Teaching and Learning in a Social Media Ecosystem: A Case Study

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Abstract
This in-depth case study of a social media learning ecosystem in higher education used mixed-methods to evaluate a strategic, pedagogy-driven integration of social media in college courses. In-depth qualitative and quantitative analyses suggest that the strategic integration of social media into instruction benefited students and positively affected the key outcomes of learning, motivation, teacher relationship, and career success.

1. Introduction

The potential of Web 2.0 technologies to alter teaching and learning is so great, that some speak of a radically different approach, titled “Web 2.0 Learning” [1]. Arguments that Web 2.0 tools can support learner-centered pedagogies and should therefore be integrated into various levels of education abound [2-5]. However, there is a need for research to provide specific evidence about the impacts of Web 2.0 on education [6, 7]. This paper addresses this need and aims to provide a data-driven examination of how and why Web 2.0 tools may affect key education outcomes such as student learning, motivation, teacher relationship, and career success. Web 2.0 has been defined as Web services that share a set of characteristics such as mass collaboration, harnessing collective intelligence, and being data-driven [8]. Further elaborations of the Web 2.0 concept define it as an emergent communication platform – as opposed to a channel – that supports social interaction and collaboration [9, 10]. Blogs, microblogs, social bookmarking sites, wikis, and social networking sites are some popular types of Web 2.0 applications (also known as social media) that educational technologists have advocated should be integrated into education [11, 12]. As Crook et al. [6] note, too many integrations of social media into education are driven by technology rather than pedagogy. The tendency has been noted before, to rush and apply technology to the problem at hand, without a careful analysis of the problem [13]. This paper presents a strategic approach to deep social media integration driven by learning objectives. We document and evaluate a case where several social media were both learning tools and learning goals. Students enrolled in two public relations courses used social media to learn public relations concepts, but also to become familiar with the media themselves and their use in the public relations profession. The case we study is unique and interesting because of this deep and objective-driven social media integration into the curriculum, the use of an ecosystem approach, and of theory-based evaluation. The results show the impact social media use overall had on key outcomes, as well as the relative comparative effect of each instructional strategy. They suggest a framework for integrating and evaluating the use of social media in the classroom.

2. Previous research

Most existing research on the use and impact of social media in higher education has primarily examined a single tool or technology. For example, previous studies have established the potential of using microblogs in foreign language learning [14, 15], and for facilitating informal and process-oriented learning [16]. A clear relationship was found between the use of Twitter in higher education and student engagement and grades [17]. Other researchers have explored Twitter’s potential for continuous, formative course evaluations [18], for increasing interactivity during presentations [19], and as a backchannel in the classroom [20] or during conferences [21-24]. The use of social networking sites (such as Facebook) during the college years has been associated with academic benefits, even when these sites are used for social purposes only. Social networking sites have been shown to help students’ integration into the community, increase their quality of life and the availability of social support, which in turn tend to be mediator variables for core academic outcomes [25-28]. An experimental study showed that appropriate teacher self-disclosure on Facebook increased students’ anticipated motivation to learn, affective learning, and perception of classroom climate, which are all antecedents to learning [29]. The use of blogs in education has also been associated with positive effects. One of the main educational benefits of blogging is that it affords possibilities for self-expression and reflection [30, 31]. The positive effect of blogging on critical reflection has been convincingly documented by a number of previous studies conducted in various parts of the world and different disciplines [32-36]. Another well-documented positive effect of blogging is
collaborative learning through social interaction via
links and comments. This effect has been documented
in studies with student teachers or teachers [37-40] and
MBA students [41].

In our review, we were only able to identify one study
that documented the use of a suite of Web 2.0 tools and
their collective impact on student engagement [42]. Yet,
educational proponents advocate a platform approach
that considers an ecosystem of technologies, rather than
the use of individual tools [43]. Therefore, in this study
we were motivated to understand how the use of
multiple media shapes education. We use a case study
approach to conduct a theory-driven evaluation of
strategic, goal-based integration of social media in
higher education courses. In our case, social media was
not only used as a platform for learning, but learning
how to use social media was a goal in itself. The
theoretical framework that informs our analysis – self-
determination theory (SDT) – is discussed next
followed by an overview of our methods. We then
present the case study and end with a discussion
section.

3. Theoretical Framework

Our analysis of the way a social media ecosystem was
implemented in undergraduate education focuses on
assessing key outcomes for students. Ryan & Deci’s
self-determination theory [45, 46] as applied to
education [47] provides a relevant and appropriate
framework for evaluating this specific case, for two
main reasons. First, self-determination theory enables
more than the assessment of learning outcomes; it can
help researchers understand the processes and variables
that influence and facilitate learning outcomes, such as
motivation and teacher relationship. Second, self-
determination theory emphasizes student autonomy – a
sense of control and choice about learning activities.

Prior work suggests that control is a key factor
differentiating traditional and Web 2.0 learning. Glud et
al. [1] argue that the use of Web 2.0 technologies for
learning requires a re-balancing of power and control
from teacher to learner. Self-determination theory as a
conceptual framework for our study enables us to tap
into this important factor. At its core, self-determination
theory is a grand theory of human motivation that
makes a distinction between intrinsic and extrinsic
motivation. Applied to learning, self-determination
theory emphasizes the importance of intrinsic
motivation, which is mediated by a sense of autonomy
and competence, and of internalizing extrinsic
motivation, which can be facilitated through
relatedness. The application of self-determination
theory yielded three out of our four main evaluation
variables: overall learning, motivation, and teacher
relationship. The fourth evaluation variable used in our
assessment was career success. Anecdotal evidence
suggested that the use of social media in the
undergraduate courses we evaluate had a direct impact
on students’ career success. Students mentioned
informally that the use of social media in these courses
helped them find jobs and internships. Therefore, we
included in our assessment items about employment
and the role social media use in these courses played in
students’ employment experiences, if any. For example,
survey items asked students whether the use of social
media in the course came up during job or internship
interviews, and whether it made a good portfolio item.

4. Methods

4.1. Study design

We used a case study methodology [48]. Case
studies are characterized by their intense focus on a
particular instance of a phenomenon [49]. Several kinds
of data from different sources are usually collected in
order to illuminate the case of interest from multiple
points of view [49]. Case studies can use both
qualitative and quantitative data and they aim to
produce in-depth insights about a particular case rather
than broad, statistically generalizable results. Case
studies seek to understand what is interesting about the
particular and to produce knowledge that is experiential
in nature. That is, readers learn from others’
experiences [50].

For this study, the phenomenon of interest we
examined was the strategic integration of social media
into education – namely, the goal-driven use of social
media followed by rigorous assessment of student
outcomes. The unit of analysis is a particular instance
of this strategic integration, which was implemented in
two public relations courses. Several types of data
related to the unit of analysis are presented: 1) the
instructor’s (first author) account of the pedagogical
strategy and use of each tool; 2) student accounts of
perceived benefits derived from the courses; and 3)
student quantitative ratings of several pedagogical tools
used in the courses, in relation to the major learning
outcomes derived from self-determination theory:
learning, motivation, teacher relationship, and career
success.

The courses we study were taught by the paper’s
first author during different semesters spanning the
years 2008-2009. All students who had taken the
courses were recruited via personal email from their
former instructor a year after the courses were
completed. As an incentive for participation, we offered
a one in 15 chance of winning a $15 iTunes or
amazon.com gift card. The study used an online
questionnaire to anonymously collect both qualitative
and quantitative data about the students’ learning
experiences. The qualitative items asked broadly about
5. Case Study: Learning with Social Media

Following a platform approach [43], the first author integrated a suite of social media tools into the undergraduate public relations curriculum at a southeastern U.S. university. Various social media were integrated in two undergraduate public relations courses: Introduction to Public Relations and Public Relations Techniques. The integration was strategic and driven by specific instructional goals, as follows: The first goal was to encourage students to connect online with public relations professionals so as to acquire social capital, and socialize into the profession. To this end, students were required to use the microblogging service Twitter and to read and comment on public relations professionals’ blogs. Reading blogs was also related to the second instructional goal, to promote independent learning. The third goal was to facilitate students’ creation of professional online identities. In addition to using Twitter, students were required to write individual blogs covering public relations topics. A fourth goal was to increase students’ motivation to learn by providing real-world relevance. Virtual guest speakers were invited to interact with the class via the online videoconferencing application Skype and they provided real-world relevance to course concepts. The fifth goal was to maintain a good relationship between students and instructor. Twitter was once again the tool of choice to accomplish this end. Overall, the social media used were: 1) Twitter, 2) reading professionals’ blogs, 3) writing an individual professional blog, and 4) Skype videoconferencing. It should be noted that, given the rapid adoption of social media into the public relations and marketing professions, cultural proficiency in these media was deemed valuable to students in itself, and constituted an overarching reason for integrating social media in the courses. In other words, social media played a dual role in these courses: not only was it one of the media of instruction, but it was also one of the learning objectives. Different social media present different cultural and technological affordances, which accounts for the integration of multiple tools into the same course. The rationales for including each tool are explained next.

5.1. Twitter

At the time of instruction in 2009, Twitter was still a relatively new medium that some students had not heard about. There was a lot of initial student resistance to using Twitter as students had a hard time making sense of it and overall they did not have an early adopter attitude. However, guest speakers would Skype in and explain the importance of this new communication medium for the public relations profession. This visibly increased students’ motivation and commitment to Twitter.

Twitter was chosen for these courses not only because the promise and growth it showed at the time in the public relations profession, but also because its culture encouraged interaction with people one had not met before. It presented a unique opportunity to help students network and socialize into their future profession, something that was not possible in the small town where the university was located. To this end, the instructor coached the students carefully into setting up their account and creating a professional online identity. The instructor slowly introduced them to professionals they could follow. In fact, by facilitating these connections, the instructor transferred her social capital onto the students. We used a hashtag to identify the course number, and we often enjoyed the advice and contribution of external professionals who used the hashtag when providing information for students. Student use of Twitter was evaluated and was part of the course grade. The evaluation criteria were related to active and sustained participation and engagement with not only class members, but specifically professionals in the students’ area of interest.

5.2. Reading blogs

Students were required to read and comment on public relations professionals’ blogs. The purpose of reading blogs was to encourage independent learning, as students could pick and choose the topics they wanted to read more about. At a time when social
media were very new to the marketing and public relations professions, a lot of industry insights were shared on individual blogs. Public relations professionals were making sense of social media and how they could and should be used as part of their work. Writing a blog could establish one as a thought leader in the profession. A lot of new insights and questions about public relations practice emerged from the professional community, and all this knowledge was only available on blogs. The instructor believed it was beneficial for students to be exposed to this new knowledge and to connect it to the textbooks. Additionally, commenting on blog posts was, besides Twitter, a way to begin to socialize into the profession and create a professional network.

The instructor first recommended a number of blogs, and showed students how to set up a blog feed reader. Then, students were encouraged to identify other interesting blogs, follow them, and share them with peers. Students were instructed on the social norms of commenting online. They were encouraged to comment on other students’ blogs in the beginning, and once they became comfortable posting thoughts online, to begin commenting on professionals’ blogs. The instructor commented on student blogs and other blogs in order to model the behavior expected of students. Students were required to keep a log of their comments on other blogs, and this was evaluated for frequency and thoughtfulness and was part of the final course grade.

5.3. Writing an individual blog

Each student was required to set up and write an individual blog with content related to the area of study. Students were provided ample instruction about the social norms and writing style associated with blogging, as well as given ideas about topics they could write about. They were encouraged to summarize and reflect course material, to apply course material to current events, to provide and comment upon current events and topics in the public relations industry. To model the expected behaviors, the instructor maintained her own blog that the students were required to follow. After some initial resistance and apprehension at publishing their writing online, students embraced and seemed to enjoy writing their blogs. The purpose of the blogs was also related to individual learning, as students were able to reflect and focus on topics of most interest to them. Additionally, blogs helped students establish a professional online presence. The blogs were evaluated for sustained participation over the course of the semester, thoughtfulness and presentation of content (including spelling and grammar).

The three tools presented so far required students to create and post content online. To protect students’ privacy, the instructor did not force any student to disclose their identity online. Students were explained the benefits and risks of being nonymous or anonymous online. Especially in regard to building a professional identity and social network, anonymity is not the most productive tactic. However, students were free to choose how they wanted to present themselves online, as long as the instructor and classmates could make the connection between a user name and an actual student.

5.4. Videoconferencing with public relations professionals

Several public relations professionals were asked to call into class and talk with students about their work. Many of these professionals were the instructor’s personal contacts, and some of these contacts had been established through social media. The stated purpose of these frequent guest speakers was to provide students information about their future chosen profession of public relations. The speakers were asked to talk about their everyday work and the skills needed to get started and succeed in the profession. However, the underlying goal was to increase student motivation to learn. The instructor observed that the same information or piece of advice carried a lot more credibility if it came from professionals “in the real world.” Therefore, the Q&A with guest speaker was used to validate the importance of concepts, skills and techniques we were studying in class.

This activity was not formally evaluated. Students were encouraged to participate, ask questions, and follow-up on Twitter and blogs, but this particular activity was not considered in the course grade. Grading rubrics for all other activities are available from the main author upon request. Anecdotal evidence from students suggested that the use of social media in these courses was extremely beneficial to them. This initial evidence prompted the design of the present study, which aims to understand, in retrospect, how and to what degree social media worked so well for this student group. Therefore, in the next section we explore the relationships between the four social media activities (using Twitter, reading blogs, writing blogs, interacting with virtual guests on Skype) and four theory-derived key outcomes: learning, motivation, teacher relationship, and career success. We first review in-depth open-ended data provided by students in order to understand what course aspects they considered, in retrospect, beneficial. Then, we conduct a descriptive quantitative investigation of the relationships between each social media tool and each of the four student outcomes.
6. Results

6.1. Participants

Former students from the courses taught by the first author at a public university in the southeastern U.S. were recruited for this study. Thirty-three students from two public relations courses were invited to participate and we benefitted from a high response rate of 78%. If the 26 participants, two were males, 22 females, and two participants did not indicate gender. Ages ranged from 20 to 23 years, 90% of the sample was White, 5% was Black, and 2% did not specify. The study was conducted one year after the last course was offered and therefore there were no conflicts as there was no penalty for students who did not participate. Data was collected anonymously through an online questionnaire.

6.2. Qualitative Results

The answers to the open-ended questions were analyzed by one of the authors following the steps and procedures of thematic analysis [52, 53]. After several readings of the data, recurrent ideas were noted and coded. Codes were adjusted iteratively until they captured the data. They were then collapsed into larger categories. The answers to the open-ended questions show that some aspect of social media was indeed perceived as one of the most beneficial aspects of one or both courses. This theme appeared in 17 out of the 21 answers received to the question about the most beneficial course aspects. The following student comment is illustrative in that it explains what aspects of the course were beneficial and why. The comment also points to the utility of blogs for independent learning, which was a main instructional goal and is related to one of the key outcomes assessed in this study:

“[One of the most beneficial aspects of this course was …] Learning practical things like how to use Twitter to network. Once I learned the basics about how PR professionals used social media, I was able to teach myself [authors’ emphasis] even more on my own by reading blogs and reaching out to PRs [PR pros, as used in the course]. I also liked learning things like how to write a press release and about media databases. These things were less fun than social media but just as necessary. I was more prepared on my first day at my internship because I had already become familiar with these things. Also, the online monitoring was a difficult assignment to grasp in class but has proved to be one of the most useful things I know. My bosses don’t know how to scour the Web to gauge brand sentiments, and I learned how to do that in this class. It was an overwhelming assignment at the time, but it was far less overwhelming than what I’ve been asked to [do] in the work world.”

When asked specifically about social media, students reported two main benefits: 1) Learning how to use social media strategically in public relations for both organizational and individual purposes; 2) Career success, as reflected in successful job and internship interview experiences and increased workplace status.

6.2.1. Learning how to use social media strategically. The following student comment illustrates the first main benefit, and also makes an argument about the motivational value of virtual guest speakers, which is related to another important instructional goal and key outcome:

“The exposure to different social media tools [...was one of the most helpful aspects of the course]. Also, the guest speakers that were skipped in class were extremely beneficial to the students. Hearing real PR professionals speak about their career helped to motivate [authors’ emphasis] students that they can be successful.”

The knowledge of social media strategy was very useful for this student whose full-time position ended up focusing on social media:

“I am in charge of all social media accounts and application in my job, therefore the class was incredibly beneficial. I use it everyday.”

6.2.2. Career success. Several students commented about social media being their strategic advantage during employment interviews. A related theme came up, that of gaining a workplace advantage and early seniority because of social media knowledge. The next comments illustrate both these career success themes:

“Having knowledge of the benefits of social media helped me to get my first job. I was also more familiar with many forms of social media than my boss, which has given me more control over my position.”

“Dr. [...] always told us how beneficial learning social media would be for us because it will be the next big thing and everywhere, and she was right! I have had two internships one marketing and one PR, and my responsibilities for them included updating the company’s Twitter and Facebook pages. It was great being able to say that I knew who to, and in some cases I knew even more about these outlets than co-workers.”

The online questionnaire also asked students to indicate what drawbacks, if any, they experienced as a result of using social media in these classes. Most students (11) reported no drawbacks. Five students mentioned feeling overwhelmed by having to keep up with all the social media content. Two students found the use of computers in the classroom distracting. Three students found the forced used of Twitter one of least helpful aspects of the course:
“The exposure to social media was helpful but the required tweets was sometimes not beneficial. Some students were really into twitter while others were not. Being forced to tweet made it not as fun and real.”

Seven students mentioned the textbook as the relatively least helpful part of the course, even though, as the next comment suggests, the textbook was needed for the other course activities:

“The textbook: I ranked the textbook lower than the other elements of the class. I know that the technical elements and terms are vital to my success as a learner, but I felt that I learned more with the hands on activities rather than discussing the readings. The activities and projects in this class were definitely the key to my learning.”

Overall, the qualitative data show that students found great value in how to use social media. But, did social media use also contribute to the larger course outcomes suggested by self-determination theory? Students’ open-ended comments begin to suggest relationships between the use of social media and the key outcomes, even though the open-ended questions did not prompt about these specific relationships. The second, quantitative, part of the questionnaire contained survey items about the relationship between each instructional tool and the four main outcomes. We performed quantitative analyses to further investigate the relationships between instructional strategies (both social media and traditional) and the theory-derived outcomes of motivation, learning, teacher relationship, and career success.

6.3. Quantitative Results

The goal in this section is to weigh the relative contribution of each learning tool to the four key outcomes (motivation, learning, teacher relationship, and career success). To do this, each tool is compared in terms of mean rating on a given outcome. As shown in the four tables that follow, mean ratings for each outcome were very high overall, even for the relatively distal outcome of career success. Within each of the outcomes, the mean ratings for the traditional tools (i.e., textbook, class discussion, and traditional assignments) are presented at the bottom and can be conceptualized as a baseline against which the contribution of the Web 2.0 tools can be better understood. Notably, the Traditional tools were rated relatively favorably, on average. The Web 2.0 tools, on average, are rated considerably higher. Comparing the average ratings of the traditional tools (e.g., textbooks, class discussion) to those of the Web 2.0 tools for each outcome confirms that the Web 2.0 tools were rated significantly higher with moderate to large effect sizes on each outcome, all $t > 2.25$, all $p < .034$, all $d > .46$. Given the high means and low variability, it is little surprise that the items that went into calculating each mean score were generally rated very consistently (Cronbach’s alphas typically $>.900$ with the lowest at $.789$).

6.3.1. Motivation. As shown in Table 1, all of the Web 2.0 tools were rated above 5 (out of 7) for their contribution to student motivation. The traditional tools were rated 4.83, and thus they may have been somewhat less motivating than the novel technologies.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>SD</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall Motivation</td>
<td>6.01</td>
<td>0.82</td>
<td>25</td>
</tr>
<tr>
<td>Motivation from Twitter</td>
<td>5.65</td>
<td>1.26</td>
<td>25</td>
</tr>
<tr>
<td>Motivation from Reading Blogs</td>
<td>5.63</td>
<td>1.12</td>
<td>25</td>
</tr>
<tr>
<td>Motivation from Writing Blogs</td>
<td>5.75</td>
<td>1.06</td>
<td>25</td>
</tr>
<tr>
<td>Motivation from Skype Guest Lectures</td>
<td>5.17</td>
<td>1.03</td>
<td>25</td>
</tr>
<tr>
<td>Motivation from Traditional Tools</td>
<td>4.83</td>
<td>1.08</td>
<td>25</td>
</tr>
</tbody>
</table>

6.3.2. Learning. Each learning tool was rated highly for its contribution to learning, as shown in Table 2. Reading blogs was the only activity with an average rating over 6 (out of 7).

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>SD</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall Learning</td>
<td>6.58</td>
<td>.51</td>
<td>24</td>
</tr>
<tr>
<td>Learning from Twitter</td>
<td>5.55</td>
<td>1.45</td>
<td>24</td>
</tr>
<tr>
<td>Learning from Reading Blogs</td>
<td>6.07</td>
<td>1.06</td>
<td>24</td>
</tr>
<tr>
<td>Learning from Writing Blogs</td>
<td>5.88</td>
<td>1.11</td>
<td>24</td>
</tr>
<tr>
<td>Learning from Skype Guest Lectures</td>
<td>5.63</td>
<td>1.07</td>
<td>24</td>
</tr>
<tr>
<td>Learning from Traditional Tools</td>
<td>5.34</td>
<td>.89</td>
<td>24</td>
</tr>
</tbody>
</table>

6.3.3. Teacher relationship. As shown in Table 3, Twitter and writing blogs were seen as important for students’ relationships with the course instructor (both averaging above a 6) while the less generative activities of reading blogs, listening to Skype guest lectures, and traditional course activities (e.g., reading the textbook) were rated close to 5 (out of 7). This raises the possibility that Twitter and writing blogs were important activities for teacher relationship because they offered means of providing feedback and individualized instruction.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>SD</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall Teacher Relationship</td>
<td>6.24</td>
<td>1.15</td>
<td>20</td>
</tr>
<tr>
<td>Teacher Relationship from Twitter</td>
<td>6.21</td>
<td>1.01</td>
<td>20</td>
</tr>
</tbody>
</table>
6.3.4. Career success. As shown in Table 4, students’ ratings of how much each tool contributed to their career success showed Twitter (5.19) as an important contributor and Skype guest lectures (3.11) as not particularly beneficial, on average.

Table 4: Effect of technology on Career Success.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>SD</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall Career Success</td>
<td>5.08</td>
<td>1.60</td>
<td>23</td>
</tr>
<tr>
<td>Career Success from Twitter</td>
<td>5.19</td>
<td>1.43</td>
<td>23</td>
</tr>
<tr>
<td>Career Success from Reading Blogs</td>
<td>4.37</td>
<td>1.48</td>
<td>23</td>
</tr>
<tr>
<td>Career Success from Writing Blogs</td>
<td>4.42</td>
<td>1.38</td>
<td>23</td>
</tr>
<tr>
<td>Career Success from Skype Guest Lectures</td>
<td>3.11</td>
<td>1.24</td>
<td>23</td>
</tr>
<tr>
<td>Career Success from Traditional Tools</td>
<td>3.46</td>
<td>1.20</td>
<td>23</td>
</tr>
</tbody>
</table>

7. Discussion and Interpretation

We began the exploration of why and how social media worked for these public relations students by analyzing the open-ended feedback they provided months after the courses were over. This time lag enabled us to collect data about students’ career success as reflected in their current employment opportunities. Also, the retroactive data may be more valuable for this case study than data collected immediately after the course ended. Time and professional experience might have changed students’ perspectives and enabled them to provide an honest, rigorous, and relevant assessment, informed by the demands of professional life after graduation. The qualitative data revealed that, without any prompting, social media emerged as the most useful and beneficial aspects of the two courses. The benefits the students reported were directly related to their chosen profession of public relations. Understanding how to use social media, the cultural and social norms that govern each medium, and being able to plan, execute and evaluate a social media communication plan were tangible skills directly related to the course’s core content. As such, the insight that social media was extremely beneficial to these students might transfer to similar courses, but probably not to entirely different disciplines where social media communication is not a required skill. However, the quantitative analyses suggest broader dynamics that could be applied in other contexts. They show how the modes of learning and communicating between students and instructor enabled by social media can support key outcomes that are not subject-specific.

Additional quantitative data analyses explored in depth the relationships between social media activities and outcomes derived from self-determination theory. The overall means for learning, motivation, and teacher relationship, all above 6 on a 7-point scale, indicate success for the four key outcomes. Specifically, the social media tools were significantly more tied to these outcomes than the traditional learning tools.

Independent learning was one of the main instructional goals in this course and the reason why students were required to read professional blogs. Reading blogs was the highest rated activity pertaining to overall learning. This does not mean that other tools are not important contributors of learning. For example, Twitter is often used to create a personal learning network [54, 55], and it is hard to imagine a course without traditional reading, writing, and discussion activities. However, this finding suggests that, for courses were independent learning from professionals is valued, requiring students to read professional blogs might be beneficial. The main author has adopted this strategy when teaching other courses that are not related to public relations, and anecdotal evidence suggests it works well.

Motivating students to learn was the main reason behind using Skype to interact with several virtual guests over the course of the semester. The high mean scores show that all Web 2.0 activities were reported to contribute substantially to student motivation. Each Web 2.0 activity was rated at least 5 on a scale of 1-7, and they were all rated higher than traditional instruction. The results confirmed that Skype worked as intended, but also showed that Twitter may have had an important impact on motivation. It is possible that the same dynamics that explain the motivational value of Skype – interacting with professionals and becoming aware of the real-world relevance of course material – apply to Twitter as well. The grade assessment associated with traditional activities may explain their motivational value. This finding suggests that facilitating student interaction with professionals in their chosen profession increases motivation to learn. This finding is likely transferrable to other educational contexts independent of subject area.

It was important for students and teacher to maintain a positive relationship, as learning theories show that is beneficial for learning [45]. The instructor hypothesized that frequent Twitter interaction would help to that end. Indeed, student ratings show that Twitter contributed to the relationship with the teacher, but so did writing blogs. In retrospect, these results make sense, because the teacher commented on each post students wrote, so blogs became another avenue for frequent interaction. Frequent, one-to-one semi-
formal interaction between instructor and students is likely to contribute to a positive relationship regardless of course content. Indeed, the main author has continued to use this strategy in most her courses, with the help of various communication tools.

To improve students’ chances of career success, the course instructor required them to connect with professionals, and helped them gain social capital by introducing them to public relations professionals on Twitter. Students were coached into creating professional online identities by writing blogs. Students’ average ratings show that Twitter was the most effective contributor, on average, to career success. In addition, some of the open-ended comments mentioned that a student’s blog came up during job or internship interviews. The participants ranked writing blogs highest after Twitter for tools that contributed to their career success. The qualitative and quantitative findings point to similar conclusions – namely, that Web 2.0 tools that enable the extension of social capital and the creation of professional online presence contributed to career success. It is possible that writing blogs contributed to student’s career success by providing employers with professional content to review. However, employers may not have mentioned to students that they read their blogs prior to interviews, so the impact of writing blogs may be underestimated. This could be an important variable for future work. These results can be extrapolated to many professions. Traditionally, students were socialized into professions with the help of conferences and internships. This transition can be now facilitated by encouraging students to interact online with their future peers and employers. Twitter is the medium of choice for several professions, and it is an ideal tool for this purpose because its social norms make it acceptable to interact with individuals one has not met before. However, the magic is not in the medium. Students can be pointed to the online places that professionals use to interact. These can be social media, email listservs, or old-fashioned discussion boards. Regardless of medium, if their future colleagues are online, students can benefit from interacting with them or even just watching them interact (lurking). Moreover, it is important for students to create and maintain a professional online presence, or Google resume, as online searches have become an important screening tool prior to employment [56].

Overall, the results suggest that, when used purposefully and connected to relevant learning objectives, social media can have a positive impact on key student outcomes. In many cases, these tools appeared complementary and supportive of the traditional learning activities, and in some cases, they appear to have outweighed the traditional activities. These findings suggest a model in which social media can be used purposefully and strategically to increase learning, motivation, teacher relationship, and career success.

8. Limitations

The results we present here show very strong and exciting relationships between social media use and key student outcomes. It is important, however, to interpret these results within the context of this study’s limitations. First, readers should keep in mind that this is a case study, and, while extrapolation and transferrability of knowledge are possible, there is no basis for statistical generalization. By definition, the purpose of a case study is not to provide generalizable results – but to identify relationships between variables that future research can test for generalizability. Future research is needed to further explore and confirm the specific relationships identified here between social media and specific student outcomes and to explore building a theoretical model that accounts for the dynamics outlined here.

Another important point of discussion relates to the ethics of requiring students to use social media. This is a question the main author has struggled with over the past decade. Besides the privacy concerns already discussed in this paper, there is a risk that students are encouraged to engage in behaviors that create and encourage information overload, and information addiction [57, 58]. It is important for students to be given the tools to combat the compulsion to check social media constantly and it is important for the educational benefits to outweigh the drawbacks we are able to anticipate. Therefore, even if this study shows that purposeful social media use in the classroom can contribute to important learning outcomes, instructors should weigh the benefits carefully before integrating technology into the curriculum.

In these courses, social media use itself was particularly relevant to the content of these courses and the students’ professions upon graduation. This might have influenced their overall high ratings of social media. However, the deeper underlying practices that this case study suggests are likely to benefit students in other fields and could even be independent of social media use. Fundamentally, this case study shows the value of socializing students into their future profession, showing the course’s relevance for their desired career path, engaging them in light-weight interaction, and providing individual feedback.

9. Conclusion

This in-depth case study and analysis of a social media learning ecosystem in higher education used mixed-methods to investigate why and how social media worked particularly well for a group of students. In-depth qualitative and quantitative analyses suggest
that the strategic integration of social media into instruction benefited students and positively affected the key outcomes of learning, motivation, teacher relationship, and career success. Further research is needed on the specific relationships between social media use and key student outcomes. Data from larger samples and different educational contexts are needed to confirm or modify the relationships identified here. One of this study’s main contributions to scholarly research is a theory-driven method for assessing the comparative impact of various instructional strategies. More research is needed, however, to refine and validate this research instrument. Overall, this case study and analysis makes two fundamental arguments: First, the study argues for and demonstrates the value of pedagogy-driven integration of technology in education. Second, this research demonstrates the value of a platform-approach [43] to educational technology, for both practice and research. For practice, this case study provides an example of an integrated Web 2.0 solution that creates a learning ecosystem. For research, the study demonstrates how such a learning ecosystem can be assessed and evaluated.

10. References


