Emerging research on social media use in education: a study of dissertations

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ABSTRACT

There has been wide academic and research interest in the application of Social Media (SM) modalities, as instructional tools, in contemporary educational settings. Although research on this topic has grown exponentially in recent years a) very little is known about the breadth of research regarding SM in the scholarly literature, and b) few reviews of data-based, outcome studies on the SM-education nexus have appeared. This study was designed to address both these issues. First, the current analysis attempts to gauge the scope of the research domain of SM-education typology by conducting a content analysis of dissertation research in this area. Second, a subset of these studies, with a focus on empirical outcome, on the efficacy of SM in educational settings was examined. A keyword search of the term (Social Media) yielded 662 studies represented in ProQuest's Dissertations & Theses database. Based on the abstract of each study, the author tagged the reference with a descriptor that best represented the main topical focus of the research. The topical areas that garnered the most research attention, within the domain of SM, were (in rank order): political issues/social movements, marketing/business performance, and college-level educational issues. In total, educational applications of SM accounted for 12% of this dissertation sample. The author summarized the major outcome findings of 29 dissertations that had a specific focus on *SM-Education* issues. Of these, only 2 studies reported any negative views by either students or faculty on the implementation of SM platforms for academic purposes. Instructors' lack of efficacy in Web 2.0 technology, privacy issues, and data overload were the major concerns noted. As these results are based on areas of investigatory interest of young researchers, the current findings provide a barometer of emerging trends regarding critical issues in *Social Media-Education* research.

Keywords: Social Media, Web 2.0, Dissertations, Higher Education, Graduate Students, Research

INTRODUCTION

Due to the ubiquitous nature and pervasive informational function of interactive digital and mobile technologies, social media (SM) has now transformed from being used informally in educational settings to gaining formal acceptance by students, faculty, and administrators (Aviles & Eastman, 2012; Barnes & Jacobsen, 2012; Tess, 2013; Voorn & Kommers, 2013; Waldeck & Dougherty, 2012; Wang et al., 2012;). This represents a major paradigm shift in education today. Interactive and mobile technologies, under the domain of Web 2.0 communications, span a wide variety of mediums such as blogs, wikis, social networking, and virtual worlds (Moran & Tinti-Kane, 2012). The unique attributes represented across all SM forums are encompassed by the following functional features: communication, collaboration, community, creativity, and convergence (see Friedman & Friedman, 2013). Such attributes enable more egalitarian and participatory discursive practices, which are at the heart of the instructional-learning praxis (Selwyn, 2011).

Research addressing the specific issue regarding the benefits and drawbacks of SM uses and applications for coursework and academic purposes has been quite active in recent years (Ajjan & Hartshorne, 2008; Brown, 2012). Although much of the research attention has been optimistic in tone (Bennett, Bishop, Dalgarno, Waycott, & Kennedy, 2012; Huang & Huang, 2011; Sim & Hew, 2010), some educational researchers have remained cautious (e.g., Friesen & Lowe, 2011; Gingerich & Lineweaver, 2014; Mao, 2014). On the positive side, educators acknowledge the supportive functions of Web 2.0 technology in fostering student learning, i.e., engagement, encouragement of autonomy, intentionality, reflection, and community (Chen, Lambert, & Guidry, 2010; Dunlap & Lowenthal, 2011). Critics contend that while there are benefits to accommodating the neo-millennial tech-friendly learning style, instructors need to assure and promote critical thinking and literacy skills in today's students (Everson, Gundlach, & Miller, 2013). At the same time, aggregate findings indicate that Web 2.0 technologies can enhance college student engagement, academic performance, and faculty-student interaction, as well as foster administrative communication with students (Collis & Moonen, 2008; Hemmi et al., 2009; Hrastinski & Aghaee, 2012; Junco et al., 2011; Mazman & Usluel, 2010). Moreover, SM applications have been found efficacious in graduate-level coursework (Meyer, 2010).

Rationale for Current Study

Despite the fact that the literature on pedagogic applications of SM has received wide scholarly attention in recent years, few studies have summarized empirically-based *outcome* research in this emerging area (see Cao, Ajjan, & Hong, 2013; Veletsianos, Kimmons, & French, 2013). Moreover, few bibliometric studies (e.g., Gao et al., 2012; Piotrowski & Kass, 2013) on the scholarly domain of the SM literature have appeared. Thus, mapping the typological 'domain' structure of the SM literature related to education would be informative. Furthermore, obtaining a sense of *Emergent* SM research related to academic issues would be of high interest to educators. To that end, the current study has 2 goals: a) to determine the topical areas, within the scope of SM, most emphasized in dissertation research, and b) to summarize the key findings of 29 dissertation research studies that examined the Social Media-Education nexus.

METHOD

Research reporting on bibliometric analyses of dissertations has recently appeared (Piotrowski, 2014; Stock-Kupperman, 2011). Such findings tend to report academic interests of novice researchers and concomitantly reflect scholarly interest in contemporary emerging areas. The data pool for the current study was obtained from ProQuest's *Dissertation & Theses* database. A keyword search (conducted August 4, 2014), using the term *Social Media*, produced 662 studies. Based on the abstract of each dissertation, the author coded each study with a descriptor that best represented the main topical focus of the research. A frequency tally, across these categories, was maintained until all 662 references were scored. The aggregated tallies served to produce a rank order listing of the most emphasized topical areas in SM research by graduate students. In addition, the author selected a subsample of these dissertations that generated group comparisons on SM factors related to educational issues.

FINDINGS

Major Social Media Areas of Dissertation Focus

The results of the bibliometric analysis indicate that emergent research regarding social media (SM) encompasses a broad range of topical areas. It appears that today's young researchers devote much research attention to the influence that SM technology has on politics and the political process, including social movements. In addition, business issues such as marketing, organizational performance and efficacy, brand management, and consumer behavior are popular SM topics. The analysis shows that dissertation research on the implementation of SM for *academic* purposes predominantly reflects applications in college or university settings. However, there seems to be evidence for emerging interest in the nexus of SM and K-12 instruction, and also on the professional development of faculty. Perhaps reflecting the seminal nature of SM research, many dissertations examined conceptual models and theoretical issues. Thus it appears that novice researchers are not reluctant to address controversial issues inherent in advancements in SM technology, nor the intellectual challenges of advancing the field. In addition, the current analysis identified several areas largely neglected in graduate-level research. Topics that receive much attention in the popular media with regard to SM (e.g., privacy, security, cybercrime, harassment, online addiction) are rarely a major focus of dissertation study. The reason for this lapse is not clear.

Dissertation Outcome Studies & Findings

The review of the major findings of the 29 dissertations identified concluded that the vast majority of these studies find very positive attitudes and outcomes on the implementation of SM for instructional purposes (see Table 1). In general, students, at all educational levels, seem to harbor positive views on academic uses and applications of SM. On the other hand, faculty, while keeping an open mind on SM use in coursework, appear to be somewhat more cautious than students. Only 2 dissertations noted either negative attitudes or lack of reliance on SM for academic purposes on the part of students. Moreover, several studies reported student concerns on the potential for overlap regarding the social versus academic bifurcation of SM use; this was usually with regard to interaction with faculty. Interestingly, studies on samples of school

administrators found very favorable attitudes and views on adaptations of SM modalities for academic use, although these educational leaders expressed the need for a) continued review of policy issues, b) the development of standards of 'best practices', and c) awareness of the legal implications of SM use for instructional purposes. These dissertation studies found support for all SM modalities, but the academic application of blogs in coursework assignments was particularly noteworthy. Emergent research on the use of blog communications for academic assignments supports this finding (see Cakir, 2013; Lin, 2013). Several dissertations, with a focus on business school education, found efficacious applications of Twitter in marketing courses. Recently, researchers have argued that Twitter, as a pedagogical tool, has a myriad of benefits for business school instructors who engage their students in experiential learning (Rinaldo, Tapp, & Laverie, 2011). Since the current study has a focus on young researchers, these findings should serve as a barometer of emerging trends regarding critical issues on the Web 2.0 technology-Education nexus.

Table 1
Summary of 29 Dissertation Studies with a Focus on Educational Aspects of Social Media

Author/Title	Method	Key Findings
McAliney, Peter J. (2013) How undergraduate students use social media technologies to support group project work	Qualitative design; 11 undergraduates; blended course; interview data, reflection logs	Major themes emerged: a) prior SM use for academic work, b) students' SM communications are critical, c) SM 'immediacy' can blur team member roles, i.e., individual responsibility, integrated planning. Colleges/universities should support use of SM for instructional purposes by providing workshops/tutorials for both students and faculty.
Zheng, Binbin (2013) Social media and classroom writing: Participation, interaction, and collaboration	Implemented a one-on-one Laptop program, using microblogging and Google Docs, on upper-elementary students' authentic writing skills	At-risk learners favored netbooks the most; Hispanics and low SES students gained the most in standardized writing achievement. Results show educators that the integration of SM technology facilitates students' participation, interaction, and writing/literacy development.
Frazier, Stephanie D. (2013) An analysis of the current use and intentions to use mobile	546 community college full-time faculty from the South responded to a 21-item	About 67% of the faculty members utilized at least 1 or more m-learning tools; Some

learning strategies among full-time community college faculty	survey on mobile-learning strategies for student engagement	faculty felt that SM use can be disruptive to student learning and that institutional support may be limited.
Zywica, Jolene (2013) Using social media to connect families and kindergarten classrooms	Qualitative design using home observations & interviews; studied 6 kindergarten teachers & 32 families that leveraged SM to link home and school in academic learning	The project helped in contextualizing content learning; teachers, parents, and children felt better connected; the model found support for using SM to foster family involvement in classroom instruction at the elementary school level; however, a sizeable minority of parents did not feel more engaged.
Lovecchio, Michael J. (2013) The principal's experience through the process of implementing social media in schools	Using a directive-instructional approach, this study outlines strategies that school principals can use in implementing SM tools for classroom communication and instruction	The discussion centers on overcoming the challenges and drawbacks (e.g., inappropriate content, socializing, bullying) on SM use in classroom learning; the central importance of preparing students for the tech-savvy skills needed for college success are noted.
Greenberg, Sallie E. (2013) Impact of social media as an instructional component on content knowledge, attitudes, and public engagement related to global climate change	Used Facebook as an integrated component of a community college environmental biology course; measured student a) content knowledge, b) attitudes toward climate change, & c) public engagement intentions; used comparison group analyses	Although no significant differences between the 2 instructional formats were noted in content knowledge, the Facebook group was more concerned and more socially active about climate change. Interview data showed that Facebook use removed class engagement barriers for shy students, facilitated class discussion time, and provided supplemental reading provided by posts from fellow classmates.
Lenartz, Andrew J. (2012) All my rowdy 'friends': The use of social media in higher education	Using a qualitative design, with focus groups, examined SM use by administrators & faculty at large community college system	Exploratory findings indicated that faculty expect SM use for instructional purposes, at the college level, to increase; one downside

		expressed was the blurring of the boundaries between SM for personal versus professional use.
Gooch, Deanna L. (2012) Research, development, and validation of a school leader's resource guide for the facilitation of social media use by school staff	Developed and field-tested a 'Guide' for SM use in school settings by staff; social media experts served as reviewers	Author concludes that school leaders need to be a) cognizant of legal rights of staff members in reference to SM use, and b) aware of their fiduciary responsibilities.
Williams, Robert W. (2012) Digital immigrant teacher perceptions of social media as it influences the affective and cognitive development of students: A phenomenological study	A qualitative design (using interview data, observation, and focus groups), evaluated 'immigrant' teachers' views on the impact of SM on high school students; 10 teachers from 3 H.S. in Alabama participated	Findings showed that teachers acknowledged that SM can enhance teacher-student interaction and serve as a 'communication' forum in educational settings.
Hunter-Brown, Stephanie R. (2012) Facebook as an instructional tool in the secondary classroom: A case study	A high school sample completed survey data, interviews, and observations in this case study	The findings focused mostly on Facebook use as an instructional tool; teachers' views were aligned with students' perceptions.
Cox, Daniel D. (2012) School communications 2.0: A social media strategy for K-12 principals and superintendents	With a focus on the use of blogs, social networking sites, Podcasts, and online videos, qualitative interviews of 12 principals and 12 superintendents across the U.S. and Canada were conducted	Views of these school administrators were quite positive: a) SM enhances communication, b) SM fosters professional growth; moreover, SM will remain a critical feature of the educational environment.
Tuma, Lorie A. (2012) The impact of Facebook access in creating a sense of community in tourism and recreation classes	A quantitative design compared college students with 'full access' to their instructor's Facebook page and degree of 'sense of community'	ANOVA analyses indicated no significant differences with regard to social cohesiveness of these students. Findings question the utility of Facebook in enhancing a 'sense of community' in the college classroom.
Barkley, Candice K. (2012) School leader use of social media for professional discourse	A case study of a group of principals that created a Blog and Twitter account on critical issues in education; performed a content analysis of the posted blogs;	Descriptive findings showed that these educational administrators 1) generated social capital via their SM activity, and 2) took advantage of modern

	interviewed 6 members of the group	technology to enhance professional discourse.
LeNoue, Marvin D. (2012) Educational social software: The use of social network sites for teaching and learning	This mixed-methods research examined the use of SNS in education and training settings	Survey respondents a) strongly felt that 'privacy' controls are the key feature in the educational use of SNS, and b) supported the utility of SNS applied to the delivery of education.
Luttrell, Regina (2012) Social networking sites in the public relations classroom: A mixed methods analysis of undergraduate learning outcomes using WordPress, Facebook, and Twitter	34 college students in a public relations class evaluated (via survey data, focus groups, & an evaluation rubric) the efficacy of 3 SM modes regarding comprehension of course materials	Twitter and WordPress were rated as more effective than Facebook in comprehension and completion of academic assignments. However, Facebook was viewed as a valuable platform for conducting course objectives.
Nowell, Shanedra D. (2012) Stories of digital lives: Teacher-student relationships in secondary classrooms and digital spaces	Using a qualitative design (interviews, focus groups), both high school teachers' and students' views toward digital online media for academic purposes was investigated	Findings showed that teachers used Internet, online video, mobile phones, and SM to support classroom instruction. Although teachers felt that digital use would increase student learning and engagement, these H.S. students felt somewhat reserved about crossing the boundaries between social and academic adaptations of SM with their teachers.
Andrews, John D. (2012) Into the tangled web: K-12 educators, free speech rights, and social media	This quantitative study surveyed 543 K-12 teachers on their academic use of SM; ANOVAs and regression analyses were performed	A sizeable majority of the sample used SM for educational purposes, many to a great degree; Findings suggest that schools should only hire administrators with positive views toward SM adaptation for educational purposes.
Arteaga, Soraya (2012) Self-directed and transforming outlier classroom teachers as global connectors in experiential learning	This qualitative study employed narrative inquiry and lived experiences of K-12 teachers regarding integrating digital SM into their teaching practices; overcoming	Themes, gained from interviews and digital text, indicated that these teachers relied on digital SM to achieve collaborative experiential learning; moreover, these teachers

	barriers to implementing SM was a major focus	showed a high degree of commitment to lifelong learning, both for themselves, colleagues, and students.
Olson, Douglas (2011) The relationship between community college student engagement and student usage of online social networking	This quantitative analysis examined both social and academic use of social networking in a large sample of community college students; age, enrollment status, ethnicity, and gender differences on SM use for academic purposes were examined	Findings showed that SM, for this sample, was used predominantly for social rather than educational purposes; age, collaborative learning, and student-faculty interaction demonstrated medium effect sizes. The students who use SM academically experienced greater levels of engagement for active and collaborative learning and student-instructor interaction.
Neely, Laura S. (2011) An analysis of Facebook intensity and privacy management practices of public school educators in the United States	Based on a quantitative design, this research examined level of Facebook use and privacy management issues in a sample of public school educators; the Facebook Intensity Scale and the Facebook Privacy Management Scale were administered	Findings showed a positive correlation between Facebook intensity and boundary permeability; significant gender differences on boundary issues were noted. Although the author urges instructional technology leaders to find efficacious use of Facebook for academic purposes, legal implications of educational adaptations of SM need to be studied.
Garber, Michelle B. (2011) Social media policy on campus: A case study of the development and implementation of a social media policy for university administrators, faculty, and staff	To ascertain the development and implementation of the SM policy at one university, this study utilized a qualitative, case study analysis, based on interviews and focus group sessions with faculty, administrators, and staff; impact on students and staff was also investigated	Qualitative findings centered around 4 major themes regarding SM- 1) Risk & control, 2) Goals, 3) Content & platform, and 4) Implementation of SM policy.
Ahmadi, Zia (2011) Technology-enhanced project-based learning in a large undergraduate anthropology lecture course	In a qualitative, exploratory case study design, this research assessed tech-based learning in a college-level course; the instructor, 3 TAs,	Interview and observational data showed that the instructor relied on Facebook and a wiki course management system for

	and 2 students were the participants	instruction; Although the initial reaction of the students regarding SM use was tepid, they adapted, in a positive manner, as the course progressed.
Amador, Paul V. (2011) College students' use and understanding of an electronic social network for academics, academic help seeking, and academic advising	This qualitative, case study involved college students reactions to the use of Facebook for academic advising; conducted during the 2009-2010 school year	Findings showed very positive attitudes toward the use of SM for academic advisement and academic support resources; Generalization of these conclusions are limited due to restrictive sample.
Bradley, Tabitha L. (2011) Perceptions of in-service teachers on their interactions and behaviors on Facebook: A phenomenological study	This qualitative design included 10 in-service teachers on their views regarding both personal and professional communications via Facebook	The phenomenological analysis indicated that these teachers do not see any difference between school-related or social communications through Facebook; the study supports proactive educational guidelines so as to deter any inappropriate online behaviors or communications on the part of educators.
Buono, Lisa L. (2011) Thinking like twenty-first century learners: An exploration of Blog use in a skills-based counselor education course	This phenomenological study explored the lived experiences of counselors in training when blogging during coursework; criterion sampling methods were used	The following themes emerged-feeling supported, developing connections, expressing oneself, discovering diverse perspectives, finding commonalities, perceiving online safety, and reflection; Findings suggest that a course blog can be a valuable instructional tool.
Cohen, Alexis (2011) Higher education students' perspectives of the relevance of the online social networking site Facebook to education	283 college students rated the relevance of Facebook for academic purposes, faculty-student interaction, and dissemination of educational information; descriptive statistics, correlational analyses, and ANOVAs were performed	Interestingly, this sample of students in higher education 1) did not view Facebook as a useful academic tool, 2) did not desire contact with instructors via Facebook, and 3) held negative attitudes about integration of Facebook into the educational process;

		males used Facebook significantly more than female students for academics.
Ayers, Michael P. (2011) Toward authentic audiences: Blogging in a high school English classroom	In this qualitative design involving language arts courses, a teacher studied 80 classroom blogs, interviewed 8 students, and maintained field notes; discourse and multimodal analyses were performed	The focus was on how the students used structural features of the blogging platform in class interactivity; Findings indicated that the connectivity to reach-out and communicate with audiences through blogs could validate their contribution.
Swanson, Troy A. (2010) The administration of community college blogs: Considering control and adaptability in loosely coupled systems	A multiple case study method was applied to 1) understand how college administrators view the academic applications of blog authors, and 2) develop a model that facilitates the integration of Web 2.0 technologies	Exploratory findings examined the adaptability of college administrators to advances in Web 2.0 mediums, particularly how tools like Facebook and Twitter are incorporated for educational applications in higher education.
Bishop, Melanie (2010) Virtual teacher talk: Blogging with and by pre-service teachers	Based on an Action research design, 34 undergraduate pre-service teachers participated in the use of blogs during a foundational course; data sources included reflective field notes, focus groups, and observer notes	Findings demonstrated that blogs were effective and enhanced the communicative-learning experience; however, not all students benefited from the experience; the author cautions that educators cannot ignore the challenge of the appropriate use of Web 2.0 platforms in academic settings.

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