whether findings can be transferred" (Merriam, 1995, p. 58). Researcher notes from group meetings and one-to-one support sessions were then used to triangulate the findings and provide additional contextual information in relation to what was reported by participants. Finally, member checks were conducted with participants by providing each an email summary of major findings and asking them to comment on whether the findings

reflected their experience. Four out of the five participants responded to the member check, and all stated in the affirmative that the findings reflected their experience and feelings.

Findings

We discovered that instructor experiences with the Elgg social networking platform could be described through the themes of instructor expectations, heterogeneous use of the platform, compartmentalization and alignment of the platform, and instructor frustrations. We describe each one of these themes below.

Instructor Expectations of Elgg stemmed from various sources

All instructors had expectations of Elgg that appeared to stem from various sources including their prior experiences with learning technologies, their experiences with popular non-educational technologies, and their pedagogical beliefs and practices. Though the instructors did not explicitly state that they had expectations caused by prior events, it became clear that their expectations constituted a major component of their experiences.

Laurie, Brenda, and Andrew discussed their prior experiences with learning technologies and the opportunities those technologies afforded them for education. These experiences informed the expectations they had about Elgg and their ability to accomplish various things with it. For example, Laurie stated that CollegeLMS "is folders, and [Elgg] is an interactive social site," and therefore she expected the nature of interactions to be different within Elgg. The same individual noted that she thought Elgg would also function "just like a blog" with students composing text and having opportunities for "kind of ongoing, commenting back and forth or discussing some writing back and forth." Brenda also expected that Elgg would function similarly to CollegeLMS in that it would allow her to track student activity. She said, "maybe the thing that bothers me the most about [Elgg], in relation to [CollegeLMS]... there is actually a

history [in CollegeLMS] and you can see if people have read your messages [and] anything I do, anything I post, whether it's an email or whether it's something in a class folder, I can look and see history and see who's opened it and that's invaluable."

In addition to expectations regarding Elgg arising from prior experiences with learning technologies, Brenda's, Mandy's, Christine's and Laurie's expectations of Elgg also stemmed and were shaped from their experiences with and perceptions of popular non-educational technologies, most notably popular social networking sites such as Facebook. We believe that these expectations were the result of Elgg branding itself as a social networking site and Technology Lab staff promoting Elgg as being "like Facebook," leading to the expectation that it would function like Facebook in terms of usability and intuitiveness. For example, Mandy, in discussing how to help students make better use of Elgg stated that she didn't think the students "developed a social presence at all cause they weren't really using it, so what I would do was require them to use it first of all, and then, I guess what I would do is talk to them, how this is a lot like being on Facebook." Brenda and Christine noted the platform's similarity to tools that their students would have used, with the former noting that "it looked like something my students [would have] experienced, I mean, it looks like social networking to a certain degree," and the latter stating that "what I like, that's unique from any other thing, is the social networking component that you can do with your students, that has similar language as Facebook." Christine also gave an example of one student asking a question on Elgg's microblogging service and receiving help from a second student, "so that was really great, so it goes from the daily voicing of what, how's it going, as Facebook, you know, entertainment kind of driven, to Q&A."

Finally, all participants' expectations of Elgg stemmed from individuals' pedagogical beliefs and practices. For instance, Andrew stated that he is "not married to [Elgg], or [CollegeLMS] for that matter, but I do really need [a] transparent management tool where I can upload documents, and I can have students upload documents in ways that I can start to either sort by the student and see their activities." Furthermore, Brenda, in explaining a technical problem she encountered with Elgg, where it was not possible for students to post lengthy responses, noted that because student reflection is "the core part of my teaching" and Elgg "didn't allow us to do what we wanted to do," her use of Elgg dropped significantly. Finally, Christine noted that Elgg did not provide her with the functionality to send notes to multiple students at once, which was a practice she was accustomed to using:

> I might send off a little message to maybe a group. Maybe there were five people in a group and I want to send off, 'I like the way you all worked in class today.' Sign my name and off it goes. But I couldn't do this in [Elgg]... so a lot of it was habit and I can develop new habits. But [Elgg] wouldn't let me do what I wanted.

Instructors used Elgg in heterogeneous ways and for varied purposes

The instructors informing this study used Elgg in varied ways and for different purposes. Importantly, all instructors reported that the platform and its functionality did not shape the way it was used and all reported limited use of social networking features such as status updates, profile management, and microblogging. Our observations of instructors' use of Elgg also confirmed that social networking features were not used in any significant or consistent fashion. In the case of Laurie however, the platform problematized her previous modes of teaching and raised questions about student-instructor relationships. She said: "Do I want to be in a social

network with my students, or do I want to be able to have a relationship with them where [pause] …where the course activities are course activities and social interactions are social interactions?"

In the instances where Elgg's functionality did not allow participants to teach in the ways that they wanted, instructors tried to (a) devise work-arounds to do what they wanted, either by reaching out to the Technology Lab to develop a technological solution (Brenda and Laurie) or by creating a pedagogical solution themselves (Christine) and/or (b) compartmentalize and reject/underuse the tool (all participants). Overall, we observed Elgg being used in four different ways. These four unique and individual experiences, which may not necessarily be generalizable to other settings, exhibited limited use of the environment's social networking features:

- Andrew and Mandy treated Elgg as a repository for information to disseminate to students. Andrew described the platform as "a virtual filing cabinet" used to communicate with students and as a "common place for them to ... either put documents or take documents away," and Mandy described it as "the dumping ground for ideas...a place where we could put things that everybody had access to." Our observations indicate that both Andrew's and Mandy's Elgg sites served as locations where documents and information could be exchanged, in the same way that these activities would have occurred under Blackboard or CollegeLMS.
- Christine used the platform primarily as a discussion forum. A consistent activity appearing on her Elgg site's discussion boards was the "golden thread," which she described as a task "where [students] have something that's been linking them to the reading, a quote, an idea, [and] they post their action and their thought [relating to how these connect]... and then they have to also reply to at least one other peer, in connection to what they thought was really interesting."

- Brenda treated Elgg as a space for having students present and share information with the instructor and for the instructor to give feedback. For example, she asked students to reflect on their work because "reflecting on your practice and constantly asking yourself questions and thinking and that sort of thing" will help them become "good teachers." Therefore, in her quest "for ways to give them feedback" she was "thrilled with the idea that everybody had their own spot [to] post their lesson plan on it and [get] feedback."
- Finally, Laurie treated Elgg as a space to do all of the activities presented above. She described her use of Elgg as follows: "I used it as a place to post readings, PDFs, I used it as a place to, for students to interact with me around assignments, both individually and small groups...I used it to communicate with individual students, students used it to communicate with me...[and] a few times I used it for threaded discussions around the course readings". In addition, Laurie asked students to upload and share pictures from the schools in which they did their practicum experience as a way to encourage discussion and sharing. Overall, our interviews, observations, and field notes show that out of all participants, Laurie made the most use of Elgg and its tools.

Instructors compartmentalized Elgg and sought to use the platform in familiar ways

In many ways, participants' use of Elgg reflected habits and expectations associated with their previous use of LMS (e.g. CollegeLMS and Blackboard). Importantly, no participant changed his/her teaching practice to accommodate the tool as in the case of participants in West, Waddoups, and Graham (2006). Throughout the interviews, all participants discussed how they attempted to use Elgg to replicate what they had done before. In addition, as participants realized incompatibilities between Elgg and their practice, they either tried to change the tool (i.e. align it with their practice) or to reduce/restrict their use of the tool, separating their use of Egg and their

face-to-face teaching into distinct categories (i.e. compartmentalizing Elgg). Mandy's thoughts succinctly summarized these activities:

> I think I tried to make [Elgg] into [CollegeLMS], to tell you the truth. And that's something that I would have had to change about the way I was using it because it's not [CollegeLMS] and that's what takes time to get over...And, you know, I didn't even realize necessarily that I was doing that all the time, but looking back at it, the reason that I didn't take advantage of parts of it, was that I was just trying to make it as a substitute for [CollegeLMS].

Brenda's and Laurie's efforts to align previous and current use required support personnel to alter Elgg by installing custom modules or editing code directly. Brenda attempted to use Elgg's group pages to share and reflect upon lesson plans with her students, an instructional practice that she had used with CollegeLMS, and worked with developers to modify the tool to meet her needs. Similarly, upon finding that Elgg's discussion boards did not support threading, Laurie worked with support personnel to alter Elgg forums to enable threaded discussions. Due to technology and support staff limitations, however, not all requirements were met. For example, Brenda's desire to share lesson plans in a manner similar to how CollegeLMS allowed her to share lesson plans was abandoned after formatting issues associated with student-generated HTML tables and submission size limits could not be fully alleviated within the Elgg framework.

Andrew, Christine, and Mandy, attempted to align their use of Elgg with their previous LMS use without requesting alterations to the system. Andrew explained that he needed the tool to be a "transparent management tool where I can ... upload documents, and I can have students upload documents in a way that I can start to either sort by the student and see their activities and

things." Our analysis of Andrew's course site suggests that he essentially requested that support staff help him to migrate all of his content from Blackboard to Elgg and to structure it in a manner that was similar to his Blackboard course. In describing this structure, he explained that Elgg needed to have "a virtual filing cabinet feeling." Similarly, Christine explained that in her Elgg course she "always had a course documents [and] course projects pages … and obviously the course syllabus, and course powerpoints ... and hand outs ... so our page was full of things from the student; they'd download them all the time." Since Elgg is not designed to be an LMS, then it may not come as any surprise that some faculty (Brenda, Laurie, and Mandy) became frustrated if the tool did not allow for the same level of management and control that they were used to in more restricted systems. In Brenda's words: "I wanted that kind of management in the system … it wasn't quite as intuitive in how to set up [those] kind of … course management aspects that I described earlier." Thus, though Elgg was intended by design to function differently than an LMS, some instructors tried to use it as an LMS and found this alignment between the tool and their intended use of it to be somewhat problematic. Other instructors, like Christine and Andrew, believed that changing the tool they used in their classroom would not change their practice in any significant way, as long as they could still do what they were already doing (e.g. storing files in a single, shared location).

To illustrate this point further, all faculty members were far less interested in the social aspects of Elgg than they were in trying to use it to support classroom management. As Christine explained: "the social part is a concern to me, because I need that barrier between professional versus personal and I chose not to, it seems, like I'm in a cave, and that's okay with me … I'm not going to post what I'm eating, I'm not going to post, you know, that it's sunny, cause you can look out the window and see that it's sunny." In her view, the social aspects of Elgg implied

communication that was either inappropriate or unproductive. Similarly, Andrew noted that he "didn't even look at" student profile areas, and in a moment of self-reflection exclaimed: "It's sort of like you know when you go to websites and you see the row of buttons you can just ignore them, I had just ignored [the student profiles]... That's terrible!"

An interesting aspect of this finding, however, is that though faculty members expressed distaste for Elgg's social features and attempted to use it as a management tool, the manner in which they characterized their teaching in a more holistic perspective was very social, community-oriented, and democratic[1], suggesting that their use of Elgg did not reflect their overall practice. Thus, though Andrew explained that he "tries to introduce the notion of democratic practices in [his] classroom," his use of Elgg was top-down and emphasized management of student data and classroom work rather than democratic participation and social interaction. Such emphases did not go unnoticed by students, however, as faculty explained that their students did not use the tool in a very social manner either. As Christine explains: "I do know that the instructor sets the pace and the tone for how the tool is used, and since I wasn't using it in the way it needed to be used truly, [the students] weren't either." Since faculty members used the tool in a compartmentalized fashion (e.g., posting documents and managing course work), they saw their students adhere to this practice and not utilize the social aspects of the tool. Thus, while Elgg includes features that support blogging, social bookmarking, and microblogging, these were not central to the experience of instructors and students in this initiative, as the most heavily used tools included collaborative documents, file sharing, and discussion boards.

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[1] It is important to note that this particular pedagogical perspective permeates the culture of the teacher education program in which this study occurred, and as such was not surprising that all participants shared this perspective.

To summarize, no participant fundamentally changed his or her practice as a result of using the tool. Rather, as participants recognized incogruencies between the tool and their practice they either (1) tried to make the tool work in a manner that aligned with their pedagogical beliefs or (2) reduced/restricted their use of the tool. As a clarifying example, though Laurie might have initially intended to use Elgg as a means of building relationships with her students, the implicit values of Elgg that direct how one builds relationships within the medium (e.g., sharing private information and photos, sending status updates, etc.), were not a good fit for the types of relationships she was trying to build. Therefore, Laurie abandoned the use of Elgg as a tool to create relationships with her students.

Instructors' frustrations stemmed from numerous sources

Four participants expressed frustration with various aspects of their experiences with Elgg. These frustrations may be categorized into four main areas: lack of technical expertise, high expectations of the technology, poor user interface, and incongruencies between the technology's implicit values and faculty members' pedagogical beliefs.

First, lack of technical expertise with the tool was a factor. Andrew provided the following story: "While I'm not an expert [in technology], I'm relatively fearless about [the technologies I'm using]." However, "that fearlessness turned into recklessness; [Elgg] allowed me to delete my [course] group … So there was one time when I thought I was deleting a file... what I thought was the document, but it was the entire group!" Backups were available and the Technology Lab was able to undo Andrew's deletion, but not being able to easily recognize the difference between files and groups and unknowingly manipulating the system in undesired and problematic ways led Andrew to become frustrated and less willing to experiment and take risks.

A second source of frustration stemmed from two faculty members having high expectations of the technology and then being disappointed when unrecognized limitations of the tool were discovered. For instance, Brenda was excited to use Elgg to have her students create, share, and comment on lesson plans, but she became frustrated with inherent limitations of the interface, which was much more restrictive than what she was used to in Microsoft Word. Similarly, Christine had anticipated that Elgg's interface would be more mobile friendly than other systems she had used, but was disappointed that it was not. In her words: "if we could get it to a handheld device, via Smartphone of some choice, I think that would even enhance even the usage of my students; I would wager that they would be on [Elgg] at least daily," whereas, as things were, she felt that her students underutilized the tool, and her expectations of it were not realized.

A third source of frustration stemmed from what two users perceived to be a poor user interface. Andrew explained: "I think aesthetically it was nice, although the interface wasn't particularly intuitive." Brenda stated that Elgg made it easy for her and her students to get to content quickly, but this required them to create work-arounds in how they used the tool, which to her was neither intuitive nor functional and created "a thorn" and "an inconvenience" in the way she communicated with her students. This issue was the most frustrating for Brenda because it lead her to drastically reduce the amount of messages she was sending her students, an activity which she valued highly, and lead her to "hate" the fact that she "quit communicating."

The final source of frustration stemmed from incongruencies between the technology's implicit values and faculty members' pedagogical beliefs, as described by two participants. As experienced teachers, each of the instructors in the study had their own established ways of doing

things that were rooted in pedagogical beliefs that may not have fit well with Elgg's way of doing things. As Laurie explained:

> "We interact really differently on our social networks than we do in our academic networks...we just have different relationships with our student than we have with our friends and our social network. And I think that conflating the two is going to bring up all sorts of feeling[s] and different kinds of relationships that me and a lot of other people are not going to be prepared [for]."

Though instructors in the study emphasized the importance of getting to know their students and having a democratic classroom, Elgg did not seem to allow for the complexity of the instructor-student relationship. Thus, though Brenda believed that she and her students were "sort of [a] family," she recognized that this "family" can be "either a functional one or a dysfunctional one" and that the tool did not allow her to cultivate the types of relationships with her students that she was used to. Giving voice to this frustration, she explained: "I really, really, really think I gave it my all but the bottom line is … what you are passionate about as a teacher and what you know needs to happen, and [if] you're not being able to use [Elgg to do that], then it doesn't make a lot of sense to keep trying."

Discussion

In this study we sought to identify and describe the experiences of instructors who used Elgg, a social networking platform, in their courses. We found that their experiences can be described in terms of their (a) expectations of Elgg that stemmed from numerous sources, (b) heterogeneous and varied ways that they used Elgg, (c) use of Elgg in compartmentalized and familiar ways, and (d) frustrations with Elgg that stemmed from numerous sources.

This investigation contributes and provides additional nuance to the existing knowledge base on instructors' experiences with online social networking platforms. While researchers have argued that online social networks may offer important benefits to formal education, we showed that the integration of SNS in our specific educational setting was contested and rife with tensions. The ways that Elgg came to be used "on the ground" contrasts starkly with the narrative of how social software might contribute benefits to educational practice. For example, while online social networks are applauded for their connectivity, we found that instructors did not make use of Elgg's social features, questioned its assumptions with regards to its framing of instructor-student relationships, and used it in ways that resembled their past use of learning management systems. These findings add a layer of rich understanding to the survey results reported by Lonn and Teasley (2009) who found that instructors used the communication management tools of an LMS' more frequently than its interactive tools. While Lonn and Teasly suggest that efficiency rather than innovation was highly valued, our findings suggest that familiarity with existing tools and use of technology for specific functions (i.e. compartmentalization), may explain the ways that Elgg came to be experienced.

Given the pervasive use of LMS in higher education, it is not surprising that instructors sought to use Elgg in way that resembled the practices they enacted in the past with a LMS. What was surprising was that progressive educators with community-oriented ideas compartmentalized social software to serve managerial functions. This finding resembles the results reported by Ge, Lubin, Zhang (2010) who found that instructors experience with a new LMS appeared to be related to knowledge and experiences with a prior LMS. Building on this finding, our results suggest that instructors' experiences with learning management systems may impact their experiences with other technologies employed in the service of learning. In other

words, it appears that LMS may frame the ways through which subsequent tools are understood, used, evaluated, and experienced. For example, in the study presented here, we observed crossover practices from the LMS to the social network (e.g., viewing and using the platform as "a virtual filing cabinet"). Nevertheless, even though both the findings reported in this paper and in Ge, Lubin, Zhang (2010) appear to point towards the direction of the experiences with learning technologies being framed by the LMS, research beyond these two contexts is needed prior to arguing that this is a generalizable finding.

Finally, while the instructors participating in the study by West, Waddoups, and Graham (2006) changed their teaching practice to accommodate the tool they used, we found that our participants used Elgg to replicate familiar practices. Taken in conjunction, these findings support the argument that emerging technologies shape and are being shaped by instructional practice (Veletsianos, 2010). Our paper however, does not explain the factors that determine whether technology will shape or will be shaped by instructional practice. To attain the benefits that online social networks are purported to offer, researchers have to investigate the factors that may define how emerging technologies are used in creative and unique ways.

Implications

These findings offer insight for future research and practice relating to the deployment of institutional tools and social media endeavors in contexts that are similar to ours. These implications are discussed next.

Nuance in Technology Design, Implementation, and Research

Two schools of thought guide current narratives in the educational technology field. The first perspective poses that pedagogy molds how technology is used in instructional settings. The

second perspective focuses on technology's central role and holds that technology, and its affordances, shape instruction, much like McLuhan (1994) argued that the medium shapes the message. These perspectives are reminiscent of the great media debate that focuses on the impact of media on learning (Clark, 1994; Kozma, 1994), but in their current form, they go beyond learning outcomes and represent lenses that individuals use to understand broader issues such as the use and diffusion of technology, online learning, instructor/learner experiences, community development, collaboration, and practices with emerging technologies.

In our research, we found that the technology-centric and the pedagogy-centric perspectives not only co-exist, but instructors' use of technology is shaped by a variety of factors, including experiences with technology tools outside of participants' professional practice (e.g., by using Facebook in their personal lives), perceived roles that the tool may play in individuals' unique instructional settings, and expectations regarding usability and affordances. Design and implementation of emerging technologies in education needs to take into account the complexities and nuances of instructor expectations and experiences. To do so, we need to move beyond the technology-centric and pedagogy-centric ways of technology deployment in educational settings and recognize that the medium, pedagogy, context, and interactions between all three influence the use of technology in education. Importantly, we need to recognize that individuals will appropriate and repurpose technologies to fit with pedagogical values and preferred uses (c.f. Veletsianos, 2012). This seems to require action on two fronts: (a) the design and (b) the implementation of learning technologies.

Learning technologies need to capture the diversity and complexity of educational settings. For instance, Elgg and other social software revolve around the idea of flattening relationships and power structures between participants and, while this perspective might be

valuable in certain contexts, our research suggests that it is not a perspective embraced by all educators, even those who foster student-centered learning environments or embed democratic values in their classroom. In addition to preparing instructors to teach in pedagogically diverse ways, what we need is digital environments that value and respect the diversity and complexity of pedagogical practice. This may not be attainable with the use of one single tool (e.g., Elgg or any other LMS or social network), but may be achieved through the use of tools that target specific instructional practices valued by educators. At the same time, such environments also need to reflect the simplicity and usability that instructors and students have come to expect from widely used online tools. On the implementation front, faculty support centers, like the Technology Lab, need to ensure that they train faculty and promote technologies in a thoughtful and reflective manner, while (a) recognizing what previous tools the instructors have used and with what affordances, (b) understanding instructors' experiences with popular technologies and how they view those technologies, and (c) understanding individual instructors' pedagogical beliefs (and pedagogical beliefs about technology) and their belief about their role as instructors.

Learning Environments vs. Tools for Learning

Study participants utilized Elgg as part of a suite of collaborative tools and appeared to treat Elgg as a supplemental space, distinctive from the classroom environment in which they were teaching. Although advanced online platforms are often presented as all-in-one learning solutions, they are also often treated in a similar way: they are used as a tool for specific instructional purposes (e.g., a repository of documents, a location for online discussions, etc). The distinction between technologies used as learning environments versus technologies used as learning tools is important, because in the first instance the technology is an integral part of the experience while in the second instance it is a vehicle used to execute specific functions. Thus,

part of the reason why the social networking features in the platform were not used may be because the communications afforded by those features were already occurring in face-to-face classrooms, which was the environment that played central stage in this setting. Had Elgg been used as a complete learning environment as opposed to a "tool for doing X," we believe that we would have observed different practices. While online social networks may offer a number of opportunities for participatory learning and teaching, the extent to which these are realized also depends on whether online social networks are an integral part of the learning ecology or are simply treated as a resource for attaining specific instructional objectives.

Technological Frustration as a Complex Phenomenon

Since instructor frustration in this study stemmed from multiple sources, including technological proficiency, unrealized user expectations, poor user interface, and incongruencies between embedded values and pedagogical beliefs, it seems that frustration with Elgg was a highly complex phenomenon that may not be a simple matter to alleviate. Given the diversity of frustration sources, approaches to implementation of complex tools like Elgg should seek to address frustration in correspondingly appropriate ways. Whereas some solutions might consist of teaching the instructor how to effectively use the tool, others would require improving programming and user interface design to more closely approximate what instructors are familiar with, while yet others would require instructors to undergo more foundational questioning (and perhaps rethinking) of the educational practices they engage in with technology and what they expect to get out of their use of it.

Current approaches to educational technology implementation can sometimes take a "build it and they will come" attitude or a view that innovative technologies will be adopted if instructors are merely made aware of their affordances and are willing to try them in their

practice. Such views, however, may assume that educators have a high level of self-awareness regarding how they use technology tools and may ignore unstated aesthetic preferences and philosophical beliefs of the instructor. That having been said, this implementation of Elgg was fairly unique insofar as Elgg was treated as a soft or malleable tool that could be changed in response to instructor feedback as the project progressed, but even with this responsiveness of the tool to instructor wishes, frustration still followed. Though instructors attempted to use the platform with high hopes of being part of the next wave in educational technology innovation, the complexity of the frustrations they faced were unexpected by all involved and suggests that successful innovation in educational technology spaces is complex and that even expert instructors require a variety of supports to successfully innovate.

Conclusion

In this paper, we try to make sense of instructors' experiences in a social networking platform by investigating the experiences of five instructors' who used such a platform in their courses. We discover that expectations, heterogeneous use of the platform, use of the platform for distinct instructional objectives, and a variety of frustrations captured the essence of this experience. Our findings lead us to suggest that (a) more nuance is needed in technology design, implementation, and research, (b) there is a difference between learning platforms as learning environments and tools for learning, and (c) frustration is a complex phenomenon arising from a multiplicity of variables.

This study has a number of limitations that readers should consider. First, this research was conducted after participants had used the platform for one semester. Longer exposure to and use of Elgg may generate different findings with respect to how instructors may use and experience a social networking platform in their instruction,. Therefore, it is important that the

findings presented here should be seen as arising from initial adoption of the platform. While these results are an accurate depiction of instructor experiences during initial adoption, we are not able to examine whether and how these results may or may not change over time due to a university-wide adoption of Google Apps for Education that lead to an abandonment of the Elgg pilot. However, by providing a detailed description of our context, participants, and results, we are enabling other researchers to judge the extent to which the results presented in our paper apply to their respective contexts and examine whether long-term experiences with the tool are similar or different (c.f. Merriam, 1995). Second, participants were relatively homogeneous in their pedagogical beliefs and practices, and results might have differed if Elgg was implemented with faculty members who espoused differing beliefs or had a greater diversity of pedagogical perspectives. Finally, results at other locations might differ because this study is bound by its context. Readers are encouraged to examine the degree to which their local contexts match the context of this study.

In future studies, it would be worthwhile to examine the use of social networking platforms in higher education over longer periods of time in order to more fully understand the role of these technologies in educational settings, the tensions that they may introduce in instructional practice, and the degree to which faculty members may or may not use them as learning environments or as yet another technology in their toolkit. Importantly, although the literature suggests that instructors may resist emerging technologies because such technologies might not align with instructors' pedagogical practice, our research shows that underuse may not necessarily be a result of resistance and fear but may represent a more complex phenomenon of expectations and expected contributions of the technology in the envisioned ideal learning environment that instructors create for their students.

References

Aijan, H., & Hartshorne, R. (2008). Investigating faculty decisions to adopt Web 2.0 technologies: Theory and empirical tests. *The Internet and Higher Education, 11*(2), 71-80.

Arnold, N., & Paulus, T. (2010). Using a social networking site for experiential learning: Appropriating, lurking, modeling and community building. *The Internet and Higher Education*, *13*(4)188-196.

boyd, d., & Ellison, N. (2007). Social network sites: Definition, history, and scholarship. *Journal of Computer-Mediated Communication, 13*(1), 210-230.

Birch, D., & Burnett, B. (2009). Bringing academics on board: Encouraging institution- wide diffusion of e-learning environments Institutional context for the research. *Australasian Journal of Educational Technology*, *25*(1), 117–134.

Brady, K., Holcomb, L., & Smith, B. (2010). The use of alternative social networking sites in higher educational settings: A case study of the e-learning benefits of Ning in education. *Journal of Interactive Online Learning*, *9*(2), 151-170.

Charmaz, K. (2011). Grounded theory methods in social justice research. In N. K. Denzin & Y. S. Lincoln (Eds.), *The SAGE handbook of qualitative research* (pp. 359-380). Thousand Oaks, CA: Sage.

Clark, R. (1994). Media will Never Influence Learning. *Educational Technology Research and Development, 42*(2), 21-29.

Couros, A. (2009). Open, connected, social – implications for educational design. *Campus-Wide Information Systems*, *26*(3), 232-239.

Dalsgaard, C. (2006). Social software: E-Learning beyond learning management systems. *European Journal of Open, Distance and E-Learning, 9*(2). Retrieved on July 15, 2012, from http://www.eurodl.org/materials/contrib/2006/Christian_Dalsgaard.htm

Dede, C. (1996). Emerging technologies and distributed learning. *American Journal of Distance Education, 10*(2), 4-36.

Dron, J. & Anderson, T. (2007). Collectives, Networks and Groups in Social Software for E-Learning. In T. Bastiaens & S. Carliner (Eds.), *Proceedings of World Conference on E-Learning in Corporate, Government, Healthcare, and Higher Education* (pp. 2460-2467). Chesapeake, VA: AACE.

Dron, J., & Anderson, T. (2009). Lost in social space: Information retrieval issues in Web 1.5. *Journal of Digital Information*, *10*(2), 1-12.

Ellison, N., Steinfield, C., & Lampe, C. (2007). The benefits of Facebook "friends:" Social capital and college students' use of online social network sites. *Journal of Computer-Mediated Communication, 12*(4), 1143-1168.

Gallon, R. (2010). Media behaviour: towards the transformation society. *Technoetic Arts*, *8*(1), 115-122.

Galusha, J. M. (1997). Barriers to learning in distance education. *Interpersonal Computing and Technology: An Electronic Journal for the 21st Century, 5* (3/4): 6-14.

Ge, X., Lubin, I. A., & Zhang, K. (2010). An Investigation of Faculty's Perceptions and Experiences when Transitioning to a New Learning Management System. *Knowledge Management & E-learning: An International Journal, 2*(4), 433-447.

Glaser, B., & Strauss, A. (1967). *The Discovery of Grounded Theory: Strategies for Qualitative Research.* Aldine.

Greenhow, C., & Robelia, B. (2009). Informal learning and identity formation in online social networks. *Learning, Media & Technology*, *34*(2), 119-140.

Harrington, T., Staffo, M., & Wright, V. H. (2006). Faculty Uses of and Attitudes toward a Course Management System in Improving Instruction. *Journal of Interactive Online Learning, 5*(2), 178-190.

Kirschner, P., & Karpinski, A. (2010). Facebook and academic performance. *Computers in Human Behavior, 26*(6), 1237-1245.

Kozma, R. (1994). Will media influence learning? Reframing the debate. *Educational Technology, Research and Development, 42*(2), 7-19.

Lane, L. (2009) Insidious pedagogy: How course management systems affect teaching. *First Monday,14*(10). Retrieved on July 3, 2012 from http://www.uic.edu/htbin/cgiwrap/bin/ojs/index.php/fm/article/view/2530/2303

Lenhart, A., Kahne, J., Middaugh, E., Macgill, A., Evans, C., & Vitak, J. (2008). *Teens, video games, and civics: Teens' gaming experiences are diverse and include significant social interaction and civic engagement*. Retrieved October 29, 2011, from Pew Internet & American Life Project: http://www.pewinternet.org/PPF/r/263/report_display.asp

Levickaitė, R. (2010). Generations X, Y, Z: How Social Networks form the Concept of the World Without Borders (The Case of Lithuania). *Limes, 3*(2), 170-183.

Lonn, S., & Teasley, S. D. (2009). Saving time or innovating practice: Investigating perceptions and uses of Learning Management Systems. *Computers & Education, 53*(3), 686-694.

Madge, C., Meek, J., Wellens, J. & Hooley, T. (2009). Facebook, social integration and informal learning at university: it is more for socialising and talking to friends about work than for actually doing work. Learning, Media and Technology, 34, 2, 141–155.

Marwick, A., & boyd, d. (2010). I tweet honestly, I tweet passionately: Twitter users, context collapse, and the imagined audience. *New Media & Society*, 13, 114-133.

McLuhan, M. (1994). *Understanding Media: The Extensions of Man*. MIT Press: Cambridge, MA.

Merriam, S. (1995). What can you tell from an N of 1?: Issues of validity and reliability in qualitative research. *PAACE Journal of Lifelong Learning*, *4*, 51-60.

Minocha, S. (2009). Role of social software tools in education: a literature review. *Education + Training*, *51*(5/6), 353-369.

Minocha, S., Schroeder, A., & Schneider, C. (2011). Role of the educator in social software initiatives in further and higher education: A conceptualisation and research agenda. *British Journal of Educational Technology*, *42*(6), 889–903.

Morrison, G., & Anglin, G. (2006). An instructional design approach for effective shovelware: Modifying materials for distance education. *Quarterly Review of Distance Education, 7*(1), 63–74.

Mott, J. (2010). Envisioning the post-LMS Era: The Open Learning Network. *Educause Quarterly, 33*(1).

Naveh, G., Tubin, D., & Pliskin, N. (2010). Student LMS use and satisfaction in academic institutions: The organizational perspective. *The Internet and Higher Education*, *13*(3), 127-133.

Paulsen, M. (2003). Experiences with Learning Management Systems in 113 European Institutions. *Educational Technology & Society, 6*(4), 134-148.

Roblyer, M., McDaniel, M., Webb, M., Herman, J., & Witty, J. (2010). Findings on Facebook in Higher Education: A Comparison of College Faculty and Student Uses and Perceptions of Social Networking Sites. *The Internet and Higher Education*, *13*(3), 134-140.

Selwyn, N. (2009). Faceworking: exploring students' education-related use of Facebook. *Learning, Media and Technology, 34*(2), 157-174.

Sclater, N. (2008). Web 2.0, Personal Learning Environments, and the Future of Learning Management Systems. *ECAR Research Bulletin*, No. 13. Retrieved on Jan 30, 2012 from http://www.educause.edu/ECAR/Web20PersonalLearningEnvironme/163047

Selwyn, N., & Grant, L. (2009). Researching the realities of social software use - an introduction. *Learning, Media and Technology*, *34*(2), 79–86.

Statistics. (2011). *Facebook*. Retrieved December 5, 2011, from http://www.facebook.com/press/info.php?statistics

Stutzman, F. (2006). An evaluation of identity-sharing behavior in social network communities. *Paper presented at the iDMAa and IMS Code Conference.* Oxford, OH.

Towner, T., & Munoz, C. (2011). Facebook and education: A classroom connection? In C. Wankel (Ed.), *Educating Educators with Social Media* (pp. 33-57). Bingley, U.K.: Emerald Publishing.

Veletsianos, G. (2010). A Definition of Emerging Technologies for Education. In G. Veletsianos (Ed.), *Emerging Technologies in Distance Education* (pp. 3-22). Edmonton, AB: Athabasca University Press.

Veletsianos, G. (2012). Higher Education Scholars' Participation and Practices on Twitter. *Journal of Computer Assisted Learning, 28*(4), 336-349.

Veletsianos, G. & Navarrete, C. (2012). Online Social Networks as Formal Learning Environments: Learner Experiences and Activities. *The International Review Of Research In Open And Distance Learning, 13(*1), 144-166.

Veletsianos, G. & Kimmons, R. (2013). Scholars and Faculty Members Lived Experiences in Online Social Networks. *The Internet and Higher Education,16*(1), 43-50.

Wang, Q., Woo, H., Quek, C., Yang, Y., & Liu, M. (2011). Using the Facebook group as a learning management system: An exploratory study. *British Journal of Educational Technology*.

West, R. E., Waddoups, G., & Graham, C. R. (2006). Understanding the experiences of instructors as they adopt a course management system. *Educational Technology Research and Development*, *55*(1), 1-26.

Wilson, B., Parrish, P., & Veletsianos, G. (2008). Raising the bar for instructional outcomes: Towards transformative learning experiences. *Educational Technology, 48*(3), 39-44.

Appendix A: Interview protocol

- Tell me about your experience in the Elgg course environment.
- How do you use Elgg?
- What worked well with using Elgg as a tool to deliver the course?
- What has not worked well?
- What does Elgg add to your teaching, if anything?
- What does Elgg add to student learning, if anything?
- How do you feel Elgg could be used to improve learning in your content area?
- How has the [faculty technology support office] worked with you in using and implementing Elgg in your course?
- How has the process of implementing Elgg in your course been?
- Has Elgg allowed you to do anything new in your course?
- What was your perception of the students' professional identities as seen in their Elgg profiling?
- How did you address the students personal profile design?
- What would you do differently in helping student develop social presence or personal profile on the Elgg platform?
- Is there anything else about your experience with Elgg that you would like to share?

Appendix B: Preliminary concepts describing instructor experiences

1. Instructors seem to have different perceptions of what Elgg is, what it does, and how is should be used.
2. Instructor experiences seem to be related to the way instructors view education.
3. Instructors have different experiences, different expectations, and face different outcomes. One size does not fit all.
4. Lack of community development. Potential reasons: did not use Elgg enough, learn how to use it well enough, or did not use the social networking features.
5. Concept #4 appears to stem from a variety of reasons like beliefs about learning and education, time, familiarity, etc.
6. Insufficient time to explore social capabilities.
7. Elgg changed the social role of the instructor and his/her relationship to students.
8. Elgg problematized previous modes of teaching (e.g., student-instructor relationship).
9. Egg did not problematize previous modes of teaching (e.g., being used in a manner similar to other tools).
10. Pedagogical needs appear to lead to rejection or underuse of technology/Elgg.
11. Frustrating experience.
12. Instructors have expectations of Elgg.
13. Instructors perceptions of the tool appear to have been formed outside of the institutional setting → Elgg is not a neutral space.
14. Instructors have perceptions of what their role is or should be and how that is or is not compatible with Elgg.

15. How does the introduction of these tools (from an office like the technology support office) impact the experience?
16. Elgg (a learning technology) is compared to Facebook (a non-learning technology).
17. Elgg has limitations, leading instructors to become frustrated and question the applicability of the tool for education.
18. The use of Elgg is more similar to an LMS than to an online social network.

Table 1

An overview of the empirical research reported in this paper.

Authors	Research Topic	Method	Data Source(s)	Relevant Findings	Limitations
Aijan & Hartshorne (2008)	Explores faculty decisions to adopt Web 2.0 technologies	Path analysis of multivariate factors	Survey of 136 instructional personnel at a single university	Instructors believe that SNS are valuable for pedagogy but do not plan to use them.	Single university
Arnold & Paulus (2010)	Examines Ning integration in a blended course	Case study	Student questionnaires and Ning content of participants (e.g., 81 blog posts, 143 discussion forum posts) in a course	Students viewed Ning as a class "hub," and their use mirrored that of an LMS (e.g., writing reflections) more than an SNS (e.g., organic interaction between participants).	Context specific, single course
Birch & Burnett (2009)	Examines the factors that influence adoption and integration of educational technology in a higher education setting	Case study	Interviews with 14 faculty members and 3 instructional designers	Institutional barriers (lack of institutional guidance, lack of tailored/specialized training, local policies), individual inhibitors (lack of time, high workloads, lack of rewards) and pedagogical concerns impacted adoption and integration of technology.	Results bound by the study's context; Single university
Brady, Holcomb, & Smith (2010)	Investigates the benefits of Ning for education	Case study	Survey of students (n=52) using Ning for one of three online or hybrid courses at a university	Students believed that Ning offered improved collaboration and social reflection opportunities to face-to-face settings.	Based on student beliefs/perceptions; Context specific, single course
Dron & Anderson (2009)	Examines the implementation of Elgg in an educational institution	Case study	Content from an online undergraduate course conducted in Elgg	Students engaged socially with one another via the medium, but had difficulty with the interface.	Context specific, single course
Ge, Lubin, Zhang (2010)	Examines the experiences of faculty members as they transition from one LMS to another	Cross case study	Six faculty members (1 male, 5 females) were interviewed using a standardized interview protocol	Some participants were worried by the transition; others were not bothered by it. The impact of the experience appeared to be related to prior knowledge and experience with LMS. Participants tended to compare new LMS with the old LMS hoping that the new LMS encompassed the features they liked of the old LMS while including additional features they thought were valuable. Balance between flexibility and control.	Single university, relatively small sample
Greenhow & Robelia (2009)	Investigates SNS use to support informal learning	Mixed-methods	Survey and focus groups of low-income college students (n=1425); Case studies of selected participants (n=11)	Students believed that SNS use helped them develop necessary educational skills that were not valued in their schools.	Results limited to sample characteristics

Lonn & Teasley (2009)	Investigates perceived benefits and actual use of LMS by students & instructors	Survey research	Survey of students (n=2,486 in 2006 and n=2,281 in 2007) and faculty (n=1,357 in 2006 and n=1,481 in 2007).	Instructors and learners value the tools provided by the LMS. Communication management tools were used more frequently than interactive tools, suggesting that efficiency, not innovation, was highly valued.	Single university; Broad snapshot of practice as opposed to in-depth look at use cases
Madge, Meek, Wellens, & Hooley (2009)	Examines informal uses of Facebook in higher education	Survey research	Survey of first-year Facebook users (n=213) at a single university	Students believed that Facebook was an important aspect of socialization into university life.	Single university
Naveh, Tubin, & Pliskin (2010)	Examines student satisfaction with LMS in education	Case study	Data from an Israeli university's LMS and student survey responses (n=10,583)	LMS use and satisfaction is correlated with a variety of variables including course size, instructor status, and forum existence.	Context specific; Single university
Paulsen (2003)	Examines the experiences of European institutions with their LMS	Qualitative meta-synthesis	Original analyses were based on interviews with 113 system managers/experts at participating institutions.	Institutions do not appear to be "loyal" or dependent on one LMS. LMS generally used for hosting/sharing of content developed using external tools. Deployed systems "work satisfactorily" and are "good enough," but they do not have all the functions institutions want.	LMS manager perspectives of practice.
Roblyer et al. (2010)	Investigates the use of Facebook in higher education	Non-parametric survey analysis	Survey of students (n=120) and faculty (n=62) at a single university	Faculty believed that Facebook was not suitable for education, while students were more open to the possibility.	Single university
Selwyn (2009)	Examines students' education-related uses of Facebook	Non-participant ethnography	Network-visible Facebook content of undergraduate students (n=612)	Facebook supports identity politics of informal education as a 'backstage' area.	Single university; Only dealt with network-visible (i.e. non-private) content
Wang, Woo, Quek, Yang, & Liu (2011)	Explores the use of Facebook groups as an LMS	Case study	Survey of undergraduate (n=14) and graduate (n=14) student beliefs after participating in one of two courses	Facebook offered some valuable, though problematic, pedagogical, social, and technological affordances to students.	Context specific, non-experimental (does not compare to another LMS)
West, Waddoups, & Graham (2006)	Examines instructor experiences with an LMS	Qualitative analysis	Semi-structured interviews (n=30) and open-ended surveys (n=122) with instructors	Instructors fell into one of three categories of use: a) embracing and dependence, b) reduced use, or c) discontinued use.	Single university, single LMS