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A critical review of the literature of social media's affordances in the classroom

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Abstract
Even though the use of social media in education is a now widely-studied topic, there still does not seem to be a consensus for what social media may afford students or how best to use them in the classroom. In this critical review of current literature, I discuss some of the most prominent qualitative studies that explore the use of social media in the classroom. I consider some of the affordances that these scholars assert social media can offer in the classroom, in particular the affordances of authoring to a wider, interactive audience and potentials for improved learning and literacy practices. I then address contemporary scholars' findings for incorporating social media into the classroom as well as the limitations for social media in education. I conclude with a discussion of potential steps for future research.

Keywords
Social media, context, education, learning, literacies, literacy practices, social networking sites, mobile apps, qualitative

Introduction

In 2015, the Pew Research Center reported that 92% of US teenagers go online daily, and 71% use at least two social networking sites (Lenhart, 2015). As digtial technologies continue to advance and become more prominent features in both adults' and teens' lives (Lenhart, 2015; Perrin, 2015; Perrin and Duggan, 2015), the ways that people interact, communicate, and learn continue to change as well, and many may thrive in learning situations where creativity, social interactions and collaboration through technology are fronted (Edwards-Groves, 2011; Nichols, 2007). Many scholars argue that with the rapidity with which technology has changed society over the last two decades since the advent of Web 2.0, so too must school curricula (e.g., Kalantzis and Cope, 2005; Mills, 2009; Moje, 2009; New

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London Group, 2000). While this argument has been made for the past twenty years, scholars continue to call for the adjustment of curricula to better meet the needs of our digital technology-based world. Because of their prominence in teens' lives, opportunities for interactive communication, and flexibility, social media may be a platform to do so.

However, even though classroom social media incorporation is often seen as a step towards embracing various methods of communication, the effectiveness for creating a learning environment or enhancing classroom learning is still widely debated (Ellison et al., 2011; Manca and Ranieri, 2013). Some scholars are skeptical about the use of social media in the classroom unless incorporated with a strong purpose or ideology (e.g., Brabazon, 2011; Collin and Street, 2013; Street, 2013). Though scholars have argued that social media have the potential for learning through supporting networks of information and people (e.g., Anderson and Dron, 2011), others still argue that social media is merely a place for socialization (e.g., English and Duncan-Howell, 2008; Madge et al., 2009). Thus, there is still no strong consensus on social media, their affordances, or how they should be taken up in the classroom (see Manca and Ranieri, 2013; Stornaiuolo et al., 2013).

To contribute to this discussion, I critically review some of the most prominent qualitative (or qualitative-heavy) studies that explore the use of social media in the classroom. Though not exhaustive, this review examines the asserted affordances and constraints for education, describing the studies and potential implications. It is important to note, however, that this is a discussion of the general findings of studies. While I take learning and meaning-making to be situated deeply within context, culture, and power (see Crook, 2012; Prinsloo and Rowsell, 2012; Street, 2013), length does not permit me to address the context for each study discussed here in detail. However, each of these affordances and constraints will be discussed more broadly with regards to these essential concepts. Thus, this review of literature aims to discuss what has been done and what future researchers and educators can learn based on a broad range of findings for the context of the classroom.

I begin by defining social media, their development over time both in and out of school, and how their features can be leveraged in the classroom. I then consider some of the claims for affordances and corresponding constraints that social media can offer in the classroom before moving into scholars' suggestions for incorporating social media into the classroom and the limitations for social media in education. Finally, I conclude with a discussion of some potential steps for future research.

What is social media?

Social media is a relatively new term that has evolved as a way to describe various platforms for online communication. Overall, the term *social media* refers to "any technology that facilitates the dissemination and sharing of information over the Internet" (Robbins and Singer, 2014: 387). More specifically, Kaplan and Haenlein define social media as a "group of Internet-based applications that build on the ideological and technological foundations of Web 2.0, and that allow the creation and exchange of User Generated Content" (Kaplan and Haenlein, 2010: 61); Web 2.0 indicates the adjustment to the Internet that allowed users to generate content (discussed further below).

Because of their relatively recent conception, there are larger, more established umbrellas under which the term social media may fall. One of the longest-standing and most studied of these umbrellas is information and communications technology (ICT). ICT includes mediums like social media as well as those that do not have an interactive audience,

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such as interactive whiteboards and offline computer games where the audience is limited to those physically in front of/using the medium at that time.

Another large umbrella under which social media fall is Web 2.0. A term first developed in 2004 (Kaplan and Haenlein, 2010), Web 2.0 describes the ways in which both software developers and users design and use the Internet to consume, share, and remix data from multiple sources, including those of their peers (Lankshear and Knobel, 2007; O'Reilly, 2007). Sometimes called the participatory web (Crook, 2012), Web 2.0 emphasizes collaboration through an innovative means of production where expertise and knowledge are distributed, shared, and built upon (Kaplan and Haenlein, 2010; Lankshear and Knobel, 2007). Popular examples of Web 2.0 include blogs, forums, and wikis.

Before mobile applications (apps) were widely used, social media were hosted on Web 2.0 websites, which were often referred to as social network(ing) sites (or SNS) (e.g., boyd and Ellison, 2007; Forkosh-Baruch and Hershkovitz, 2012). boyd and Ellison use a three-pronged definition to conceptualize social network sites:

> . . . 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. (boyd and Ellison, 2007: 211).

Each of these prongs is vital to allowing for communication between users and has paved the way for many of the newer features prevalent in contemporary social media.

However, because of the evolution of mobile technologies and apps for mobile devices (phones, computers, and tablets), many users no longer have to visit an actual website for social networking, and instead use an app. Some social media, like Instagram and Snapchat are only hosted on apps, though content may be viewed on websites, while other social networking sites, like Facebook and Twitter, can be accessed through either an app or a website. Therefore, I use the term *social media* to refer to both social networking sites as well as mobile apps.

Because new social media platforms are released every day, social media can be difficult to categorize (Kaplan and Haenlein, 2010) and can encompass many mediums (e.g., websites, video games, mobile applications, blogs). Social media can be used for communicating through photos, videos, and/or text and sharing sourced information with predominantly friends and family (e.g., Facebook, Instagram, Snapchat) or with more professional contacts (e.g., LinkedIn, Academia.edu, ResearchGate). Social media can also be used for specialized tasks like blogging (text or photo) and writing (e.g., Blogger, Tumblr, WordPress), sharing photos, videos, drawings, and/or text (e.g., Vine, Snapchat, Instagram, Twitter), sharing sourced information and discussing it (e.g., Pinterest, Reddit, Twitter), gaming (e.g., Farmville, World of Warcraft), saving and categorizing information to view later (Pocket, Google+, Pinterest), etc. However, there is considerable overlap in the use of many of these social media platforms, and they will be discussed in more general terms throughout this article.

Social media in the classroom

Scholars have approached social media's use in the classroom in varying ways (e.g., through the theoretical frameworks used, methods used, disciplines examined). Areas in which social media in the classroom has been studied span from radiology and business writing in higher

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education (e.g., DuBose, 2011; Magrino and Sorrell, 2014), to elementary and middle school literacy (e.g., Lankshear and Bigum, 1999; Ranker, 2008), to high school English (e.g., O'Byrne and Murrell, 2014) with many others in between. Furthermore, even though social media's use in the classroom has predominantly been studied using ethnographic methods (Stornaiuolo et al., 2013), some scholars have also used other methods such as action research (e.g., Cochrane, 2014; Edwards-Groves, 2011), activity theory (e.g., Rambe, 2012a; Sam, 2012) or discourse analysis (e.g., Greenhow and Gleason, 2012). Because of this expansive variation, I chose a wide range of articles focusing on social media use within the classroom to discuss in this review.

In their literature review of 43 articles examining literacy practices and social media, Stornaiuolo et al. (2013) found that many scholars studying social media in schools looked at identity development and expression, security issues, relationships, and friending behaviors. Additionally, several studies of educational practices with social media focus on online classrooms (e.g., Blaschke, 2014; Conole and Dyke, 2004; Dabbagh and Kitsantas, 2012) or higher education classrooms (e.g., Moran et al., 2011; Okoro et al., 2012). Other scholars conducting empirical studies focused on social media use in education examined the products created (e.g., Hull and Nelson, 2005; Lee, 2007) and the expressed identities that can be seen in these products (e.g., Halverson, 2009; Hughes and Morrison, 2014; Zammit, 2011), while still others focused on teacher/professor attitudes about social media in the classroom (e.g., Mao, 2014; Vie, 2015) or assessment (e.g., O'Byrne, 2009; Unsworth and Chan, 2009).

Many of the earliest studies of social media in the classroom focused on interactive writing websites, or more specifically, blogs (short for web logs). Blogs are two-way interaction tools that allow for people to collaborate, communicate, cooperate, and participate with one another (O'Byrne and Murrell, 2014; Shirky, 2008). Persistently, blogs continue to be the most commonly studied forms of social media in the classroom, perhaps because they closely mirror traditional classroom literacy practices, and as bounded texts, they may be easier to study than some of the literacy practices surrounding more open platforms (Stornaiuolo et al., 2013). However, some argue that blogs' blurring of lines between formal and informal spaces can cause their potentials for learning and meaning-making to be complicated (Liew, 2010).

As new apps and social networking sites continue to gain popularity, more scholars are examining the potential benefits for using other technologies in the classroom beyond the traditional blog (Moje, 2009; Stornaiuolo et al., 2013). Scholars are now interested in the educational benefits of new, highly interactive technologies like Facebook (e.g., Rambe, 2012b, 2013; Roblyer et al., 2010; Wodzicki et al., 2012) and Twitter (e.g., Buck, 2012; Forkosh-Baruch and Hershkovitz, 2012; Greenhow and Gleason, 2012). These newer platforms can potentially provide different areas for student collaboration, expression, and interaction.

Social media features

To better understand the claims outlined in this review, it is important to understand some of the features of social media and their potential implications for education. A prominent feature of social media is the hashtag (represented as #). Originally popularized on Twitter, hashtags are ways to categorize posts (Greenhow and Gleason, 2012). Users can search for posts by using hashtags and see all of the posts that share that particular hashtag.

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In education, when students use hashtags to categorize and search for course-related posts, communication between students is traceable within those posts both in the classroom and online. This allows students to interact with each other and their posts in real-time, thus putting the students in the positions of co-authors as they engage with each other's posts, adding comments and hashtags of their own (Arizpe and Styles, 2008; Moje, 2009). Because students can use numerous hashtags on a single post (e.g., up to 30 on Instagram), they can code their posts for a variety of purposes (see Daer et al., 2014), which can signal participatory literacy practices (Santo, 2011; Stornaiuolo et al., 2013). The user-generated categorizations can also give some insight into how students view their posts in relation to themselves (e.g., #adorable, #Idontgetit, #Iactuallymadethis) and to other posts (e.g., #WebsiteCreation or #schoolproject; Stornaiuolo et al., 2013).

Through features such as "likes" (e.g., thumbs up or hearts to show support for a post), users can give quick feedback to other users and see the reactions that their posts garner, and because these are usually publically numbered/counted, both the poster and the viewers can see the popularity of a post at a glance. These kinds of participatory tools (along with comments) allow users to see how much attention a post is receiving. Furthermore, commenting can allow for the post to become a multi-way communication between users (O'Byrne and Murrell, 2014; Shirky, 2008; Siemens and Weller, 2011).

Because of these kinds of affordances, social media can be used in schools to engage students in potential interactive communication – students then have channels to question their peers, adapt to and make conjectures about ambiguity in their posts, and make connections about their ideas and work, which some scholars have found leads to "critical thinking and meaningful learning" (Arizpe and Styles, 2008: 370) and self-driven learners (Jimoyiannis and Angelaina, 2012). Ideal as these claims sound, there are many key elements that must be in place for them to occur (e.g., students must be hyper focused at the task at hand and interested in using the social media for educational purposes for them to be achieved, teachers must implement them with pedagogical strategy, power dynamics must be shifted). If these criteria are not met, many argue that social media's interactive features can be more of a distraction than something that actually facilitates learning (Pierce and Vaca, 2008; Warman, 2011; Watters, 2010).

Affordances and constraints of social media in the classroom

In this section, I critically examine some of the most prominent claims of affordances and corresponding constraints for which scholars assert that social media allow. While the asserted benefits of social media use are numerous (e.g., backchannel discussions, enhanced communication, increased student creativity, classroom management, increased access for academically-marginalized students), here, I focus on two of the more common contentions that can be seen in the classroom: offering opportunities for widened and interactive audiences and the implications for learning and literacy practices.

Increased, interactive audience

Perhaps one of the most commonly touted benefits of using social media in the classroom is the larger, more interactive audience for which they may allow (Curwood, 2013; Edwards-Groves, 2011; Hughes and Morrison, 2014; Magrino and Sorrell, 2014; Robbins and Singer, 2014; Stornaiuolo et al., 2013). Social media, with their multimodal and participatory

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affordances (Hull et al., 2013; Stornaiuolo et al., 2013), encourage people to interact beyond their immediate and usual audiences (boyd, 2011; Stornaiuolo et al., 2013). Even though traditional projects are confined to the walls of a classroom, those hosted through social media are both for a larger audience and can connect to other online resources (Edwards-Groves, 2011; Magrino and Sorrell, 2014). Additionally, because of the ability to post comments and have multi-way communication, students can be opened up to more modes (e.g., visual, textual, color, style, design) and channels of communication wherein multiple students or users can communicate more effectively with each other in real-time (O'Byrne and Murrell, 2014; Shirky, 2008; Wandel, 2007).

For example, Magrino and Sorrell (2014) studied the use of blogs in combination with other social media platforms (Facebook and Twitter) in a business and technical writing college classroom. They found that students benefited greatly from the collaborative and engaging tools that allowed for greater student interaction, student-to-teacher communication, and distribution of course material. Furthermore, in his focus group of 53 high school students, Crook (2012) found that the participants were concerned with the lack of audience in schools and that social media provided an increased audience for them. According to McLoughlin and Lee (2007, 2008, 2010), this interaction encourages information sharing, student-generated content and discussions around this content, and improved social rapport. With an interactive audience, students can make the choices about when to reply and with what, how they want to use hashtags to categorize their multimodal texts, and they can create new communication environments (Robbins and Singer, 2014) of which they are largely in charge.

Additionally, Edwards-Groves (2011) analyzed how 17 teachers and their students used digital technologies in their classrooms to construct texts. She found that those who used technology satisfactorily allowed for greater learning through collaboration and wider (and what she asserts are more authentic) audiences for students. Though her focus was more on the teachers and their use of technology in the classroom, Edwards-Groves also included students' reflections about their digital projects; these student reflections discussed the benefits of a realistic, increased audience, such as greater attention to visual modes of representation and efficiently organizing information for the viewer. Similarly, in their work with three 6th grade classrooms, specifically focusing on English Language Learners (ELL), Hughes and Morrison (2014) found that their focal students responded positively to having an audience of more than just the teacher and that they began to communicate and participate more both online and in the classroom because of this increased audience. However, Hughes and Morrison (2014) focused on two of the 78 students in the course (10 of which were ELL), and these focal students were chosen because of the great strides that they made in the course. Other students may not have experienced the same engagement or even cared about their audience. Furthermore, it is unclear if any of these projects actually reached an audience beyond the classroom or just have the potential to do so. This distinction might affect the ways in which students take up both the social media and the learning principles within the project, as audience and context play integral roles in the ways in which students themselves interact with the media.

Though the benefits of an interactive audience may simply rest with the student-to-student interactions that social media may allow for, many study-designers hope that it goes beyond the classroom to reach distant audiences who may also share interests and can "jointly construct contexts through their interactive textual practices" (Haas and Takayoshi, 2011; cited in Stornaiuolo et al., 2013: 222). For example, Curwood (2013)

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focused on one exemplary student (Jack) who used English class as an opportunity to write fan fiction for *The Hunger Games*, posting his writings on Mockingjay.net for an interactive audience to read. He also played the game *Panem October*, and designed his own interactive games for others to interact with and play as well. Jack was able to adapt a course assignment to reflect his own interests and connect with people beyond the classroom. This example, however, focusing on the most successful student(s) like Hughes and Morrison (2014), highlights those students who took up the affordances that social media in the classroom can offer, and other students may not have been leveraged towards these in the same way.

Lewis et al., moreover, assert that even though social media may be interactive, they are actually quite constraining and one-dimensional; they are "based in collective circulation of artifacts and individual meaning-making, rather than the co-construction of meaning" (Lewis et al., 2010: 356). Using the examples of YouTube and Facebook, Lewis and colleagues note that the formatting features require users to post linearly and interact with tools that are not collaborative (e.g., liking, rating, sharing), which may affect how students and users view what constitutes participation and even collaboration. Others have found that even though there may be numerous interactions on social media, these interactions may be relatively surface-level (e.g., assignment due dates, questions surrounding the syllabus) rather than the rich interactions touted by others (Crooke, 2012; English and Duncan-Howell, 2008), a finding that will be discussed further in the following section. Thus, researchers and educators alike may misconstrue participation for the co-construction of meaning as students readily participate, using social media for purposes that more closely reflect those outside of the school context.

Furthermore, concerns over privacy, especially with younger students, often lead teachers and administrators to choose more restrictive tools or environments (e.g., private groups on Facebook) that limit any potential for interaction beyond the boundaries of the classroom (Manca and Ranieri, 2013). This restriction then automatically blocks any potential interaction with a widened audience, thus negating this potential affordance that social media may offer students, and begs the question, how social must social media actually be to leverage the affordances that some scholars assert? Can they be used in a context so far removed from their intended purposes (i.e., being social) that they still constitute social media?

Even if permitted, for an increased audience and interactive format to be of any useful classroom benefit, students need to actually embrace the tools and be interested in using them (New London Group, 2000). Students may see in-class education in a more traditional light where information is passed from the instructor to the student and where the instructor's knowledge and opinions on the course concepts is the valued (and tested) information (Collin and Street, 2013; Manca and Ranieri, 2013). Therefore, they may not place any value on interacting with or learning from other students or the larger population via social media (Collin and Street, 2013). In such cases, technologies for interactive communication establish very little, even though they are using a platform that allows for widened audience or visible communication.

Finally, some scholars argue that the core concepts of collaborative and interactive audiences of social media may be fundamentally at odds with the context of schooling. Crook notes that school "tasks are typically circumscribed and contained within tight deadlines; whereas more playful joint activity in [social media] is allowed to meander more and is less often managed in the format of discrete projects" (Cook, 2012: 71). The studies discussed in this section may have found numerous affordances for an increased and interactive audience

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and were likely found through altering the context and power relations typically found within the traditional notions of school and schooling.

Learning and literacies

Many contest that literacy (or more commonly referred to as *literacies* to acknowledge its multiplicity; see New London Group, 2000) is not a skill, but rather practices that need to be worked, redefined, and honed over-time (Barton et al., 2000; New London Group, 2000; Street, 2003), as literacies continue to be reshaped by the social and cultural forces around them (Archer, 2006; Kellner, 2000; Leu et al., 2013). Based on this view of literacies, teachers and students should continually refine their ideas of literacies and use classroom tools that can adapt and change to support evolving concepts of them. Thus, some scholars contend that using social media can be an effective, flexible medium to incorporate student-centered communication into the classroom and to support students' multimodal learning and literacy practices (e.g., Ajayi, 2008; Hughes and Morrison, 2014; Mao, 2014; O'Byrne and Murrell, 2014; van Lier, 2004).

Undoubtedly complex concepts, learning and literacies are often at the heart of educational studies focusing on social media in the classroom, but can be complicated to assess, measure, or even describe in qualitative case studies. As a result, many studies assert the *potentials* for learning or the practices *surrounding* learning. For example, in their critical review of 23 empirical studies examining Facebook as an educational tool, Manca and Ranieri (2013) found that most of the studies focused on how students felt about using social media as learning tools rather than the actual "learning" that resulted.

In their review, Stornaiuolo et al. (2013) assert that social media can be powerful tools that unite a diverse range of knowledge, perspectives, and practices. This range can help learners develop meaning (Beauchamp and Kennewell, 2010) as they support and interact with new ideas, skills, and information resources. Therefore, many argue that social media may have strong implications for both formal and informal learning and that using social media as multimodal tools to bring multiple modes together for meaning-making may allow students to express ideas differently and reflect upon them while doing so. For example, Blaschke's study "examining learner familiarity and research confidence with social media over time" (Blaschke, 2014: 2) through graduate students' reflections sheds some light on the perceptions of the learning while using social media. One student in the study reported that he felt compelled to think deeper about the course materials because he was processing them and then expressing his ideas in both textual and visual modes. Furthermore, Jimoyiannis and Angelaina (2012) evaluated students' engagement in a multimodal project (blog-based) where 21 fourteen- and fifteen-year-old science students used a variety of modes (photos, text, videos) singularly and in combination to complete a project about acid rain. Jimoyiannis and Angelaina (2012) assert that activities like blogging that required students to use multimodal tools allowed for greater idea integration and meaning construction.

In their work with ELLs, Hughes and Morrison (2014) advocated the use of social media to promote both multiliteracy and traditional literacy practices. They found that for students who struggled with expressing their ideas with written text, the multimodal functions of social media provided students with a range of ways to present their ideas. Using modes other than printed text can allow the students to supplement communication with other modes like pictures, drawings, and videos (Kress, 2003; Nelson, 2006) and help struggling students with literacy learning (Hughes and Morrison, 2014; van Lier, 2004). According to

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Kress and van Leeuwen (2001), these multimodal functions give access to struggling students and allow them to feel like a part of the literacy and learning community. In their final interviews with Hughes and Morrison (2014), students reported that they believed their English reading and writing skills as well as their confidence had improved. These, however, were self-reported data that were also from the two students in whom Hughes and Morrison saw the most growth, and therefore, need to be considered judiciously.

Though multimodal texts have tremendous potential for helping students express ideas in new and alternative ways, context must once again be considered. While students may want to create and interact with multimodal texts, they may not be ready to or understand how to create them in ways that will represent required, academic information. Crook found that even though students wanted to include multimodal texts in their schooling, they perceived the mode of video as that of recreation and humor and it ''was not a modality that was readily associated with the rigour of schooled projects'' (Crook, 2012: 75). Therefore, students may not understand how to leverage the affordances that multimodal social media platforms may afford in the classroom.

Because of the interactive features of social media previously discussed, scholars also assert that social media allow for student learning to become more *visible* through media features like posting and commenting (Crook, 2012; Jimoyiannis and Angelaina, 2012; O'Byrne and Murrell, 2014; Rambe, 2012a, 2012b). Students can show their thought and creation processes as well as realizations of new ideas through such features. They can also see other students' posts and progress and feedback from people on their posts, and they can use this information to their benefit. For example, Rambe's (2012b) study claimed that students' more visible online interactions through Facebook with the instructor and other students gave further insights into the mindsets, literacy practices, and even literacy shortcomings that students might have. This notion, however, was not fully explicated in the article, and therefore, it is difficult to tell how these were observed by the instructor and researcher.

In their study of students using Facebook, English and Duncan-Howell (2008) reported that even though students avidly used social media, the majority of the communication centered on surface-level encouragement rather than course-related or academic topics. Similarly, Rambe (2012c) found that students communicating through Facebook were able to create learning communities for the co-construction of knowledge, but that it was difficult to develop deep, academic discussions. Rambe (2012c) suggested that these shortcomings be addressed through, among other things, encouraging on-task behavior, relaxing academic authority, and aligning the use of social media with pedagogical designs. Each of these would require reconceptualizing the context of traditional school. Thus, purposeful attention needs to be paid to students using and interacting around social media for academic purposes to better encourage learning and support academic literacy practices, and purposeful repurposing may need to be included (i.e., teachers may need to guide students to understand expectations for how to use social media academically).

The transparent, traceable features of social media can also reveal if students understand the conventions of the space. In her study, Buck (2012) closely examined the expert use of social media by a college student, Ronnie, and the various literacies that he was able to represent in that use. She found that Ronnie displayed distinct literacy practices through his demonstrations of his knowledge about each platform, understanding the discourses, audiences, and semiotics of each platform and the differences between them for each one. Because of his nuanced understanding, Ronnie was able to use the features of social

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media to his benefit to convey the information that he felt was most appropriate for each distinct platform. Buck noted that examining how the literacy practices exhibited on social media are "connected to academic literacy practices and how these different influences on literacy work together" (Buck, 2012: 35) may give researchers more insight into the literacy practices that students bring with them into the classroom. This information may in turn help teachers understand how to best contextualize and repurpose social media for classroom use.

However, close attention needs to be paid to the type of social media and its use and incorporation into the classroom as well as the potential power dynamics surrounding it. In Blaschke's (2014) study, she found that students struggled to separate the media that supported the learning from the learning itself; students may need help understanding how a medium can support and facilitate learning. Blaschke also noted that while most students' responses were generally positive, some felt that the particular media used affected their learning process. This means that not all social media are created equal, and more research may need to be done to see which platforms can support learning most effectively and why. For example, Manca and Ranieri found that despite the assumption that students are digital natives with strong understandings of the complexities of social media, many "do not always feel comfortable and at ease with Facebook, and they do not appear to be willing to use informal tools such as Facebook as a unique teaching tool for learning" (Manca and Ranieri, 2013: 496). Thus, some students may be reluctant to use social media for academic purposes, particularly if they do not see them as befitting to the school context because of the meanings and histories that they place upon them (Prinsloo and Rowsell, 2012).

Many studies also claim that using social media in the classroom can actually help to improve traditional literacies as well (e.g., Dalton and Palincsar, 2007; Hughes and Morrison, 2014; Magrino and Sorrell, 2014). In their five years of incorporating social media into their university writing courses, Magrino and Sorrell (2014) found that weaker students consistently improved because of the ability to express their ideas in different modes, and stronger students flourished because of the additional opportunities to personalize and polish their projects. Additionally, in their study investigating the potential literacy practices on Twitter, Greenhow and Gleason claimed that students' tweeting practices might improve their standard communication by:

> (1) improving students' motivation and engagement with course content; (2) increasing student–student or student–instructor interactions, which creates more opportunities for feedback and mentoring; and (3) offering lower barriers to publishing and a more "relaxed" writing style, which can encourage self-expression, creativity, playfulness, and risk-taking. (Greenhow and Gleason, 2012: 437).

These claims, prudently shrouded in hypotheticals, are based on a review of other researchers' work surrounding various types of social media and the potential literacies that students' practices within them. Though Greenhow and Gleason (2012) made reasonable, small implications for how using social media in the classroom might help to engender student engagement that could lead to improved literacy practices, these claims are not empirically based in their own data. Furthermore, these claims would require a reconceptualization of the classroom to be accomplished, as many of these seem at odds with the traditional classroom context wherein students are expected to express ideas in more than 140 characters.

Magrino and Sorrell (2014) also claimed that the use of social media in their writing courses can help to improve students' traditional literacy skills; however, this is not explicitly

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supported with either the student examples given or the discussion. A large amount of further information and explanation would be needed to assert this claim, including the conceptualization of the notion of learning and a rich description of the learning environment. For examples of thoroughly operationalized conceptions of learning, see Greenhow et al. (2009) for their theoretical piece about learning with Web 2.0 or Hew and Cheung (2013) for their literature review on quantitative studies on learning through Web 2.0 technologies. Scholars have also discussed this in terms of learning *goals* like Beauchamp and Kennewell (2010) did in their article detailing interactivity with ICTs and its impact on learning.

Implications for classroom incorporation

Because social media use has been taken up and studied in such varying ways, there are many ideas for how social media should be incorporated into classrooms. Undoubtedly, these will vary depending on the culture, context, and power within the classroom as well as the theoretical underpinnings that the teacher brings to bear on these key factors. Thus, with these notions in mind, I discuss some scholars' recommendations for how to include social media in the classroom based on their findings. I consider teachers' positions and the importance of modeling and framing the technology for the context of the classroom as well as students' positions and how they affect the incorporation of social media in the classroom.

In his longitudinal study looking at 35 projects using mobile learning and Web 2.0 technologies, Cochrane outlined six critical factors for implementation that he found: (1) pedagogically integrating the desired technology into the course and assessments; (2) modeling the pedagogical use of the tools; (3) ensuring that there is a supportive learning community; (4) selecting appropriate mobile devices and Web 2.0 technologies; (5) providing both technological and pedagogical support to students; and (6) allowing for interaction that helps to re-conceptualize the roles of teachers and students to co-designers and co-constructors of knowledge (Cochrane, 2014: 73). Many of these ideas are also echoed individually by other scholars (e.g., Arizpe and Styles, 2008; Beauchamp and Kennewell, 2010; Edwards-Groves, 2011; Leu et al., 2013; New London Group, 2000), and reflect an understanding of the importance of the existing and potentially shifted power structures and context of the classroom in which social media are being incorporated.

Like Cochrane (2014), many scholars focus on teachers' positioning and how to best support and prepare teachers (e.g., Edwards-Groves, 2011; Leu et al., 2013). For example, in her study, Edwards-Groves (2011) observed two school scenarios: one where the whole school took up the mission of better supporting students' writing with technology, and the other where teachers worked more independently (with the facilitators) while integrating technology into the writing classroom. She found that of the two cases that she observed, the teachers who were supported by the whole school were better able to discuss the challenges and successes that they faced. Thus, Edwards-Groves (2011) and others argue that professional development for teachers is an important priority for social media integration and use in the classroom as teachers are a critical component of how social media affect student learning (Leu et al., 2013). This is no surprise considering teachers' traditional roles as the experts, knowledge disseminators, and facilitators of the classroom culture. Breaking away from these traditional roles requires education and support.

Many scholars also argue that the ways in which teachers incorporate social media and new technologies are more important than just the presence of technology (e.g., Hew and

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Cheung, 2013; Matthewman et al., 2004) and emphasize the importance of modeling (Cochrane, 2014; Jimoyiannis and Angelaina, 2012; Magrino and Sorrell, 2014). Beauchamp and Kennewell (2010) found that when teachers first tried to incorporate social media into their classrooms, the technology was generally the focus, and therefore, the interaction around it was forced and superficial. However, when the teachers fully embedded the technology into their pedagogical practice and knowledge, the technologies were better able to contribute to classroom learning (Collin and Street, 2013; Street, 2013). They found that even if the teacher was able to do this, s/he still needed to be an active member, ensuring communication and collaboration among the students and guiding rich discussions around the use of social media, suggesting that the success of the integration and learning experiences rests heavily on the teacher (Beauchamp and Kennewell, 2010; Crook, 2012) and their reconceptualization of their role. If a teacher is ill-prepared to integrate digital technology and change the way s/he views his/her role as the expert or disseminator of knowledge in the classroom, then the new social media will likely not be a success (Beauchamp and Kennewell, 2010; Cochrane, 2014; Edwards-Groves, 2011; Lankshear and Bigum, 1999) and the power dynamics in the classroom will remain the same.

To add to this reconceptualization of the teacher's role, Rambe (2012c) suggests a "technological disruption", which is described as a disruption that "arises when educators use technology in ways that the original inventors and designers might never have imagined (Gower et al., 2001)" (Rambe, 2012c: 133). Thus, social media must be repurposed, as fundamental innovations need to be made at the pedagogical and technological levels to enhance learning through social and digital media (Cochrane, 2014; Redecker et al., 2009). These changes will establish a recreation and repurposing of the learning environment (Rambe, 2012c), which may allow typically out-of-school practices with social media to better fit the context of the classroom.

While the focus is generally on the teacher for reconceptualizing how social media are used in the classroom, student interaction is also very important. Rambe argues that "when Social Media environments are tightly anchored in constructivist, knowledge-centred learning environments where dialogical discourses and on-task academic behavior are sustained, they present profound opportunities for deep scholarly engagements" (Rambe, 2012c: 132). For example, a teacher in Edwards-Groves' (2011) study suggested that students not only interact online but also discuss and consult with each other in class about their learning and problem solving to ensure that they are using cooperative learning strategies. In another example from Edwards-Groves' (2011) study, a student makes a similar suggestion, noting that students need to work collaboratively, discussing their progress to enhance the learning experience. Social media users do not typically debrief face-to-face about the information discussed online. However, in order to facilitate effective use of social media in the classroom context, this step may need to be added, as students have face-to-face, academic discussions around their learning in class (Beauchamp and Kennewell, 2010; Edwards-Groves, 2011).

Students also need to see the value in their participation in social media. In many studies, students are required to use social media for in-school purposes that they typically use voluntarily out of school, which they may find useless or out of context (Crook, 2012; Guzzetti and Gamboa, 2004). If they do not value using social media to design multimodal texts, represent ideas in non-traditional ways, or interact with other students via social media (Collin and Street, 2013), then they will not see a reason to participate in any way that benefits them or the other students in the class. Instead, teachers may need to address and

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stress that the use of social media in the classroom is for a new use, one that is more closely aligned with the ideologies embedded in the project and classroom environment (Collin and Street, 2013; Crook, 2012; Leu et al., 2013).

Limitations of social media in the classroom

Even with the numerous recommendations for how to incorporate social media into the classroom, many educators still encounter both practical and pedagogical limitations. For example, specifically in English classrooms, Matthewman et al. (2004) found that there were tensions between modeling expectations and allowing for creative innovation, between English classroom vocabulary use and metalanguage for multimodality use, and between the boundaries of the subject of English and other subjects. It seemed that the incorporated technologies may have been at odds with the culture and contexts that the teachers had already cultivated in their classrooms, and thus, they encountered numerous fundamental issues as expectations did not meet the reality of technology within these contexts.

More generally, because of the multimodal nature of social media where image is usually forwarded and text is generally secondary, many worry that students' traditional reading and writing literacies may decline (see Bezemer and Kress, 2014; Mills, 2009). As some students bring out-of-school literacies like texting conventions (e.g., abbreviations, fragmented sentences) into traditional academic writing, some scholars view this as the decline of writing (Bezemer and Kress, 2014). Bezemer and Kress go so far as to propose that some people think that this is ''loss of literacy'' where new ways of making and reading texts are a loss ''for all of culture and, by a further effect, is bound to have deleterious effects on economic performance, as witnessed in OECD sponsored studies such as PISA, TIMMS and PIRLS'' (Bezemer and Kress, 2014: 3). However, they argue that this claim does not take into account the ''practices, aesthetics, ethics and epistemologies of contemporary forms of text production'' (Bezemer and Kress, 2014: 3), and thus, it is an antiquated way to view writing and the context around where, why, and how writing is produced. In order to take these concerns into account, Kaufer et al. (2011) argue that teachers must ensure that social media in the classroom are there to improve upon and interrogate texts, not there as distractions that do not promote literacies, a concern that many other researchers and teachers share (see Rambe, 2012c). Even the traditional notion of literacy is not about learning the proper way to use words (Kalantzis and Cope, 2008). Instead, it is about the different ways in which people can use those words in context (e.g., writing an e-mail to friends versus an employer or writing a website for a food blog versus writing a website for a club).

Furthermore, some scholars also discuss the opposition to social media in the classroom because there is a fear that nontraditional texts will replace traditional ones (Luke, 2000; Mills, 2009). Mills, however, argues that ''information texts, emails, websites, databases, visual literacies and oral discourses should not be overlooked as 'inferior literacies''' (Mills, 2009: 106). Luke (2000) echoes this sentiment, noting that writing electronically is still ''literacy'' and does not diminish traditional literacy practices, much in the same way that writing on a typewriter does not diminish literacy practices associated with handwriting a text. Mills (2009) also argues that the inclusion of new technologies and digital texts does not mean that there is no longer a place for classic literature in the classroom. In fact, because of Web 2.0 technologies, some scholars show that the lines between traditional and nontraditional texts are increasingly more blurred as classic texts take on new, interactive lives online (e.g., Mackey, 1998; Unsworth, 2006).

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Another limitation of using social media in the classroom is that their use often depends on a teacher's knowledge about how to use the technology (Edwards-Groves, 2011; Lankshear and Bigum, 1999). Many teachers are unaware of how to incorporate, and perhaps more importantly how to repurpose, social media for academic purposes in the classroom context, which may result in ill-fated attempts by teachers in practice, despite their personal use of technology outside of the classroom (McVee et al., 2008). Furthermore, the concepts, media, and information with which the teacher is most comfortable are generally given the most attention in the classroom (Edwards-Groves, 2011; Edwards-Groves and Langley, 2009). This means that even though a project may be started with intentions of bringing students' out-of-school literacies into the classroom, if the teacher is not familiar with the media or how to use it, s/he may actually be doing the students a disservice. On the other hand, if a teacher is something of an "insider" to the social media being used (i.e., s/he uses it her/himself and understands the practices within it), then s/he may have an advantage of better understanding both the platform and the literacy practices within it (Lankshear and Knobel, 2007; Stornaiuolo et al., 2013).

Students' knowledge and familiarity with social media must also be considered as a potential limitation for integration (Lewis et al., 2010; Magrino and Sorrell, 2014; Mao, 2014). Even if students are comfortable with social media outside of school, they may not know or understand how to use them in an academic context, repurposed or not. Manca and Ranieri (2013) found that most students still view schooling in traditional and formal ways where they hold precise distinctions for times and spaces between socializing and learning, but social media's inherent features that allow for interactivity, fluidity, and structures do not mirror those of the classroom (Lewis et al., 2010).

Therefore, as students struggle to navigate social media and digital technologies in varying contexts, the relatively common assumption about students as "digital natives" may be false based on the particular context (Crook, 2012; Leu et al., 2013; Magrino and Sorrell, 2014; Manca and Ranieri, 2013). While students may be skilled in downloading, video gaming, modding (modifying) games, creating mash-ups, posting on social media, etc., they may not know how to use or repurpose these practices in the classroom or use other practices like researching online and critically evaluating sources (Leu et al., 2013). Thus, even though the platform may be familiar, the genre of communication for academic purposes may not be, and the conventionalized communications on the platform may not match the academic expectations of its use in the classroom (Staarman, 2009).

Finally, it is important to note that there is worthy resistance to a false notion that social media are a classroom panacea (Brabazon, 2011; Kellner, 2000; Leu et al., 2013). Teachers must navigate the difficult path of guiding diverse learners each day and curating the ways in which they will ingest information. Focusing too heavily on the technology and not enough on the practices or literacies that teachers hope students will use, practice, and learn, is a pitfall that many warn against (Beauchamp and Kennewell, 2010; Hew and Cheung, 2013; McVee et al., 2008). In their study, Matthewman et al. (2004) found that teachers assumed that the use of digital technology in their classes could be used as scaffolding for the regular written tasks into which it was being incorporated. However, this was not the case, and the time spent on a project actually increased from five weeks to seven weeks to allow for further scaffolding, repurposing, and preparation. Thus, Matthewman et al. (2004) found that teachers in their study were seeing digital technology as a pedagogic strategy and not as a pedagogic tool, which significantly influenced take-up.

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Conclusion

While there is some consensus about what social media can offer teachers and students in the classroom and ways to leverage these claimed affordances, there are still many unanswered questions. One reason for this might be the constantly changing nature of social media and the challenge they are to research as a result (Gee, 2015). Another reason might be that because social media are so broad, flexible, and fluid, there is a multitude of ways that teachers and students can use them in the classroom, and how they do so is largely based on the context of that particular environment. Teachers and researchers likely have yet to understand all the affordances that social media may offer as they continue to be repurposed and used in new contexts. However, there is agreement that social media are pervasive in the daily lives of most US citizens and their study and potential use for the classroom are important.

Therefore, many scholars argue that more research needs to be conducted (e.g., Hew and Cheung, 2013; Moje, 2009; Stornaiuolo et al., 2013). Although studies of social media use in the classroom potentially show the affordances of their incorporation, further research needs to be done on students' literacy and learning practices while using social media in schools (Stornaiuolo et al., 2013), especially those that forefront the use of photos and videos over traditional print text and how these may compare. Moje (2009) calls for new and continued research for social media classroom application, focusing on specific teachers who effectively incorporate social media tools to promote multiliteracies. Furthermore, very few studies focus specifically on the communication and literacy practices between students both in the classroom and through the social media, and the larger process surrounding the use of social media in the classroom (Greenhow et al., 2015; Moje, 2009). Researchers may also focus on what learners are doing with social media as well as issues of access and equality with social media (Greenhow et al., 2015; Prinsloo and Rowsell, 2012), and how social media may provide academically marginalized students authoring paths or alternative options for challenging the traditional power structures of the classroom (e.g., Selywn, 2007).

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