

Social media use in high school settings: Rules, outcomes, and educational opportunities

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Social Media Use in High School Settings: Rules, Outcomes, and Educational Opportunities

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ABSTRACT

This paper presents findings from a larger study of social media use and networks in a North American high school. Specifically, it examines the role that rules and policies play in shaping how students use social media with their peer group and in the school setting. Additionally, it examines the outcomes of student social media use, as well as opportunities for schools to play a more proactive role in the phenomenon. The study was conducted across two years, with two classes of students observed in the classroom during the first year and a collection of students, teachers, and administrators interviewed during the second year. Findings show that the high school students have layers of rules governing their social media use. Teachers and parents exist outside their networks, but nonetheless play an important offline role in regulating teenagers' online activities and helping them keep safe and navigate complex online relationships. Teachers informally help students learn how to use social media responsibly, but opportunities remain for more proactive support and education.

CCS CONCEPTS

 Human-centered computing~Social networks
Human-centered computing~Social media
Human-centered computing~Ethnographic studies
Social and professional topics~Adolescents

KEYWORDS

Activity systems analysis, rules, schools, social media, teachers, teenagers

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1 INTRODUCTION

Social media and schools are quite naturally intertwined, but have an uneasy co-existence. American teenagers are heavy users of social media and smartphones [1], and their school, friendship, and online networks have a great deal of overlap [2, 3]. However, smartphones and social media are not welcome in many school settings [4] even though they can support learning [4, 5]. In part this is due to negative behaviors associated with teenage mobile phone and social media use, including drama [6, 7], sexting [8, 9], and cyberbullying [10, 11]. Adults who interact with teenagers, whether they are teachers or parents, likely monitor the teenagers' social media activity to prevent these negative behaviors [12, 13].

Schools could be leaders in social media education, but few are. Organizations such as the International Society for Technology in Education [14] and Common Sense Media [15] have proposed digital literacy standards and curricula, but these standards have not yet resulted in a widely adopted curriculum for responsible social media use. School policies range widely; some forbid social media altogether and others embrace it for pedagogical purposes only [16]. Regardless of a school's approach, social media has a pervasive presence in both teenage lives and school settings. For this reason, it is important for schools to develop both policies and curricula that will guide students toward productive, responsible use.

2 PURPOSE AND RESEARCH QUESTIONS

This study, which is situated in a public high school in the United States, investigates how students learn about and use social media. Additionally, the study examines the ongoing monitoring and discipline related to social media use that occurs both in school and at home.

In this study, we use activity systems analysis [17] as a theoretical framework to explore the current state of social media education and oversight for high school students. This approach, built on Cultural Historical Activity Theory and derived from the work of Vygotsky and Engestrom [18], is used to help describe complex real-world learning contexts by looking at the interactions and tensions among the various system components. This includes the actors within a network, their relationships, the tasks they perform, the tools they use to perform those tasks, the rules that guide their practices, and their goals [17]. Table 1 provides an overview of the activity system elements, which represent the people involved in the activity, the components that assist in and govern completion of the activity, as well as the activity's goal and end result.

Table 1. Overview of activity systems analysis elements, adapted from Yamagata-Lynch [17].

F1 (
Element	Brief Description
Subject	The person who engages in the
	activity
Rules	The laws, guidelines, and principles
	that affect how the activity is
	conducted
Tool	The artifacts that support the activity
Community	The larger social group of the subject
Division of	The way in which tasks are shared by
Labor	a community
Object	The goal of the activity
Outcome	The end result of the activity

The research questions that guided this particular analysis are:

- 1. How and from whom do high school students learn to use social media?
- 2. What types of rules and monitoring systems govern high school students' use of social media, both during the school day and outside of school? In what ways are these rules and systems educative or punitive?
- 3. What social media education needs do high school students have?
- 4. What opportunities exist to educate and better support high school students when they use social media for a variety of functions?

3 METHOD

This study draws from two years of data collected at a public high school in the United States. During Year 1, we took an exploratory approach. The Year 2 study was designed based on findings from Year 1, with the purpose of probing more deeply into various issues that arose.

Year 1 participants were 24 10th grade students and 24 12th grade students. They were surveyed, observed, and interviewed using an embedded research approach in the classroom setting (see [19] for additional information about the method). The researchers spent 150 minutes with each grade (three 50-minute school periods). All classroom interactions and discussions were recorded.

Year 2 participants were 37 students (10th and 12th grade), 17 teachers, and 3 administrators. All Year 2 participants were interviewed using a semi-structured interview protocol. Interviews lasted 30-60 minutes and occurred in private locations at the school. All interviews were audio-recorded and later transcribed. During the interviews, students were asked about parental and school rules related to their social media use, oversight or monitoring of their social media use by adults, and whether anyone had ever taught them about responsible social media use. Additionally, they were asked about how their privacy concerns and management on social media tools. Adult participants were asked about rules for mobile phone and social media use that they set in their classrooms, as well as how they uphold school rules in this area.

The study was conducted with the approval of the researchers' Institutional Review Board and the school district's research coordinator. All participants provided their assent and their legal guardians gave informed consent, as required.

The transcribed interviews were coded in NVivo. Codes represented dimensions of the social media use activity system (see Fig. 1). Once the interviews were coded, memos were written to summarize the data in each area. From these memos, a composite activity system was developed to explore the systemic nature of teenage social media use.

4 FINDINGS

4.1 Year 1 Context

During Year 1 we did not explicitly ask students about rules, having entered their classroom spaces with a broad, exploratory purpose. At that time, we were focused more generally on what social media tools the students were using, why they used them, and with whom they were using them. However, during our interactions with the students the importance of rules emerged. Students told us about what their parents forbid and monitored, policies set by their school and teachers, norms, and personal rules they had developed. For example, a tenth grade girl explained to us the complexities of temporarily following other people to learn more about them and their networks, and we witnessed a twelfth grade couple navigating a conflict about what was acceptable liking behavior. In short, what emerged during Year 1 was a complex picture of teenagers navigating layers of guidelines with varying degrees of enforcement and consequences when they use social media.

4.2 Year 2 Context

During Year 2 we began to explicitly ask the teenagers with whom they use social media, what rules govern their use, and what outcomes they experienced from social media use in individual interviews. The teenagers in Year 2 of this study all began using social media during their middle school years. All 37 have active accounts on one or more of the popular social networking sites (SNS; Instagram, Snapchat, Twitter, Facebook), although they report a wide range of use. Some students access their networks constantly to communicate with friends, whereas others are less interested or more reticent about the activity. Many, but not all, discuss their social media use with their parents and at least initially had parents monitor their accounts. A twelfth grade boy shared:

> They used to. They don't anymore, just because I don't do anything that they don't approve of. So I go to school and I go home, so like, there's nothing that I'm hiding from them, so they kind of revoke their helicopter parenting.

However, most of them also believe they know more about social media than their parents do and report parents mostly focusing on avoiding danger online. A tenth grade girl discussed that her mom looks at her account to promote safety, rather than monitor was she posts, she said: "I wouldn't say monitored, I think she just wanted me to be really safe. I've always been pretty safe." The students reported negative experiences online, including inappropriate encounters, addiction, and interpersonal conflicts (e.g., drama; [6, 7]), as well as positive ones such as connectedness, receiving homework assistance, and informal learning.

The teachers had an even wider range of social media experience and use. All had at least one social media account and most were active on at least one social networking site. Still, several of the teachers were reticent to call themselves social media users. Several teachers expressed uncertainty about social media. Even those who were quite active online felt that their online networks and activities were different from student networks and activities. For example, one teacher stated:

> I know the majority of my students do not use Facebook. They think that's for like old fuddy duddies like me. And I know they're primarily on Snapchat, Instagram, this new thing called Tumblr which I guess probably isn't that new anymore but I don't know what it is.

Regardless of personal activity level, teachers strongly felt the presence of social media in the school setting. Although they were not participants within the students' online networks, they heard about online activities and posts secondhand from the students.

5 THE ACTIVITY SYSTEM

In this section we describe the factors comprising the different parts of the activity system presented in Fig. 1. The subject for our activity system is the teenagers, and their object is to use social networking systems in their everyday lives.

5.1 Tools

Mobile phones and SNS apps are the primary and most visible tools that the teenagers use, but they are not the only tools in this environment. Their parents often use monitoring tools, keeping track of what the teenagers do on their phones, with whom they are connected, how much they use their phones, and how much data they have consumed. Wifi and data are critical tools, even though they cannot be seen. The school wifi blocks all popular SNS, so in order to use social media at the school, students must have access to a data plan or make use of a VPN.

5.2 Rules

The rules that govern SNS use in this setting occur at different levels and with varying formality. The school has rules that may or may not be enforced by teachers. These rules specify that students may not use mobile phones in the classroom. Combined with the school's wifi blockage of SNS, this means that SNS cannot be used in the classroom. However, teachers have the opportunity to set more relaxed rules in their classrooms. One student shared: "Like some





tteachers literally don't care and they'll be like Snapchat this or whatever." For some teachers, determining what rules to enforce is a work in progress. One teacher said:

> I'm not, like, a phone nazi, I'll let them leave it on their desk, because if they're doing this, you know – but if it's on their desk, I can kind of see it. And I'm still playing with my phone regulations in class, but I'm like, yeah, put your phone on the desk.

Another teacher indicated that she treats juniors and seniors differently than younger students, because "they are old enough that they need to start being responsible and start learning some self-restraint and control." In her view, this approach was helping to prepare them for self-regulating social media use during college.

Students reported great variation in parent rules. Some students said their parents had no oversight over their phone or social networks, or that their parents had monitored their activities in the past and ceased because it was no longer necessary. Still, some students have more directly involved parents, like a tenth grader who said "My mom kind of, like, monitors my account to make sure that nothing's going on, or I'm on my best behavior when I'm on social media, because she says that being – having a phone and being on the internet is a privilege, so I have to earn that." Generally, students indicated that there was a system of trust between

them and their parents and that they "keep it pretty clean" online in order to not violate that trust.

Personal rules developed by individual students tended to govern their privacy settings and friending policies. These personal rules worked within the system of social norms that dictated things like what is and is not acceptable to post. For example, one norm regulated Instagram content. Public Instagram accounts, which according to one student is "how you meet a lot of people," are the space to share cultivated images. Students wanting to post other content tended to do so on private accounts called 'finsta' or 'spam' accounts, which had limited followers who were trusted to not further share that content. Another norm made it acceptable to seek peer help with homework through certain channels (GroupMe and Snapchat).

5.3 Community and Division of Labor

The students we spoke with had a keen sense of their duties within the social media landscape. Their biggest tasks were to connect to peers, communicate with them in ways that modeled and maintained social norms, and participate in the economy of liking and favoriting. One interesting form of labor they reported engaging in frequently was maintaining streaks on Snapchat. Streaks are unbroken periods of time when two individuals message each other daily. They are counted in days. Because streaks rely on mutual engagement, students reported a sense of duty and sometimes pressure to continue streaks. They shared stories of times they let their friends down by forgetting to maintain a streak or, in a few instances, deliberately ended streaks because the activity was a burden.

Interestingly, teenagers served as monitors of each other's' online behavior. Although not in a position to be disciplinarians, they reported inappropriate and dangerous behaviors to adults who could intervene and take disciplinary action as necessary.

Teenagers' online social networks may largely exclude the adults in their lives whether by formal rule (teachers) or personal preference (parents), but these adults nonetheless play a major support role in both the maintenance of these social networks as well as the ongoing education and development of these teenagers. For example, a twelfth grade teacher shared how she helps her students learn to selfregulate their own SNS and mobile phone use by not prohibiting it in her class. However, understanding they are still developing and learning, she also provides them with support when needed: Well, I fall on the (side of) you need to self-regulate. You're going to college next year. I'm taking the brakes off... And I tell them, you know, I will help you if you need me to help you. And also, I try to give them legitimate reasons to be online.

As in the above example, much of the teachers' labor related to student social media networks occurs in the physical realm, providing students with advice and guidance in the classroom without actually entering or directly observing their social media worlds. This approach is necessary because teacher-student social media connections, while not prohibited, are frowned upon.

Additionally, teachers prefer to not be connected to their students on social media, both to preserve their own privacy and because they do not really want to see the full range of teenager online activities. Specifically, their role as mandatory reporters means that they would be under legally obligated to report any illegal or troubling activities they observe online. It is easier for them to not be in that environment where they may inadvertently be exposed to such behaviors at all. One of the fine arts teachers discussed that her students were very open with her about their SNS activities:

> So there are times when they share a little too much with me, and so I feel like my administrators probably think that I just constantly have drama...But at the same time, because we know each other so well, like, they come and tell me things and a lot of times I'll have to go report it, you know? So I do know a good bit of what they do. However, at the same time, I like to kind of keep a little bit of a blissful ignorance, because I would be probably reporting things all the time if I knew everything they did. So I do know they will come and tell me if there's something really serious happening in social media.

This teacher clearly had access to information about what students were doing, but also preferred to not be in the position of constantly monitoring student online activity.

The role that teachers play in the students' social networks is an important one, and teachers still have access to and an indirect presence on student social media feeds without being formally connected. Students frequently discuss and share screen shots of social media posts with teachers, providing teachers with a clear window unto this world. Also, students share photos and stories of teachers and school events on their social networks. One teacher mentioned that she had the dubious honor of having what she was told was the "most Instagrammed classroom" in the school.

Teachers also shared that their students look to them for both approval and advice. Students seek their assistance when they are upset, confused, or feel someone is being unsafe or is in danger. Teachers do not need to be in student networks in order to diffuse situations that build on social media. Students recognize that even if teachers are not as savvy as they are about which direction to swipe or how to take the best selfie, teachers are very knowledgeable about how to navigate difficult relationships, keep students safe, and avoid negative consequences of social media use. Thus, teachers are not merely educators, but also monitors, disciplinarians, and problem solvers, accomplishing all tasks from outside the student networks.

5.4 Outcomes

The outcomes are essentially the desired terminal goals and consequences of an activity. The intended or target outcome of this activity systems was the responsible use of SNS. Many of the high school students discussed using SNS responsibly and reported positive experiences, including: entertainment, formal learning, informal learning, and network building. However, there were also outcomes that were unintended. Some of the high school students reported the irresponsible use of SNS. Consequently, the unintended, negative experiences include: drama, covert use, avoidance of adults, and feelings of discomfort or embarrassment.

5.5 Tensions

These teenagers navigate a complex set of competing tensions to use SNS (see Fig. 1). In some instances, the tensions are recursive, or within a specific area. For example, the tools that these teenagers use to access SNS must be provided for them. Parents pay for phones and data plans, but also can restrict access to these items and install monitoring software. The school offers wifi, but blocks access to popular SNS like Instagram. Consequently, students who want to access SNS during the school day must use a data plan. Similarly, individual teachers do not consistently uphold school rules related to phone and SNS use during the school day, and teacher may set their own rules. These rules may also conflict with rules set forth by parents (e.g., reply immediately whenever your parent contacts you). Tensions also exist among rules, community members and the division of labor. Individuals within the activity system have to determine which rules apply, and which role(s) and responsibilities they should undertake in different circumstances. For example, when using social media to support learning a teacher might be considered a coparticipant and monitor directly on a social media platform and would have the obligation to enact disciplinary action if students violated any rules or engaged in problematic behavior. However, teachers are not supposed to interact with students on social media outside the classroom context, and nor should they directly monitor student social media use by watching their interactions on SNS. Teachers can advise students on how to navigate social media situations when approached by students with questions or problems. This type of intervention does not require the teacher to enter the students' social media networks.

Actions taken due to the tensions between rules, community members, and division of labor mean that an important opportunity to teach students how to effectively use social media is missed. Students learn to use social media through trial and error and informal peer learning. Students become adept at manipulating social media tools in order to interact with their friendship networks and evade adults. Parents and schools guide student behavior through disciplinary guidelines (i.e., local negative consequences for undesirable social media behaviors or rule violations) rather than education. However, students are not consistently taught how to use social media responsibly or productively while they navigate the larger online information landscape as both consumers and producers.

For students at the school in this study, social media use results in a combination of positive (e.g., information learning, network building) and negative (e.g., covert use, drama) activities. Responsible use is guided through a combination of rules, tools, and learning through personal experience, and not through any formal educational experience.

6 DISCUSSION AND CONCLUSION

This study has illuminated the nexus of rules and decisions high school students must make every time they use social media. Essentially, teenagers find themselves operating in the midst of a series of contradictory and often inconsistently enforced policies. While teenagers are well aware of the positive benefits they reap from their social media activities [3], often the adults in their lives only see the problems related to social media use. In short, this study confirms that teenagers' social media use continues to be poorly understood by the adults in their lives [20, 21].

As Garcia [21] noted in his study of mobile phone use in schools, adults may misunderstand how teens are using technology and, in an attempt to control what may not truly be off-task or problematic behavior, may develop tools that disrupt teens' natural communication and socialization patterns. In the examples shared from Garcia's case study, mobile phone use during class time was forbidden, and students were told that they could engage in any necessary mobile-based communication during lunch and other school-day breaks. Students in his study, however, reported that they did not want to use their phones during those times. Instead, they viewed lunch and breaks as opportunities to socialize with their peers in a face-to-face context. Additionally, the purpose of using mobile phones during class was often to plan their future face-to-face meetups and interactions.

Similarly, in our study, teachers and administrators consistently commented with frustration about how students would exit the classroom and pull out their phones. This action meant that students walking the halls tended to have their faces looking down into a device and typically did not make eye contact with or speak to anyone in their physical path. What we saw around the school ourselves was a more complicated combination of behaviors. Students used phones during breaks, as described, but also congregated in groups and socialized. Phone and social media use appeared to be different in the moments that students exited the classroom versus when they congregated in groups. In the former instance, they were connecting with friends who were not present; in the latter, they often integrated their social media use with the friends who were physically present.

Exploring another tension, teachers reported that parents expect to be able to use the phones that they purchased and the cellular service plans that they paid for in order to reach their children at any time, including in the middle of class. Teachers who allowed students to have phones on their person and potentially use them to support classroom learning commented on these disruptions. However, they found it difficult to uphold policies about staying on task or restricting phone-based communication when the person initiating the communication was a parent. By letting those interactions slide with little more than a disapproving glance, teachers avoided engaging in overt conflict with parents. While a student could be admonished for distracting phone use in the classroom, discussing the problematic behavior with parents requires additional effort on the teacher's behalf as well as potential discomfort. At the same time, ignoring this issue opens the door for other minor phone use infractions, including social media use. This problem resulted in teacher frustration, but the students were not entirely at fault. When phones are used for academic purposes students are likely to see parent communications as well as peer social media alerts.

Additionally, we saw teachers and students grappling with many of the same issues raised by other researchers who explore social media use in K-12 settings. Teachers struggled to determine if or how they might use social media to support learning, or whether it was appropriate for them to do so at all [22]. Context collapse was viewed as a problem. As a result, teachers and students maintained a safe distance from each other in their online worlds and sought to avoid online collisions [23]. Even when students used social media as a third space and merged social and academic activities [24], they still tried to avoid direct adult contact online.

Returning to our research questions, the findings show that students at this school learned about social media use primarily from peers and experimentation. Interacting with peers online is developmentally appropriate, and can have both positive and negative outcomes for teenagers [25]. Parents and, to a lesser degree, teachers may play a role in some areas of teen online behavior, particularly those related to privacy and managing conflicts, but their advice is given outside of the network and often comes in the form of rules and consequences rather than modeling and coaching. Although school and parent rules are often tethered to fears of what might happen on social media, students tend to not react strongly to these fears unless they have had a direct or vicarious experience; however, students may react to fear of local disciplinary consequences. Additionally, inconsistent adult rules and reactions may suggest to students that social media rules are situational and should be broken when there is a good reason (e.g., to respond to a parent or to find information for an assignment).

Social media education for both teachers and students is one way to promote a more peaceful existence of social media in the school setting and to help students improve their ability

to use social media maturely. However, how to best educate youth in this area remains uncertain. Throughout our analysis process, we noted parallels between how social media education is being approached and how sex education, which has long been a contentious topic, has been addressed in American schools. These parallels include the debate over whether education is a parent or school responsibility, who should monitor teenagers' behavior, and what approach is best.

However, unlike sex education social media education need not be contentious. It could be embedded within a digital literacy curriculum and could lead to appropriate and transformative use of social media to support learning both in and out of the classroom. Schools could help teenagers navigate the technological, informational, and interpersonal components of social media use. When young adults transition out of high school and enter college or head down other paths, they would benefit from having this foundational knowledge.

Another issue is when to begin social media education. The students in this study reported first using social media as middle school students, and as they neared high school graduation they had yet to receive any school-based support for social media use. Social media use and sexual behavior both tend to emerge during the middle school years. Sexual abstinence is the popular value to promote at that time [26], 8th and а similar movement, Wait Until (https://www.waituntil8th.org), suggests that smartphone ownership be delayed at least until 8th grade. This movement suggests that smartphones are the gateway to harmful social media use. However, promoting abstinence is not the same as providing education. Common Sense Media's (2016) digital citizenship curriculum begins at the kindergarten level, with age-appropriate content that builds to the high school level. Similarly, social media education is likely needed at all levels, but middle school may be the best time to begin heavy discussion of appropriate social networking.

Finally, the approach to social media education, monitoring, and discipline should be considered. In other studies, a reflective approach has been found preferable to the dominant fear-based one [27]. To adopt an approach from sex education, teacher professional development could help improve school-based coverage of responsible social media use even if a curriculum is not adopted [28].

7 IMPLICATIONS

This empirical-based activity system provides a starting point for identifying the challenges, opportunities, and content that should be considered when developing a responsible use curriculum for high school students. By focusing on how to support positive outcomes and minimize negative outcomes, schools can be leaders in supporting lifelong learning skills. This approach need not conflict with personal restrictions and guidelines set forth by parents for their children, nor with school policies for smartphone possession and use.

8 LIMITATIONS AND FUTURE STEPS

A limitation of this study is that we did not purposefully interview parents. We gleaned a small bit about parental point of view when interviewing a few of the teachers who also were parents of teenagers. However, we are unable to speak robustly and directly about parent attitudes and intent within our findings. Instead parents are represented through student and teacher reports and interpretations of their actions. Our future steps include using items derived from these findings to survey a broader group of middle and high school students about this topic. Ultimately, we plan to work toward a social media educational experience that is agreeable to all constituents.

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