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Attitudes toward Using Social Networking Sites in Educational Settings with
Underperforming Latino Youth: A Mixed Methods Study

For the better part of the last two decades, researchers have documented and debated a digital divide that has resulted in differential access to, and benefit from, the Internet based on race, gender, and socioeconomic status (Ching, Basham, & Jang, 2005; Hargittai, 2004; Ortiz, Green, & Lim, 2011). For years, Blacks and Latinos found themselves disproportionately on the outside looking in when it came to Internet access and use, but in recent years these access issues have been reduced and in some cases eliminated (Lopez, Gonzalez-Barrera, & Patten, 2013; Ono & Tsai, 2008). Nonetheless, some argue that even with improved rates of access for groups previously excluded, a second-level digital divide continues to result in differential levels of benefit derived from this newfound access (Reinhart, Thomas, & Toriskie, 2011). This second-level digital divide goes beyond simply categorizing those who have access to the Internet versus those who do not, as it represents a divide in how social and human factors can result in some members of society being marginalized into patterns of less effective use of the technology. Patterns of unproductive use can result in what has been described as a “time wasting gap” (Richtel, 2012, para. 4), wherein students from poorer families spend considerably more of their Internet access time to play games, watch videos, and connect on social networking sites. These counterproductive patterns have the potential to undermine the benefits that educators hope to reap from technology infusion in education.

A well-documented gender gap into the early 90s existed for many years as boys used computers more in schools than girls. Even as the difference in use has diminished, there remains differences in how girls used computers as compared to boys (Volman & van Eck,

2001). Although the gender gap in computer use has all but disappeared (with the exception of games and online video watching, see Rideout, Foehr, & Roberts, 2010), there are still notable differences in online practices and attitudes based on gender that may challenge the notion of a level playing field in cyberspace ("Social media enthusiasts," 2012).

As educators struggle to identify the essential components of a twenty-first century classroom, controversy exists with regard to the potential classroom benefits of various forms of online interaction, which have come to be known as computer-mediated communication (CMC; Murray, 2000). Whereas email is a largely uncontroversial form of CMC when used in classrooms, there is much debate, conjecture, and confusion as to the possible role that social network sites (SNSs), such as Facebook or MySpace, should have in youths' educational settings (Bowman, 2009; Debatin, Lovejoy, Horn, & Hughes, 2009; Livingstone & Brake, 2010). At a time when the second-level digital divide threatens to perpetuate social and socioeconomic inequity resulting from group's differential technology usage (Reinhart et al., 2011), educators' decisions are important to ensure that youth's varied engagement does not translate into disparate affordances and benefits.

Research findings are mixed regarding the potential benefits and pitfalls associated with using SNSs in the classroom. For example, some researchers laud Facebook as a place where social capital is enhanced (Ellison, Steinfield, & Lampe, 2007), and self-esteem is raised (Steinfield, Ellison, & Lampe, 2008). Others contend that it is a gathering place for narcissists (Buffardi & Campbell, 2008; Mehdizadeh, 2010; Ong et al., 2011), students with lower grades (Kirschner & Karpinski, 2010), and online predators (Ybarra, Finkelhor, Mitchell, & Wolak, 2009). Research findings on MySpace have proven to be just as equivocal, as some contend that

it allows students to demonstrate twenty-first century skills in an informal setting (Greenhow & Robelia, 2009a) and provides positive educational benefits, particularly for low-income and minority students (Greenhow & Burton, 2011). Others describe MySpace as having a reputation as an unsafe “digital ghetto” causing a cyber-version of “White flight” due to parental concerns that it attracts the crowds they don’t approve of (Boyd, 2011, p. 217).

Although there are many factors that influence educators’ decisions on whether different forms of CMC have a place in the classroom, student comfort levels with communicating with school personnel and classmates for school-related purposes may be a good starting point in the discussion. The purpose of this study is to examine the perceptions of underperforming Latino high school students related to their comfort levels with using computers for completing schoolwork and allowing teachers into their social interaction spaces. Specifically, our two research questions are as follows:

Research Question #1: How comfortable are underperforming Latino students with using CMC to interact with school personnel and classmates?

Research Question #2: Does gender influence high school students’ perceived comfort levels with using CMC in educational settings?

Based on previously published findings, two hypotheses were proposed corresponding to the respective research questions:

Hypothesis 1: Underperforming Latino students will be less comfortable using SNSs in their classrooms than they are using other forms of CMC.

Hypothesis 2: Females will be less comfortable than males using CMC with teachers and other students in educational settings.

Review of Literature

Latino Youths and Technology Engagement

Concerns about the U.S. digital divide—defined as “those with access to new technologies and those without” (U.S. Department of Commerce, 1999, p. xiii)—portend disparate trajectories for individuals’ social, educational, and economic lives. This uneven technological engagement has been of particular concern for Black and Latino groups whose technological usage historically lagged behind that of their White and Asian counterparts (Farlie, 2005; Livingston, 2011). Fortunately for Latinos and Blacks, recent reports indicate this gap appears to be narrowing (Lopez, Gonzalez-Barrera, & Patten, 2013). Yet little is known of youths’ out-of-school technology practices that shape how Latinos access and use technology. In this section, the most recent findings on Latinos’ Internet usage will be presented first along with an urging to problematize the issue of mere access and address meaningful and substantive digital educational engagement. This discussion is followed by a review of empirical studies of Latino youths’ and families’ cross-contextual engagement with technology in out-of-school and educational settings.

Closing the gap and broadening the perspective of access. By the year 2050, it is estimated that one-in-four school age children will be of Latino/a descent. The dismal statistics of how children from diverse populations disproportionately experience poverty, discrimination, and low quality education has been well documented (Orfield & Chungmei, 2005; Pearl, 2002; Shannon, 1998). Moreover, reports of Latinos consistently lagging behind other groups in their use of technology create additional concern among educators and policy makers (Ching, Basham, & Jang, 2005; Farlie, 2005; Livingston, 2009; Tanno, 2003). Recently, findings from

the Pew Research Center's Hispanic Trends Project indicate that the digital divide has narrowed between Latino and White adults. In 2009, Latinos and Whites used the Internet at rates of 64% and 80% respectively. By 2012, Latinos' Internet usage climbed to 78% while Whites' usage modestly grew to 87% (Lopez, Gonzalez-Barerra, & Patten, 2013). Since Latinos are not one monolithic group (Suárez-Orozco & Pérez, 2002), it is important to note that the greatest growth is coming from foreign-born Spanish speaking Latinos. According to the report, U.S. Latino youths are catching up to their White and Asian counterparts in Internet, cell phone, and social network service usage. Sixty-eight percent of Latino Internet users cite usage of social networks (Lopez, Gonzalez-Barrera, & Patten, 2013).

These findings indicate favorable trends for Latinos' access to Internet and other technologies, but there are other troubling concerns. For example, Latino ownership of computers at 72% lags behind that of Whites (83%) (Lopez, Gonzalez-Barrera, & Patten, 2013). Furthermore Gorski contends that there are material consequences that transcend questions regarding mere physical access: Educators need to ask who technological access serves and examine when its use mirrors larger societal inequities (2009). For example, despite Latinos' increased technology usage, their participation in STEM careers remains alarmingly low (Malcolm, Dowd, & Yu, 2010, p. 3). Additionally, youths' meaningful and social technological practices exist across a range of contexts (De La Peña & Orellana, 2007). Therefore, social scientists must explore social, historical, and economic aspects of technology use. Overall, there is general agreement among social scholars that technology usage is not neutral (Tettegah & Mayo, 2005; Haddix & Sealy-Ruiz, 2012). In order to consider the contextual landscape in

which Latino youths use technology it is important to examine their out-of-school and in-school practices.

Technology engagement in family contexts. The effects of the digital divide emanate from early experiences with technology but can be ameliorated with meaningful and purposeful interaction with technology (Ching, Basham, & Jang, 2005). Several recent case studies examined technology used in the home by Latino parents and family members. Machado-Casas and Ruiz (2012) found that Latino youths, who generally gain familiarity with technology in school, often serve as conduits for introducing technology to their families. They contend that this in-home differential access can create a multigenerational divide between adult family members and their children. The researchers also found that in contrast to the young children gaining greater technology orientation in their K-12 school experience, many immigrant parents lacked technological know-how, and were becoming “global invisibles” (p. 8). Another ethnographic study with immigrant families in northern California reiterated the role that second-generation youths often serve as “cultural brokers of technology” for their families (Sanchez & Salazar, 2012, p. 100). The middle- and high school-age students in their study often shouldered the responsibility for maintaining the technological infrastructure in their respective homes, handling a range of matters such as computer purchases to setting up Internet access. Barriers, such as the lack of affordable bilingual computer support within their community, further hindered parental access.

This role of youths as technological experts resonated in a key finding in De La Peña and Orellana’s (2007) study of upper-elementary immigrant Latino students. Their qualitative investigation revealed multiple ways youths were instrumental in introducing and using

technology in their homes. Yet adult family members may maintain a protective stance as indicated in another qualitative study of Latino students in special education. Parents restricted their children's Internet usage because of safety concerns regarding content and the vulnerability of their children being preyed upon by strangers (Tripp & Herr-Stephenson, 2009). These studies collectively point to the weighted dimension of Latino youths' agency as technology brokers in their households. Such roles may not be experienced by youths in middle- and upper-class, English-language dominant households where computers are more readily available (Lopez, Gonzalez-Barrera, & Patten, 2013). In such households, computers are regularly used by all family members in a "full spectrum frequency" (Ching, Basham, & Jang, 2005, p. 403) for varied reasons including academic, social, financial, career, health, and entertainment purposes. The technology broker role of Latino youths points to a potential source of cultural capital that can be drawn upon when designing technology-based instruction for Latino students.

Technology engagement in educational contexts. School technology instruction varies with factors including up-to-date computer resources, Internet access, educator knowledge, and teacher expectations. For students from diverse ethnic, economic, and social experiences, schools tend to emphasize a skills-based "know how" approach instead of inquiry based learning throughout the curriculum (Domine, 2010; Gorski, 2009). As examples, classroom teachers might assign low-level projects that constrain student learning in structures and access (Tripp & Herr-Stephenson, 2009) or they might overlook youths' out-of-school technology practices (Haddix & Sealy-Ruiz, 2012). Further, youths' technological interests may not always be pursued in the classroom because of a number of factors such as the lack of access to technology, inadequate close supervision by adults, or even teacher hesitancy to encourage minority students

to use technology in the classroom (Haddix & Sealey-Ruiz, 2012). In a critique of the disparity in some students' low level technological participation, Gorski notes, "[M]any students of color, young women, and low-income students are being socialized to see computers more or less as digital flashcards" (2009, p. 356). To counter this situation, scholars urge educators to engage students authentically and meaningfully with technology to develop youths' habits of mind (Domine, 2010) and cultivate their potential as innovators (Eglash, R., Gilbert, J., Taylor, V., & Geier, S., 2013) rather than as "mere technological consumers" (Scott & Clark, 2013, p. 628).

Other reports provide evidence of vibrant educational contexts in which students agilely weave technology with other resources. After-school settings have been one such arena in which technology is integrated with other resources such as students' home languages, second language development, computer games, and popular culture. Vasquez's seminal study of one after school program, *La Clase Mágica*, describes the dynamic exchange of ideas and problem solving mediated by children's dual linguistic resources (1994). Gutiérrez, Banquedano-Lopez, and Alvarez (2001) also noted bilingual children's use of dual language resources in an after school program as they collaborated with peers and adults in computer-learning games and email exchange. Similarly, Martinez-Roldán and Smagorinsky (2011) noted the "distribution of power and knowledge" between students and peers (p. 177) and instances of reciprocal teaching between university students and elementary students in navigating educational games and websites. In a study of two culturally responsive after-school math programs in an urban setting, Eglash, et al. (2013) explored how culturally responsive pedagogy and vernacular resources mediated students' understanding of academic concepts. Such examples of alternative educational contexts highlight youths' dynamic and authentic engagement with digital resources.

In ensuring digital equality for all youths, serious concerns remain about the differential usage, access, and understanding of technology among different groups (Gorski, 2009). It is important for researchers to note how youths navigate their different identities while engaging in digital media and new online tools in their daily lives (Domine, 2010). According to Tripp and Herr-Stephenson, “[M]eaningful access to the Internet also implies being able to go online to engage in contemporary friendship practices, participate in new media culture, and experiment and play with technology” (2009, p. 1203). It is important, therefore, to examine Latino youths as active social agents engaging with technology in both out-of-school and in-school contexts to negotiate their evolving identities in the digital age and pursue personal and social goals.

Computer-Mediated Communication in the Classroom

As Internet connectedness approaches the point of saturation, email and SNSs are almost universally familiar forms of CMC use amongst students of high school age. Rideout et al. (2010) found that 84% of 8-18 year-olds had Internet access at home in 2009, and 70% reported going online at some point in a typical day. Students between ages 11 and 18 spend on average between 6-7 minutes a day using email, and about four times as much time using SNSs. Mesch (2012) contends that CMC offers an avenue for disadvantaged minorities to overcome social and residential segregation and improve educational opportunities. As for email communication in particular, Hassini (2006) has argued that the use of email as a supplemental communication channel between teachers and students can provide a richer learning experience and help to improve future instruction. Other research suggests that email communication can increase the value students place on developing the student-teacher relationship (Young, Kelsey & Lancaster, 2011).

There are examples of successful use of CMC for academic purposes in the classroom. Bransford, Brophy and Williams (2000) found that individualized email communication between teachers and students was instrumental, from a learner-centered perspective, in taking advantage of the cultural beliefs that each student brings to the learning environment. In addition, they note that email communications seem to make the discussion of emotionally charged issues easier for students (p. 73). Such practices can help to make students' identities available within the learning context, which Nasir and Cooks (2009) contend can provide insight into how the identities of "minority" or "urban" students are constructed vis-à-vis social contexts (p. 58).

Whereas email use presents a fairly standardized experience across the various platforms available to students, differential CMC patterns of use and understanding are more likely to arise from the use of SNSs due to different patterns of use and varying features. Several sites have emerged as SNSs, but due to their unique appeal, exponential growth, and respective market shares, Facebook and MySpace have gained the lion's share of research attention when it comes to possible educational application of such sites. Our discussion of SNSs in the classroom will focus primarily on these two sites due to their relative saturation in the school-age population and the extent of the research literature on the educational implications of each.

SNS origins. At its peak in 2008, MySpace enjoyed 75.9 million unique visitors per month in the U.S., but by August of 2012, that number had dropped to 33.1 million (Steel, 2011). The decline has been credited in part to concerns over safety, as well as a lack of technological innovation in comparison to Facebook (Gillette, 2011). Despite its recent decline, MySpace still has its proponents who argue that it can be beneficial in educational settings to reduce

educational inequities, build social capital, and to reinforce a college-going identity (Greenhow & Burton, 2011; Greenhow & Robelia, 2009a).

Facebook, in stark contrast, began as a service to connect college students at Harvard, and later spread to other universities, high schools, and professional networks before opening up to the general public in 2006 (Boyd & Ellison, 2008). In 2008, Facebook surpassed MySpace in active users (Mack, 2008) and by the end of 2012 claimed over 1 billion active users (Whittaker, 2012). Advocates of Facebook in the classroom suggest that SNSs can enhance the learning and social capital of students if they are utilized as instructional tools (Burgess, 2009; Tomai et al., 2010). The U.S. Facebook user base of 165 million includes 13.8 million users under the age of 18 (Gonzalez, 2012). However, despite its saturation, it would not be accurate to assume that the vast majority of secondary students are active SNS users. Only 42% of 11 to 14 year olds use SNSs, and 53% of 15 to 18 year olds report using these sites (Rideout et al., 2010). Nonetheless, Facebook has a large and increasing following among secondary students.

A social (networking) divide. Bringing SNSs into the classroom with low-income youth at risk of dropping out of high school may be problematic if this group is underrepresented on a specific SNS that an educator may decide to utilize (Dominie, 2010). There is some evidence that the different origins of Facebook and MySpace resulted in different adoption patterns along racial and socioeconomic lines, at least during their respective early stages of saturation (Hargittai, 2007, 2011). Boyd contends that in the social networking realm, race, ethnicity, and socioeconomic status have led teens to “self-segregate across the two sites, just as they do in schools” (2011, p. 203). However, Hargittai’s research on SNS demographic patterns showed remarkably similar Facebook usage patterns for Whites, Asians, and African Americans. Latino

students were far more likely to use MySpace than Facebook in 2007, but the opposite was true in 2009. In any case, some scholars warn us that we should be cautious not to assume that culture is bound exclusively by race or ethnicity when making decisions about educational practices (T. C. Howard, 2010; Lee, 2002).

Social networking in classrooms. Some examples and recommendations of SNS use to support academic pursuits have emerged through research as well. Luckin et al. (2009) found that learners' motivation to use SNSs may support deeper engagement on the part of students as a result of the feedback afforded by the platform. Despite its declining user base, Greenhow and Robelia (2009b) argue for MySpace use in classrooms. They contend that it represents a form of new literacies that should be included in education in order to allow low-income students access to "the kinds of constructivist-oriented experiences enjoyed by their more affluent peers" (p. 1131). Furthermore, K.E. Howard (2013) argues that there is a need to educate youth as to the ethical use of SNSs rather than letting them try to figure it out on their own.

Successfully integrating SNSs into the classroom relies on the assumption that students will endorse the idea of using their social cyber-hangouts for purposes related to their education. Very little research has been conducted to examine student opinions on the matter, but there is some evidence that students in higher education aren't very enamored with the idea of using their SNSs in connection with their course work (N. Howard, 2012; Roblyer, McDaniel, Webb, Herman, & Witty, 2010). One study found that undergraduate students were uncomfortable with blurring the lines between their social networks and their academic environment (Baran, 2010). Less is known about how high school students may feel about classroom inclusion of SNSs,

particularly low-income Latino youth who may have different patterns of use than other ethnic groups.

There is also some evidence that gender influences user comfort level with interacting on SNSs. One national survey of adults found that most people use social networks for personal interests, but women of all ages are far less willing to share information over SNSs due to concern for their personal safety and privacy ("Social media enthusiasts," 2012). It is possible that high school teenage girls may have more concerns than boys over safety when bringing SNSs into an educational setting. In the final analysis, educators must consider an array of possible variables when attempting to use different forms of CMC in classroom settings.

The Empirical Study

Background of the Study

This study reports on data that are part of a comprehensive evaluation of an alternative high school program in an urban Southern California high school district. The program was initiated in response to a significant dropout rate and it consists of an Independent Learning Center (ILC) that is situated within the campus of a traditional high school. The traditional school (within which the program is operated) has a student population that is 93.3% Hispanic/Latino, and 86% of the students are eligible for free/reduced price lunch. The students in the ILC were recruited from among students in the district who either had dropped out of school altogether, or were significantly behind on credits and presumed at-risk for dropping out.

The ILC is a blended alternative educational setting that is neither a traditional onsite school nor an entirely online program. The students complete their core subject coursework online using a web-based program, which is supported through an onsite computer lab.

Moreover, the ILC is site-integrated in that the ILC students are allowed to participate in electives and extracurricular activities (i.e., band, clubs, choir, sports, etc.) with the regular student population at the traditional school location. Although the students can complete their core subject work online independently, from any computer with Internet access, many visit the onsite computer lab several times per week to take advantage of the teacher and tutor assistance available. Additionally, all students are required to meet with their ILC outreach teacher once per week to discuss their progress.

A Mixed Methods Approach

A mixed methods research approach combines the respective strengths of qualitative and quantitative methods such that the overall strength of an inquiry exceeds that of one method alone (Creswell, 2009). Its roots in the social sciences have been traced to Campbell and Fiske's (1959) article advocating for a research process wherein independent measures of variables of interest are converged. It has been described as a paradigm that allows the generating of important research questions and warranted answers to those questions (Johnson, Onwuegbuzie, & Turner, 2007). It involves combining or connecting quantitative and qualitative data to provide a more complete understanding of a research question or set of related questions (Plano Clark & Creswell, 2010).

Our rationale for employing a mixed method design for the present study included the fact that using either quantitative or qualitative data alone would provide incomplete answers at best to our questions related to student comfort level using CMC with their classes. Analyses of quantitative surveys addressing student comfort levels can provide a measure of the pervasiveness of a particular sentiment, but give no insight into the potentially complex reasons

behind it. Conversely, qualitative face-to-face interviews can provide the participants an opportunity to express in meaningful terms what their individual perspectives are, but are limited in explanatory value since they cannot be generalized to others (Creswell & Plano Clark, 2011). In the present study, patterns uncovered in the quantitative data analyses (i.e., levels of comfort) are insufficient to explain the reasons behind those patterns. In the research literature on CMC, there are myriad studies, surveys, reports and the like examining quantitative data on student trends as they relate to SNS use (Ahn, 2011; Arrington, 2009; Hargittai, 2007, 2011; Rideout et al., 2010; Wilkinson & Thelwall, 2010). Likewise, there have been several studies that have examined qualitatively the perceptions of students using SNSs in educational settings, as well as the merits of such activities (Boyd, 2011; Greenhow & Burton, 2011; Greenhow & Robelia, 2009a, 2009b; Greenhow, Robelia, & Hughes, 2009; Robelia, Greenhow, & Burton, 2011). Research combining quantitative data with explanatory qualitative findings is less prevalent in the literature. Luckin and her colleagues (2009) examined secondary students' practices and perceptions of online tools using a mixed methods approach, but we know of no prior research that examines high school students' practices and comfort level with SNSs quantitatively while proposing to explain those results qualitatively.

In the present study, we employ a sequential explanatory design (Creswell, 2009) in which the quantitative phase occurs first, followed by a qualitative phase designed to inform the results from the first phase: QUAN → qual. In this design, the two strands of research are implemented in sequence with the first (quantitative) having greater emphasis in addressing the purpose of the study (Creswell & Plano Clark, 2011). In this study, the quantitative phase consisted of a web-based survey administered to all 90 consented participants at or near the

beginning of the school year. Thirty participants were selected at random for two follow-up face-to-face interviews (Wave 1 and Wave 2) during the school year, using protocols designed to inform the quantitative survey results. The study design and methods were approved following a full review from the researchers' university institutional review board. No incentives were offered for participation in the study; however, those that did participate received a polo shirt with the ILC school logo as a gift after their participation.

Quantitative Inquiry

Method

Participants. The ILC alternative high school has a cap of 120 students at any given time. This study commenced at the start of the second year of the ILC program's existence. At the time the study began, there were 118 students enrolled and all were invited to participate in the study. Ninety 14-19 year old participants ($M = 17.13$, $SD = .82$; 55 male, 35 female) volunteered for the study during the 2011-2012 school year. The participants were predominantly Hispanic/Latino (93.3%), in addition to 3.3% Caucasian/White and 3.3% identified as "Other." The participants were representative of the population at the high school where the ILC is located (92.9% Hispanic/Latino, 3.1% White, 4% other), which has the highest concentration of Hispanic/Latino students in the district. However, the population of the entire district is more diverse (50% Hispanic/Latino, 27.2% White, 17.4% Asian, 5.4% other). Forty-one of the 90 participants had previously dropped out of high school prior to enrolling in the ILC, whereas the balance of the participants had all been significantly behind on credits and may have missed some time from school without officially dropping out.

Survey instrument. Participants completed an online survey which included questions related to their comfort using different forms of CMC to communicate with school personnel and/or classmates. Specifically, the questions that are the subject of these analyses were:

1. Do you use Facebook?
2. Do you use MySpace?
3. How comfortable are you with using email to communicate with school personnel (teachers, counselors, etc.)?
4. How comfortable are you with using computers to complete schoolwork?
5. How comfortable are you with using the Internet to complete school lessons?
6. How comfortable would you be using Facebook to communicate with teachers and students about schoolwork?
7. How comfortable would you be using MySpace to communicate with teachers and students about schoolwork?

Questions one and two were dichotomous (*yes/no*), whereas questions 3 through 7 used a 5-point scale ranging from 1 (*not comfortable at all*) to 5 (*very comfortable*). The data were analyzed using SPSS 20.0 (descriptive analyses, chi-square, one-way repeated measures ANOVA).

Results

Descriptive statistics. Table 1 displays the participants' reported use of Facebook and MySpace. Using National School Lunch Program eligibility as a proxy for income, over 70% of the participants would be identified as low SES. In this heavily Hispanic/Latino sample, three-

quarters of the participants were Facebook users, whereas only four participants reported being users of MySpace.

Table 1. Social network site use among participants (percentages)

	Hispanic/Latino (n = 84)	Other (n = 6)	Total (n = 90)
NSLP Recipient	70.2	16.7	66.7
Uses Facebook	75.0	50.0	73.3
Uses MySpace	4.8	0.0	4.4

Note. NSLP = National School Lunch Program

One-way repeated measures ANOVA. A one-way repeated measures analysis of variance was conducted to compare the participant responses as to their comfort levels using the five technology mediums listed in Table 2. A Bonferroni adjusted alpha level of .01 per test (.05/4) was used. Results indicated a significant effect for medium, Wilks' Lambda = .21, $F(1, 89) = 79.68, p < .001$, multivariate $\eta_p^2 = .79$. Pairwise comparisons revealed that the participants were significantly less comfortable using email communication with school personnel than with using computers or the Internet for schoolwork (both $p < .001$). They were significantly less comfortable with Facebook use for schoolwork than with email communication, and less comfortable with MySpace use for schoolwork than Facebook use for schoolwork (both $p < .001$). Their comfort level using computers for schoolwork and using the Internet for schoolwork did not differ significantly ($p > .05$).

Table 2. Descriptive Statistics for Comfort Level Ratings

Medium	M ^a	SD
Email	3.71	1.33
Computers	4.36	.84
Internet	4.40	.89
Facebook	2.90	1.48
MySpace	1.73	1.10

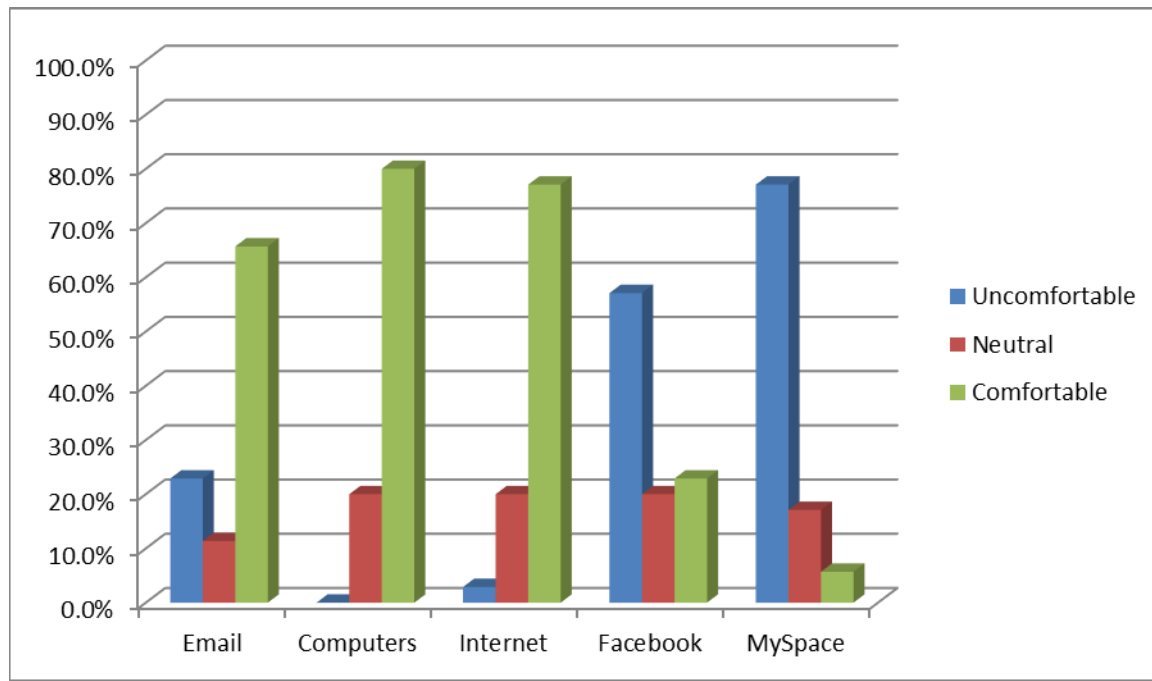
Note. $N = 90$

^a1 = not comfortable at all, 5 = very comfortable

Table 3 provides a breakdown of participant comfort level with different forms of school communication, by gender. While the vast majority of both males and females reported being comfortable or neutral to the idea of using computers and the Internet to complete schoolwork, about 23% of females and 16% of males reported being uncomfortable communicating with school personnel via email. A majority of females reported being uncomfortable using Facebook to communicate with teachers and students about schoolwork; whereas, most males were either comfortable or neutral to the idea. Over two-thirds of both males and females reported being uncomfortable using MySpace for schoolwork.

	Females (n = 35)			Males (n = 55)		
	Uncomfortable	Neutral	Comfortable	Uncomfortable	Neutral	Comfortable
Email	22.9	11.4	65.7	16.4	25.5	58.2
Computers	0.0	20.0	80.0	3.6	9.1	87.3
Internet	2.9	20.0	77.1	3.6	9.1	87.3
Facebook	57.1	20.0	22.9	30.9	21.8	47.3
MySpace	77.1	17.1	5.7	70.9	21.8	7.3

Note. A response of 3 on a 5 point scale coded as neutral.



Chi-square analyses. A chi-square test of independence was performed to examine the relationship between gender and comfort level with each of the various mediums of technology in conjunction with schoolwork. The 5-point scale responses were recoded as categorical for chi-square analysis, with “3” representing a neutral response, 1-2 coded as uncomfortable, and 4-5 coded as comfortable. The relationship between gender and comfort level using Facebook for schoolwork was significant, $X^2(2, n = 90) = 6.99, p = .03$. Females were significantly more likely than males to report being uncomfortable using Facebook to communicate with teachers and students about schoolwork. Forty-one percent of the total sample reported being uncomfortable using Facebook in the classroom. There was no significant association between gender and comfort using email, $X^2(2, n = 90) = 2.78, p = .25$, using computers, $X^2(2, n = 90) = 3.32, p = .19$, using the Internet, $X^2(2, n = 90) = 2.21, p = .19$, or using MySpace, $X^2(2, n = 90) = .43, p = .81$.

Qualitative Inquiry

Research Questions

The quantitative results of the present study indicated that the participants were comfortable using computers and the Internet to complete schoolwork, but were less comfortable using email to communicate with their teachers. They were even less comfortable using Facebook as a communication tool to communicate with teachers and students about schoolwork. In our follow-up interviews, we sought evidence that might clarify the reasons for the students' comfort in using computers and the Internet in connection with their studies. Moreover, in light of the finding that participants were less comfortable communicating with school personnel via email, we looked to explore the students' perceptions of the personnel with whom they interacted at the ILC to discern whether or not this was a reflection on the relationships they had with the school personnel. Finally, we examined participants' perspectives with regard to activities that may blur the line between schoolwork and the students' personal lives (i.e., home visits, therapy). Prior research (Baran, 2010; Madge, Meek, Wellens, & Hooley, 2009) has found that students in higher education can be uncomfortable with instructors mandating the use of SNSs, which they may perceive as an invasion of a semi-private social space. We reasoned that students' perspectives on activities that bring teachers into their personal realms might highlight the reasons for the discomfort many students have with SNSs, or even email for that matter, as tools of communication within their educational setting.

Method

Thirty of the participating ILC students were selected at random for two follow-up individual face-to-face interviews. The interviews were conducted at the ILC by the researchers.

Digital voice recorders were used for the interviews, each of which lasted approximately 15-20 minutes. In the first wave of interviews, the participants addressed their reasons for dropping out or falling behind in their traditional classrooms settings, as well as their feelings about the online curriculum program used in the ILC program. The participants were also asked to identify what they found most important about the ILC to them personally. From the various responses received, we compiled a list of 12 components of the ILC to be used in conjunction with the second wave of interviews. Immediately prior to the second wave of interviews, the participants were given a list of the 12 previously identified ILC components and asked to rank them from 1 through 12 in personal importance (1 = *most important*; 12 = *least important*). Their completed rankings were discussed during the Wave 2 interviews as the participants were asked to elaborate on why they placed their top three so high on their list, as well as on why their bottom two selections were ranked so low. Of particular interest were their rankings of interactions with school personnel, as well as their perceptions of outreach activities that would cause teachers to go out to their homes. In their first interviews, many of the participants cited friends, and to a lesser extent relatives, as playing a role in their previous academic difficulties. In this follow-up interview, they were asked to elaborate on how friends or relatives might have interfered with their schoolwork. This may explain their reticence to allowing classroom activities and the Facebook network of friends and relatives to be intermingled. The recordings of the interviews were professionally transcribed and imported into NVivo (version 10) qualitative data analysis software. Pseudonyms were assigned to all participants. Initial themes were created in NVivo based on the interview protocols used, and the themes were subsequently expanded as needed based on the line-by-line coding of the interviews to the themes. Each theme was then analyzed

for response patterns and summarized accordingly. At least two raters reviewed each initial coding assignment, and there was over 98% agreement amongst them. In instances where there was disagreement, a third rater was utilized to finalize the coding.

Findings

The following are themes that surfaced from the interviews:

Factors contributing to dropout and/or prior academic struggles. Participants cited various factors that they felt contributed to their dropping out of (or falling behind in) their previous high school classroom settings. The influence of friends on behaviors not conducive to educational success was noted by 50% of the students interviewed.

- Oh, I was hanging out like with the wrong people, like ganging out like, people that were like -wouldn't even like do good things, friends... More just – basically just like trouble makers - people [who] like get into fights for like the dumbest things. (Mario)
- Probably just my friends telling me, well let's go, hey lets ditch, let's go hang out at the park or something you know. (Juan)

Overall, friends seemed to play a large role in the poor attendance and lack of focus many of these students exhibited in their previous high school settings. Many of the students seemed to acknowledge their own complicity in the activities that led to their poor performance and, by and large, expressed a desire to avoid hanging around with the “wrong people” as they pursued their goal of a high school diploma.

Views of online curriculum. Participants' perspectives of the ILC online curriculum were overwhelmingly positive, with 97% of them indicating that they had a good experience

with the program. Some cited the easy availability of an online system among their reasons for liking the online curricula.

- It's very flexible, so that's like the first thing of course. The ability to be able to access school, you know, anywhere. But, you have Internet access, it's incredible because, you know, I could be at home, I could be at a friend's house, I could be, you know, drinking coffee at Starbucks and be at school at the same time...(Alex)

Such direct online availability of academic content can mitigate the influence of peers that might interfere with students' efforts to stay focused on school work. Others students were appreciative of the opportunity to work at their own pace and review material over and over as needed.

- [I] actually like it, it was pretty good; I do everything like on my pace... If I don't understand something I can always go back to it. (Armando)

Overall, the participants appeared to like the process of completing core curriculum work online, and for the reasons one might expect (i.e. working at their own pace, anytime/anywhere access). Only one participant made negative comments about the online curriculum, and those comments were related to the accuracy of the content rather than the process. It would appear that this group is comfortable working with computers and using them to complete their schoolwork. They would seem ideal candidates for incorporating SNSs in their classes after having become comfortable with online curricula as an everyday part of their schooling.

ILC component rankings by students. Table 4 displays the average rankings for all 30 interviewed participants on the 12 ILC component list compiled from the first wave of interviews.

Table 4. Mean Rankings in Importance of 12 Components of Independent Learning Center

Component	Mean Ranking ^a	SD
Online Curriculum	2.80	2.58
Tutors	4.13	2.00
Teaching	4.13	2.21
Counselors	4.33	1.90
Career-related Class Projects	4.37	2.54
Career-related Field Trips	5.60	2.58
Assemblies/Guest Speakers	6.47	2.36
Culture-related Class Projects	6.90	2.83
Therapist	7.73	2.15
Outreach (home visits)	8.53	1.76

Note. $n = 30$.

^aRanking were from 1-12 (1 = *most important*, 12 = *least important*)

As alluded to earlier, the online curriculum was positively received by the students and was the highest ranked item in importance, on average. Although their apparent affection for the online curricula was clear, the importance of the instructional personnel at the ILC was also quite evident. They ranked the tutors, teaching, and counselors as the second, third, and fourth most personally important components of the program. They seemed to appreciate the availability of the tutors (local university students) as backup support for the teachers in the ILC, with 40% of the respondents listing tutors among their top three ranked items.

- Because when the teacher is busy, you know... they are like secondary, you know they are like the backups. (Armando)
- It's always good to have an extra hand on the other side because the teachers are not going to always be there, so tutors are very important to me. (Lorena)

Many also appreciated the contributions of the teachers (37% listed among their top three) in preparing them for their lessons and for their future.

- Because teachers are like, what's most important nowadays; without teaching like you won't, you know, have a better future, you won't have knowledge. Like, the teachers are the ones that are helping us get to our future goals and what we want. I think to me teachers are like the most important people right now to me, like you know besides my family... (Arcely)

Several participants also found value in the guidance and advice that they received in the form of academic counseling (27% ranked counselors in their top three).

- Because they are guiders. They are [the] main person that actually helps you make sure that you are on the right track...(Lorena)

Interestingly, the two elements that received the lowest rankings were the two that most involve the students' personal lives - therapist and outreach (home visits), which ranked 11th and 12th respectively. The therapist at the ILC is available to help students cope with issues such as family problems, substance abuse, and other outside factors that may be influencing their ability to be successful in their studies. The outreach component consists of home visits by the teachers in the ILC for students who seem to be having difficulty making it to their weekly onsite checkup visits with their ILC teachers. Thirty-three percent of the respondents listed the therapist as one of their bottom two ranked elements. When asked why they ranked the therapist so low, most indicated that they had not met with the therapist and had no desire to do so.

- I don't really like therapists. That's why. (Karina)

- I don't know, because like, I don't like, I'm just like the type of guy that like doesn't really talk that much about stuff. (Mario)

The lowest ranked item, outreach, was listed by 50% of the respondents as one of their bottom two ranked elements. Some expressed a lack of comfort with bringing what they considered to be “school business” to their homes.

- Well, ... I never like when they used to ... come visit me at home, you know, if it was school business, you know all right, we know we'll do it at school...there is no reason to bring home into it. Because, you know a lot of families are different, you know depending on your home, you know some parents, like they don't like involving school or like they just, that is too much for some families you know. If it's school, just keep it at school, because there is too much, sometimes too many problems at home. (Armando)
- How do you feel when somebody goes to your home? (Alexandria)

Friends/relatives impact on academic success. In the second wave of interviews, the participants were asked specifically to think back to the time when they were having difficulty in their previous settings and to recall if friends or relatives asked them to do things that would interfere with their schooling. Seventy-seven percent of the participants responded in the affirmative, citing peer pressure as a factor in their prior struggles.

- Yeah, there was a lot of times - that's actually the reason why I'm here, because while I was a freshman, sophomore, I would ditch a lot, I had friends who would tell me, hey, you know, let's go, let's do this and that, and well, you know my bad choices followed through them. So it's not their fault you know because I only

control myself; no one can control me, so that was my decision. It's hard to tell your friends no, because you know, they are your friends and sometime I guess you just have that, the way of thinking that you want to fit in.... I always do regret that but it's too late, I can't [do] anything about it. (Melinda)

For some students, responsibilities to their families interfered at times with their school attendance.

- Well, yeah, like my parents, they would go to work, my little brother, let's say he would be sick. They would ask me if it was possible for me to stay home with him, so I can take care of him. They didn't speak English and with their job, they have to interact with a lot of people and from different languages... I would miss school, and I will go with them just to translate and that's like one way and I know like I fell behind....My dad like, he installs carpet and all that, so the first [thing] he does is go talk to his client...I would be there to translate - sometimes the clients ask for specific things to get done, and I have to explain that to my dad. (Arcely)

Peers also may have influenced performance by expressing displeasure with those who would strive to achieve in school. A majority of respondents (53%) recalled instances wherein students were ridiculed for their efforts to be successful in their schoolwork.

- Oh, yeah, like in class there are still those students that bring their three pencils - they are ready to learn and everything, people will call them nerds, because they would sit in the front, they would call them like teacher's pet and all that. And I would feel bad, because like the student, all the student is trying to do is

learn...(Arcely)

In summary, it was clear that peers, and to a lesser extent, family members, often were perceived as significant factors impacting the students' abilities to keep up with their studies in their prior high school settings. It would appear that bringing a social network of friends and relatives into the classroom should not be considered a neutral act. Social circles can and do have an impact on the success of students, particularly those who are struggling to achieve. Online access to school content was favorably received by the students of the ILC, but these students appear to be keenly aware of the influence that their peers can have on their efforts to be successful in their studies. This may offer insight into the reasons behind the differences in comfort level related to using computers for school work, using email to communicate to teachers, and using SNSs to communicate with both teachers and peers. School work and email communication can occur outside the realm of influence of peers, whereas anything on an SNS site has the potential to mix school work with personal and peer relationships.

Triangulation and Discussion

Our first hypothesis posited that underperforming Latino students would be less comfortable using SNSs in their classrooms than they would be using other forms of CMC. Quantitative results supported this hypothesis. In order to establish the participants' comfort level with technology in school settings (apart from their views on SNSs) we inquired as to their perspectives on using computers and/or using the Internet to complete schoolwork. Less than 4% of respondents reported being uncomfortable using either of these mediums in conjunction with their studies. Almost 19% reported being uncomfortable using email to communicate with teachers, and 41% were uncomfortable using Facebook to communicate with their classes.

We sought to shed some light on the quantitative findings in our qualitative inquiry. Specifically, we were looking for participant insight as to (a) why students in this program seemed to be so supportive of utilizing online computer technology in conjunction with their schoolwork; (b) why students were less comfortable using that same technology to communicate with school personnel about schoolwork; (c) why students reported being even less comfortable utilizing Facebook in their classes despite the fact that three-fourths of them were already Facebook users; and, (d) how previous detrimental peer interactions may have influenced their views on interacting with classmates online, such as would be the case when using SNSs in educational settings.

Respondents' perspectives on the online curriculum suggest that its appeal is due to its flexibility and anytime access, the opportunity it affords them to review material as many times as necessary to grasp content, and its efficiency in allowing each individual to work at his or her own pace. Students' reported discomfort with communicating with teachers and school personnel via email seemed contradictory at first glance, given the fact that they expressed no discomfort with using the computers or the Internet to complete schoolwork and they ranked teachers, tutors, and counselors as three of the four most personally important elements about the ILC. However, views expressed about teachers making home visits to keep them on track appear to shed some light on the possible reasons for the discomfort with direct email contact. Students aren't always comfortable with blurring the lines between school business and home life, presumably for a variety of reasons. Although the participants valued the roles of school personnel, they also seemed to view their home lives as private and separate from their academic lives. Their low rankings of the therapist available to them at the ILC seem to reinforce this

view, although this should not be interpreted as minimizing the value of such services for those who may be in need of it. It should also be noted that most of the students interviewed had never utilized the services of the therapist.

Our second hypothesis posited that females would be less comfortable than males using SNSs as a form of communication with teachers and other students in educational settings. This hypothesis received support as well, as quantitative data suggested that gender clearly had an impact on comfort level for our participants. Males were more likely to be comfortable with including Facebook in classroom studies, whereas females were more likely to be uncomfortable with it. The fact that both males and females reported being significantly more uncomfortable with using Facebook to communicate with teachers and students about schoolwork than they did communicating with teachers via email suggests that there is an aspect about networking with peers in the context of schoolwork that makes many uneasy. Qualitative data were informative on this front as well, as many of the participants cited peer influence as a factor leading to their prior lack of academic success and cited instances where peers ridiculed students who put forth great effort to achieve academically. This would suggest that opening the classroom up to a network of the students' friends may be counterproductive to their maintaining focus due to the presence of peers who may negatively influence their behaviors. This is in contrast to some prior research that suggested SNS use in education may benefit low SES ethnic minorities (Greenhow & Burton, 2011; Greenhow & Robelia, 2009b).

Consistent with previous research (Hargittai, 2011), 75% of this group of predominantly Latino and low SES participants identified themselves as Facebook users. In contrast to previous findings (Boyd, 2011; Greenhow & Burton, 2011; Hargittai, 2011), usage of MySpace amongst

this group of participants was almost nonexistent. Claims of a SNS digital divide along racial lines were not supported by the findings in this study.

Limitations

This study was conducted in a unique school setting designed to provide an alternative route to high school graduation for students who had previously dropped out or who were at risk for dropping out. The students in the school self-selected into a program built around online core curricula to facilitate course credit recovery on flexible schedules. Caution should be exercised in attempting to generalize these findings to more traditional school settings or to students with more successful academic performance track records. Although this research was consistent with prior research documenting differential comfort levels between males and females with using SNSs, further research may be informative as to the reasons for this apparent disparity amongst high school students.

Conclusions

In the final analysis, the decision to use SNSs such as Facebook or MySpace in an urban high school educational setting appears to be far more complex than simply finding out which platforms students are familiar with. Interactions between students and school personnel that blur the line between official school business and personal lives can leave students feeling that their privacy is being infringed upon. If such interactions occur across networks that include other students, then those interactions are likely to be influenced by existing peer dynamics. For low achieving students, those dynamics can sometimes be counterproductive to the focus students need to be successful. Therefore, decisions to include SNSs as a part of classroom communication must be made with thoughtful consideration being given to the social influences

that may, in fact, run contrary to the aims of well-intentioned educators.

In addition, evidence continues to mount suggesting that males and females experience online social networks differently. Therefore, gender must be considered when educators are called on to make decisions about incorporating CMC in educational settings. Identifying the reasons for females' disproportionate discomfort with SNSs would be helpful to ensure that some students are not privileged over others based on gender. Findings that suggest that females are not as comfortable as males using SNSs in class settings should weigh heavily against using such tools in coed classroom settings until such time that this disparity can be ameliorated, thus providing a more even playing field for all students. Finally, the role that many Latino students play in their families as cultural brokers (Sanchez & Salazar, 2012) would suggest that programs utilizing their technology experiences can provide promise in providing alternate avenues of academic success.

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