

Digital Practitioners? Analyzing Technology Use among Social Work Students

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Abstract

This paper presents a study of information and communication technology use among undergraduate social work students. The study included a sample of 108 students at two private Midwestern liberal arts colleges. Students were given an assignment presenting a generic practice scenario they may encounter in practice – finding information and referral resources for a client. Students completed a survey that gathered information regarding their use of information and communication technologies (ICTs), and how they utilized ICTs to complete the assignment. Findings suggest the majority of students located adequate information on behalf of the client.. Data also show that personal computers and laptops were the preferred devices for students despite high ownership of handheld devices. Finally, students indicated social media use as a primarily recreational pursuit, with limited utilization of such platforms for professional applications. Researchers present suggestions for further research and classroom application of the findings.

Keywords: Technology; social media; BSW program

1. Introduction

Perron, Taylor, Glass, and Margerum-Leys (2010) define information and communication technologies (ICTs) as “electronic tools used to convey, manipulate and store data by electronic means” (1). ICTs have grown exponentially in scope and function throughout the new millennium. When the Internet was introduced to the public, it was a technology with limited initial utility. Now, it is a daily part of life. ICTs now include sophisticated search engines, seemingly boundless stores of information, and Web 2.0 tools like social media platforms, wikis, blogs, and other user-generated content (Giffords, 2009). The way in which we access web-based ICTs has also changed considerably. While the desktop computer was once the primary gateway to the Internet, access is now possible through mobile devices like laptop computers, tablet computers, mobile phones, smart watches, and even futuristic devices like Google Glass.

The growth of ICTs has challenged higher education to keep up with the frenetic pace of technological innovation. Mobile education, for instance, is being declared by many as the future of education. There are over 3.2 billion mobile users worldwide, with another 1.6 billion personal computers still in use (Dunn, 2013). Higher education has recognized this shift, and scholars have begun to research the effects of these changes on education. Much of the focus of research in the area of technology-driven learning is based on the effectiveness of various technology tools for educational settings. There is steady growth in the amount of contributions to the scientific literature regarding ways of integrating technology into student learning. It implicitly reveals that educators are trying to “catch up” with digital natives, in an area where technology is changing at an incredible rate. There also appears to be a serious gap between faculty teaching technology skills for academic purposes, and these skills being applied to professional applications at social service agencies.

An example is students increasingly using e-readers and tablets to read textbooks and other course material (Johnson, Smith, Willis, Levine, & Haywood, 2011), but then not using these tools as extensively in the practice field (Whitaker, Torrico Meruvia, & Jones, 2010).

Social services may also be lagging behind when it comes to aspects of social media. Perron, Taylor, Glass and Margerum-Leys (2010) contend that social work research, education, and practice are all failing to devote adequate attention to teaching social workers modern approaches to using ICTs. Another study that surveyed nonprofit hiring managers found 79% stated they do not have agency-level policies about how and when to use social media (Joselyn & Panepento, 2010).

In social work education, specifically, there is a clear lack of research focusing on the link between classroom use ICTs and their application to practice and field settings. Faculty in higher education are beginning to integrate ICTs into the classroom, such as flipping classrooms, using Twitter in the classroom, or using video of clinical interviews to teach practice skills, but activities such as these do not necessarily translate into technology knowledge to be applied in the field. It remains at the level of technology consumption, not technology utilization by the practitioner. There exists a gap between what is learned in the classroom and what is actually needed to effectively practice social work that incorporates modern ICTs.

Educators are learning to tailor their educational approaches to their students and their perceived expertise as digital natives. However, the experience of the authors is that while millennial students have unprecedented, life-long practice with ICTs, they utilize the technology primarily for social and recreational purposes. Research on 18-24 year olds in the United Kingdom found the average number of log-ons into Facebook averaged 13.8 times per day, and 1 out of every four minutes spent on the smartphone is on Facebook (Lepi, 2013). The Pew Research Center reported 92% of teens go online daily and 24% say they are online “almost constantly” (Lenhard & Page, 2015, 2). Yet, young adults do not fully grasp social media’s potential for professional uses, particularly in social work. Social workers are not trained to realize how the virtual world impacts the lives of ‘real’ clients in field practice settings (Gonchar & Adams, 2000). Thus, the research questions posed for this study were exploratory: How are social work students currently utilizing ICTs? How are social work students utilizing ICTs in actual professional applications?

2. Literature Review

As reported by the Pew Research Center, 73% of all teenagers age 13-17 own or have access to a smart phone (up from 37% in 2012), 87% own or have access to a desktop or laptop computer, and 58% own or access a tablet computer (Lenhart & Page, 2015; Lenhart, 2012). The increased use of mobile devices has also proliferated on college campuses (Cheon, Lee, Crooks & Song, 2012). Eighty-eight percent of students in one survey reported they use their phone for social networking and surfing the web (Lepi, 2013). Another study found that 18-29 year olds access the Internet on a cell phone 55% of the time, or even a device such as an e-reader or gaming device 28% of the time (Lenhart, Purcell, Smith & Zickuhr, 2010). A 2006 study on short messaging services (SMS), or texting, showed 80% of students send a text message every day (Market, Sanchez, Weber & Tangney, 2006). The 2015 Pew Research illustrated that texting activity has continued to increase, with teens now reporting they send 30 text messages a day (Lenhart & Page, 2015).

In fact, some have reported that incoming generations of youth consider mobile phones “indispensable to their personal existence” (Richardson & Lenarcic, 2008, 141), and have constant exposure (Cobcroft, Towers, Smith, & Bruns, 2006). However, Liu, Han and Li (2010) suggest that the utilization of mobile services is not a necessary conclusion simply based on the ownership of mobile technology. While students may be comfortable with personal use of mobile technology, there may be reluctance to adopt it for educational or professional purposes (Park, 2011; Wang, Wu, & Wang, 2009), and students who are more confident in their use of mobile devices are more likely to utilize them for mobile learning (Cheon, Lee, Crooks & Song, 2012).

One factor that affects mobile learning is student “readiness”, such as comfort levels with technology or ability to be self-disciplined (McVay, 2000; Smith, Murphy & Mahoney, 2003; Wang et al., 2009; Warner, 1998). Students regularly engage in *informal learning* through everyday ICT activities, but may not be prepared for *formal learning*, which has an intentional design to learning in a structured educational environment (Gikas & Grant, 2013). Looi, Seow, Zhang, So, Chen and Wong (2010) suggest, however, that integration of mobile technology is designed to challenge this traditional dichotomy.

Despite high levels of student use of ICTs, less than half of educators interviewed in one study actually engaged in discussion with students about using ICTs for learning (Peters, 2007). Faculty and students may both be approaching the utilization of new tools and technological methods with precaution (Hemmi, Bayne, & Land, 2009), and some may even regard new technologies with suspicion (Roblyer, McDaniel, Webb, Herman & Witty, 2010). Therefore, being able to utilize a device does not necessarily translate into student learning outcomes, or achieving technological effectiveness for the student practitioner upon graduation. What is notably lacking in scholarly literature is information about students utilizing ICTs to locate information related to school, employment, or volunteer experiences.

In social work education, the most recent Educational Policy and Accreditation Standards (2008) of the Council on Social Work Education (CSWE) recognize the importance of responding to the ever-changing technological landscape in social work education. These standards call for social workers to “respond to contexts that shape practice,” specifically including “scientific and technological developments, and emerging societal trends” (CSWE, 2008, 6). The standards also state social workers must have the ability to “distinguish, appraise, and integrate multiple sources of knowledge” (CSWE, 2008, 4), which certainly applies to gathering information from Internet sources, social media, and other platforms. The limited research in this area for social work students is focused on ICT effectiveness. Zeman and Swanke (2008) found a collaborative WebCT module enhanced Master of Social Work (MSW) students’ skills. Sage, Quinn, and Fitch (2014) found that 66% of social work students checked their social media pages several times per day, and while at work, 51% used their work computers instead of personal devices to do so. The study also found that 73% of survey respondents did not believe they received adequate training in their agencies on the rules regarding social media use.

While the rapid development of ICTs has led researchers to begin to focus on the differences between mobile learning and other electronic learning (Park, 2011), this study aims to explore the utilization of *any* ICTs by social work students for an assignment that would mirror what a practitioner may experience in field social work. Social workers need to engage new technology in order to impact its influence on their organizations and clients (Sapey, 1997). Utilization of ICTs in social work practice may improve access to special populations, such as those living in rural communities and persons living with disabilities (Sfiligoj, 2009). Another potential access point for clients comes through social media. In one study, most nonprofits (74%) reported they used social networks to announce events and activities, and share other organization-focused information (Sharma, 2014). Practice-based learning is a critical element in social service professional education and essential for transferability into practice settings (Dearnley, Taylor, Laxton, Rinomhota & NkosanaNyawata, 2013). In an analysis of the extant literature, Giffords (2009, 414) and NASW (2011) outline ICT skills and uses by social work practitioners (Table 1).

Given the extensive way ICTs may be used in practice, the focus of this research was to explore what technologies students turned to, if any, to address a practice-focused assignment. The assignment asked students to gather information and referral sources for a family in need of services. The purpose was to uncover the context in which digital native social work students utilize ICTs for practice applications. Specifically, we isolated “locating information and resources” and “using social media” from the itemized list in Table 1 as the skills to be explored in this study. The researchers chose these particular skills as they were most related to a scenario a BSW-level generalist practice case manager may encounter in a service agency.

3. Method

A non-random convenience sample of 122 student participants at two small Midwestern liberal arts colleges, one rural, with accredited social work programs were used for this study. The sample included social work majors, and a control group of non-social work majors for comparison purposes, but there was no randomization into the groups. Some respondents may have been taking social work courses as a non-major, and two psychology courses were used as well to collect additional control group subjects. Approval for the survey study was approved by both human subject/IRB committees of the colleges.

Students were provided the following assignment in one of their social work courses, which is a generic scenario that may be encountered in practice.

“You are a social work case manager who does home visits to help families in need arrange resources. You begin working with a single mother with two school-age children. She identifies the following needs:

Financial assistance to pay for monthly expenses
Heating assistance to keep her gas on over the winter
She needs clothing for her children
She needs math tutoring for her daughter that the school cannot provide She needs counseling to help her cope with depression.

Note – This person lives a few blocks from the college you are attending. Instructions – Find resources that may be able to assist this family.”

The assignment was developed and utilized in past courses by one of the researchers, and fit well as the assignment for this study. The assignment was also chosen based on a prior study that found increased learner autonomy requires instructors to recognize effective device use when wanting to develop skills in evaluating and locating information (McFarlane, Triggs & Yee, 2009). The assignment was awarded course credit or extra credit by the faculty instructor for the class in which it was administered. Students were intentionally not provided instructions on how to complete the assignment. Thus, it was estimated there would be variance in student approaches to completing the assignment, whether through internet searches or calling around to agencies, as well as variance in the type of devices and emerging technologies used through computers, mobile phones, or social networking platforms. The lack of instructions and corresponding survey questions developed were designed to explore the variance in approaches to completing the assignment, including technology devices used.

The authors graded each assignment using a common rubric, with rankings from zero (“The student attempted the assignment, but failed to complete multiple aspects of the assignment as instructed”) to five (“The student located real resources that could realistically assist this family. The student provided an accurate evaluation of the efficacy of the identified resources. The student provided accurate and specific information about these resources. The work is complete and thorough enough to provide a sufficient level of assistance to the family in the scenario.”). To test for inter-rater reliability (IRR), the two faculty members shared five assignments from each respective college and graded them independently, for a total of 10 ratings. IRR was determined using a two-way mixed, consistency, average-measures Intraclass Correlation (ICC) on the 10 sample subjects to assess the degree that coders provided consistency in their ratings on the completed assignments across subjects (Halmgren, 2012). The resulting ICC was .881 ($p=.002$). The data indicates that the faculty assessors had a significant degree of agreement. The reliability analysis suggests that a minimal amount of measurement error was introduced by the independent coders in judging the quality of the information to assist the family by the students.

Student subjects in this research study were administered a survey questionnaire after the assignment had been collected. A meta-analysis of 164 studies on mobile learning found surveys were used as the primary research method (Wu, Wu, Chen, Kao, Lin & Huang, 2012); however, the same study found no studies in the social work discipline (Figure 4, 824). In contrast to the assignment for credit, the post-assignment survey was voluntary. Of the 122 students who completed the assignment, 108 returned the survey questionnaire completed for a total response rate of 88.5%, which may be influenced by the fact that the assignment was awarded as extra credit for some students. The survey questions were designed by the authors after reviewing other types of standardized questions on survey instruments used by research groups. The survey questions selected focused on device use, emerging technology utilization, and social network collaboration while attempting to complete the assignment. The instrument was not tested for validity or reliability beyond the face validity of social work faculty reviewing the instrument.

4. Findings and Discussion

4.1 Results of the Assignment

Over half of the student respondents were social work majors (57.4%, $N=62$) [Table 2]. The mean score on the assignment, rated between zero and five, was 4.02. The majority of students (69%, $N=75$) received a score of 4 or higher, indicating that most students were successfully able to locate services that could assist the family in the assignment. The mean score on the assignment among social work majors was 4.18, higher than the mean for students in the non-social work major control group (3.80).

4.2 Demographic Data

The majority of students were underclassmen: 39.8% of students in the sample were freshmen, 23.1% were sophomores, 15.7% were juniors, and 21.3% were seniors [Table 2].

Just over half of the students (53.7%) reported that the highest level of education achieved by at least one of their parents is a 4-year college degree or higher. Ownership of handheld devices appears to be the norm among respondents in this study. An overwhelming majority of respondents (90.7%) reported that they own a handheld device that is capable of accessing the internet. Compared to the Pew Research Internet Project (Lenhart, 2012), who reported 23% of teenagers owns a smartphone, our college-age sample had a much higher percentage of ownership among college-age students.

The only significant difference found in the assignment score across independent variables was a student's own education level. There were significant differences in a post hoc test when comparing Freshmen ($M=3.67$ rubric score) to both Juniors ($M=4.59$) and Seniors ($M=4.35$). These results show that students with more education and experience within the programs had higher scores on an assignment assisting clients with referral resources, as would be expected.

Social work majors reported a higher amount of time using the internet to locate information compared to the control group for school ($M=12$ hours; control group $M=8.6$), while work ($M=1.7$ hours; control group $M=1.4$) and recreational utilization ($M=9.6$ hours; control group $M=10.5$) were similar [Table 3].

Social work students reported that they spend 11.4 hours per week on social media for recreation. Over 8 hours more per week than the other two categories. Compared to the control group, social work majors reported a higher amount of time using social media for recreation ($M=11.4$ hours; control group $M=9.2$), while school ($M=2.9$ hours; control group $M=2.7$) and work utilization ($M=0.2$ hours; control group $M=1.1$) were similar.

When controlling for parent level of education, social work students who have at least one parent with a 4-year degree reported double the amount of hours spent accessing social media *for recreation* (14.6 hours/week) compared to students whose parents have no more than a high school education (7.0 hours/week). The same was demonstrated in the amount of hours spent accessing the internet for recreational purposes (12.4 hours/week versus 6.1 hours/week).

4.3 Technology Use for Personal or Social Reasons

There are several technology tools in use by the majority of social work majors several times per day [Table 4]. Over 90% of students reported they text several times per day, and 86.9% stated they check or send emails with the same frequency. Compared to the Market, Sanchez, Weber and Tangney study (2006), approximately eight years prior to the current study, this research found 15% more students text daily.

Close to one-third (32.8%) of social work students reported playing online or mobile-based games at least daily, while the same percentage stated they never play online games. Specifically for Facebook, 85.2% of social work students reported daily usage, while 67.2% checked it several times per day. A total of 95% checked their Facebook accounts at least weekly. This is comparable to the data reported by Lepi (2013), where 88% of students reported using their phone for social networking and surfing the web. The Pew Internet Research Project found 84% of 18-29 year olds used Facebook (Duggan & Smith, 2013). Thus, our data on social work students is comparable for daily usage, yet higher for weekly usage of Facebook.

Other social networking sites than Facebook, however, do not appear to be as widely used as Facebook. Two-thirds (65.6%) of majors reported checking sites like Twitter, Instagram, and others at least daily, and 72.2% at least weekly, while 25% of social work majors reported they do not use these platforms at all. In the control group, 78.3% of students reported at least daily usage. The Pew Internet Research Project found 31% and 37% of 18-29 year olds used Twitter and Instagram respectively (Duggan & Smith, 2013). Thus, our data on social work students is approximately 30-40 percent higher for weekly usage of Twitter and Instagram. Skype and other voice over internet protocol platforms are used less with only 19.3% of social work majors stating they use such services weekly. Just over one-third (36.1%) of the sample access video-sharing sites several times per day, and over one half (57.4%) at least once per day. Respondents reported accessing the internet with more frequency using a PC or laptop versus a handheld device. A total of 96.7% of students reported using a PC or laptop for personal or social reasons at least once per day, while only 83% stated they do so at least daily on handheld devices. The control group had minimal differences to the social work majors.

There was no particular pattern of distribution in students' reports of their use of ICT tools to collaborate with other students. The majority of students (65.5%) reported collaborating only weekly or less, and 9.8% stated they do not collaborate at all with ICT tools.

When asked how often they use technology platforms for practicum or current social work practice, 34.4% of social work majors reported daily use of these platforms for such purposes and the majority of students (57.4%) reported they use them weekly or less. When broken down by year in college, given that many students do not enter practicum until senior year, 38.6% of both freshman and sophomores reported using technology at least daily for social work practice or practicum, while 84.5% of juniors and seniors marked they use it daily. Over one-third of freshmen or sophomores utilizing ICTs could be due to underclassmen being in internships or voluntary placements prior to practicum placements, as most do not enter practicum until senior year.

4.4 Technology Utilization for the Practice Scenario

The primary task for students who took part in this study was to complete a practice oriented assignment, which was meant to mimic a generic scenario they might encounter in field social work. The second half of the survey asked students to report on several aspects of how they completed this assignment. Once again, the results outlined below are specific to the respondents who are social work majors, with some analysis of comparative data with the control group.

4.4.1 Technology use: Students reported that they did use technology to complete the assignment, but there was minimal variety in the platforms students chose. For example, data indicate that 77.4% of social work students used *only* a personal computer/laptop when searching the internet for the assignment, while only one student (1.6%) used *only* a smartphone/tablet, and 17.7% used a combination of both a computer/laptop and a smartphone/tablet. Two students (3.2%) reported using a combination of tools, including surfing the internet using a game console. The 19.3% of social work students who used a smartphone at all for this assignment is comparatively well below the 67% of students surveyed in the Educause Center study (Gikas & Grant, 2013) who expressed the belief that mobile devices are important to their academic success and utilize their mobile devices for academic purposes.

An internet search was the primary method that students chose to find information to help the family in the assignment. The majority of students (58.3%) specifically stated that a Google search was their initial source for the assignment, and this expands to 76.8% of students either utilizing Google initially or choosing the Google search engine as their second location when searching for information. Common student cited examples of what they placed in the search engine include:

- “financial assistance for single mothers in [city]”;
- “heating assistance in [county]”;
- “family resources near [city].”

4.4.2 Social media and collaboration. Social media was not a popular platform among social work students when completing this assignment. Only one social work student (1.6%) reported posting a question on social media to attempt to locate social service information for the assignment with network contacts. Furthermore, 8.1% (N=6) reported that they shared information with other students (social work or non-majors) who posted requests on social media regarding the assignment.

4.4.3 Distraction. A finding that was particularly striking was the sheer commonality of distraction. Of all study participants, 77.6% stated they were distracted at some point while working on this assignment by a text, Facebook, a tweet, or some other social networking site that was not part of the assignment. Social work majors admitted to being more distracted (80.6%) than control group participants (71.7%).

4.4.4 Student self-evaluation. In the end, students were abundantly confident in their results. In total, 61 of the 62 social work students (98.4%) who completed the assignment reported that they helped the family in the scenario. This was despite the fact that 24.6% of the social work students received a score of three or less on the assignment, which would indicate that these students did not help the family based on the assessment rubric used by the faculty raters. Interestingly, the only student who stated they did not help the family scored a 4/5.

5. Conclusions and Implications

The data reveal important information about how social work students currently utilize ICTs in realistic social work practice applications. The data show that students display a level of comfort in using an internet search engine (in this case Google, primarily) to locate information for a professional practice application. When attempting to identify services for clients on the given assignment, 76.8% of students utilized Google initially or chose the Google search engine as their second location to search. As faculty, we hypothesized students would do this for convenience.

Connaway, Dickey, and Radford (2011) found that convenience was a significant, overarching theme in their analysis of two, multi-year studies on how students and professionals choose sources within library databases. However, we questioned whether utilizing the most convenient pathway would allow students to find reliable, sufficient, high-quality information to adequately assist the family in the case scenario. In this case, the data suggest that the majority of students (69%) were successful in finding resources for the family in the scenario. Over two-thirds of social work students finding sufficient resources for a family in need primarily using Google may be due to: Google's search engine optimization capability; students having learned Google-centric search skills by using appropriate search terms through high school, college, or other online research learning; or having prior practice and skills in gathering social service information and referral resources.

However, nearly a quarter of the social work students in the study (24.6%) received a rubric score of three or less, signifying they did not successfully find the resources to help in the scenario. But the students clearly thought they did, given that all but one of the social work students replied that he or she successfully helped the family. This finding is revealing because it may point to the possibility that conveniently acquiring information from internet search engines, and not gathering more information from various other sources, might confer an over-confidence in one's ability to find adequate information and thus provide effective services for clients. It relates to the broader conversation in higher education surrounding information literacy skills. In one large-scale, national study, Head and Eisenberg (2010) found that students rely heavily on a research strategy "driven by efficiency and predictability" (p. 35) while struggling to adequately evaluate the efficacy of information. Information literacy has unique implications to social work practice, where erroneous or incomplete information can detrimentally impact clients' lives.

Head and Eisenberg (2010) recommend instructors emphasize the research process, integrate research rubrics into assignment guidelines, and hold students accountable for the information they produce through research. Social work faculty, in collaboration with college librarians, could incorporate these recommendations by developing resources and instruction that teach students what is appropriate information for clients seeking services, how to effectively seek that information using various technology sources, and using key terms for optimal returns in search engines.

Given the evidence that students gravitate towards convenient approaches, the authors suspected students would utilize social media more to obtain information from a network of available sources ("friends," contacts, etc.). The data suggest that such use was generally minimal. Fewer than 10% of respondents reported either posting to social media or responding to the posts of peers. Since the cross-sectional survey was conducted prior to students receiving a grade, they may have been afraid to report they utilized social media tools to collaborate on a course assignment, and therefore underreported such use. Overall, the data concerning social media is consistent with the authors' initial perception of how social work students are using social media platforms: that students are, in fact, using social media more for personal and recreational use than professional uses. This could indicate that students see "collaboration" as something completely different than "communicating" or "connecting" with others online. Though students report they are using social media platforms several times per day for recreational purposes, students are apparently not finding such commonly-used platforms professionally applicable.

It is also possible that social work faculty and social work organizations are not providing students with opportunities to use social media in professional settings. Though this study found that most junior and senior-level social work majors (84.5%) report they use technology platforms for practicum or current social work practice, significantly fewer freshman and sophomores (38.6%) reported such use. While this finding can be contributed to the differences in work and practicum opportunities at different education levels, it is still notable that students are not reporting exposure to professional uses of social media until later in their academic development.

The literature illustrates that social media is now a fundamental part of life in the modern world (Lenhart and Page, 2015; Duggan & Smith, 2013; Lenhart et al, 2010; Pew Internet and American Life Project, 2013). Given that clients seeking social work services reside within this environment, there is a need for faculty to teach the ICT skills that will empower social workers to serve their clients most effectively. Sage, Quinn and Fitch (2014) recommended that both colleges and agencies need to develop training on social media use, in particular. The findings of this study support that assertion. As social work is an applied profession with roots in the practical application of knowledge and skills in the field, it is essential to build transferrable social media skills into social work courses.

Robbins and Singer (2014) point out several ways in which teaching social media use connects directly to real-world social work practice, including public advocacy skills, collaborative learning with real-time information, and developing a professional use of self.

An interesting finding comparing recreational versus professional use of technology is the finding that 81% of social work students were distracted by social media while working on the assignment. This finding suggests the recreational use of these platforms routinely infringes on time meant for school work. Given that the behaviors students learn in school settings follow them into the professional milieu, it is not unrealistic to anticipate that students will face the same recreational distractions as they enter the workforce.

One final item explored in this study was students' general use of computing devices, especially mobile devices. The data from the study indicates that the PC/laptop is still the preferred device for many students despite high rates of handheld device ownership. Data showed that 77.4% of students used only a personal computer when searching the internet. This may indicate that students do not perceive their handheld device as a primary tool for gathering information for school/professional purposes. The reasons for this could be many, and might include comfort level, ease of use, computing speed, or simple habit. However, given that over 90% of students in the study reported owning a handheld device with internet access, and literature notes that there is a general belief among students that handheld devices are important to their academic success (Gikas & Grant, 2013), it is interesting that students in this study rarely turned to mobile computing to complete the practice scenario assignment.

Our research concurs with Park (2011) and Wang, Wu, and Wang's (2009) findings that while students may be comfortable with personal use of mobile technology, there may be reluctance to adopt it for educational or professional purposes. It appears that the ability to utilize a device does not necessarily translate into student learning outcomes, or the achievement of technological effectiveness for the student practitioner upon graduation.

Cobcroft, Towers, Smith, and Bruns (2006) point out that changes in student learning styles, the depreciating cost of mobile technologies, pressures on higher learning institutions, and the systemic shifts toward widespread use of mobile technology all create a landscape that requires professional knowledge of mobile technology. Given this changing environment, the authors posit that teaching professional uses for mobile devices and technology platforms represents a significant, untapped pathway for social work education.

One limitation of the current study is that due to the convenience sample, the findings cannot be generalized to the greater population of social work students. The findings do provide the basis for further testing and evaluation. The survey questionnaire should have included inquiry into how much time was spent on particular platforms, such as online gaming or Facebook. While the study included a categorical variable for year in college, it may have been improved by the additional variable of age of student, since there may be variance in usage and ability with technology across age. Furthermore, many of the variables could be further quantified for evaluation purposes.

Findings from earlier studies demonstrate the benefits of intentional integration of ICTs into course content and teaching methodology (Archambault, Wetzel, Foulger, & Williams, 2010; Gikas & Grant, 2013). Professors, themselves, are challenged by the need to work collaboratively with information technology personnel to deliver ICT education (Peters, 2007), thus relying more on traditional instruction than the active seeking of information. Due to the vastly changing landscape of technology use among the general public, including the individuals and groups with whom social workers will interact in the field, social work education programs should consider training students in utilizing ICTs for practice. Social work educators have an opportunity and an obligation to send social workers into practice with skills and knowledge necessary to meet these modern demands. The authors plan to collaborate further on evaluating social media and ICT use for social work professional applications.

Tables

Table 1: Identified Technology Skills and Uses by Social Workers

Technology	Source
<ul style="list-style-type: none"> • Locating Information and Resources • Maximizing your safety • Recognizing and addressing client concerns • Making your services accessible • Conveying your message • Using – and knowing when not to use – social media • Maintaining an eco-friendly practice 	NASW. (2011). The tech-savvy social worker: Prepared for the challenges of 21 st century practice. [Newsletter]. <i>Leadership Ladders: Steps to a Great Career in Social Work</i> . Washington, DC: NASW.
<ul style="list-style-type: none"> • Use the internet to access research and collect data • To provide online counseling, e-therapy • To treat addictions • Offer social support • Cyberactivism • Raise funds online • Generate reports, track personnel, automate billing, forecast budgets, and assist service planning and delivery • Online continuing education and certification courses 	Giffords, E. (2009). The internet and social work: The next generation. <i>Families in Society</i> , 90(4): 413-418.

Table 2: Basic Student Demographic Profile

Item	N=	Percent (%)	Mean Assignment Score
<i>Major</i>			
Social Work	62	57.4	4.18
Control group (non-Social Work major)	46	42.6	3.80
<i>Year in School</i>			
Freshmen	43	39.8	3.67
Sophomore	25	23.1	3.92
Junior	17	15.7	4.59
Senior	23	21.3	4.35
<i>Parent Level of Education</i>			
High School degree only	31	28.7	4.13
2-yr college degree	19	17.6	3.89
4-yr degree	58	53.7	4.00
<i>Ownership of Handheld Device</i>			
Yes	98	90.7	4.05
No	10	9.3	3.70

Table 3: Social Work students' Mean Usage of Internet and Social Media (in hours per week)

Item	Social Work Students	Control Group
<i>Locating Information on the Internet</i>		
School	12.0	8.6
Work	1.7	1.4
Recreation	9.6	10.5
<i>Social Media Use</i>		
School	2.9	2.7
Work	0.2	1.1
Recreation	11.4	9.2

Table 4: Social Work Student Frequencies (%) for Personal or Social Use of Various Technology Platforms

	Never	Monthly	Weekly	Once per day	Several times per day
Text message	3.3	1.7	0	1.7	93.3
Play online or mobile based games (Ruzzle, Words with Friends, Candy Crush, etc)	32.8	18.0	16.4	13.1	19.7
Check or send email	1.6	0.0	1.6	9.8	86.9
Check Facebook or post to it	3.3	1.6	9.8	18.0	67.2
Check Twitter, Instagram, or other social networking sites	26.2	1.6	6.6	16.4	49.2
Use Skype or other Voice over Internet Protocol	34.4	45.9	16.4	0.0	3.3
Access the Internet using a PC or laptop	0.0	0.0	3.3	15.0	81.7
Access the Internet from your handheld device	6.7	3.3	5.0	10.0	75.0
Access video-sharing sites (YouTube, hulu, etc)	33.3	6.6	32.8	21.3	36.1
Collaborate with other students using ICT tools	9.8	16.4	39.3	11.5	23.0
How often do you use any of the above (a-j) for practicum or current social work practice?	8.2	16.4	41.0	16.4	18.0

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