

## Are Social Work College Students Entering the Workforce with Enough Technology Skills to Meet the Needs of Agencies?

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### Research Article

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#### ABSTRACT

This research study used a primarily descriptive approach to assess the critical technology skills of social work students at a large southern United States university that were placed within an internship during their final semester. A cross-sectional survey was sent to students and field supervisors regarding technology usage in the field. It was found that supervisors agreed that students are technologically proficient coming into placements and that the most useful skills included how to use documentation software, smartphones, teleconferencing, and the Internet in general. There were differences in student and instructor responses regarding where students receive technology training. This research study was conducted to understand the technology-related needs of agencies and if incoming social workers are learning those skills at school or somewhere else.

### INTRODUCTION

The main goal of social work education is to prepare students for the challenges of social work practice. Modern practice methods can include administering online counseling, the usage of digital records, cyber-therapy, and using other emerging technologies. The current climate of public services is migrating public benefits online<sup>[1]</sup>, and technology in general has a growing role among the skills a social worker must possess<sup>[2]</sup>. Schoech, in an editorial piece for the Journal of Technology in Human Services, speculated that possible future special issue topics include "biometric devices and wearable computing, cloud computing, robotics, elderly IT applications, serious human service IT games, use of social media such as Facebook and Twitter in practice, and smartphone apps to support human service practice"<sup>[3]</sup>.

These burgeoning technologies are expected to have a great potential impact on the field, especially with issues such as rural social work, advocacy campaigns, distance services for clients, and the continuing education of social workers. It is vital that social workers in current practice settings be proficient in word processing, computer documentation, and various electronic communications. It is not unreasonable to expect technology to play an even larger role in the coming decades.

Social work practice and social work education are separate, yet highly related to one another. To get a full understanding of how technology is used in social work programs, the field of social work practice must be discussed as well. Youn identified the need for social work students to be proficient in at least the basic technologies if they are to be useful to their future employers<sup>[4]</sup>. Quinn and Fitch stated that all human service workers will, at some point, engage in either recording data, generating information, producing knowledge, or communicating their knowledge to others; all of which can be facilitated through technology<sup>[5]</sup>. This need for technological proficiency in practice creates the need for related education in social work programs. If new social workers are expected to be proficient in the use of technology, then the responsibility for this preparation falls on someone. Potential responsible parties include social service employers, national associations, faculty, or the students themselves.

The question of who is teaching these technology skills to students is important if the profession wants to survive in the modern era. The social work programs of the United Kingdom are leading the way in this realm and have pushed for more technology content within their curriculum (Quality Assurance Agency for Higher Education)<sup>[6]</sup>. According to this agency, social work students in the UK must demonstrate a critical understanding of information and communication technologies on how they impact society and an awareness of the digital divide. These quality assurance bookmarks are very similar to the standards the Council on Social Work Education (CSWE) sets for social work programs in America. The difference with regard to technology, however, is that the UK version offers specific suggestions for instructors.

The first exposure to real clients often starts with the field practicum during a social work students' final year of school. This is one of the first opportunities to test a future practitioner's skills with regard to technological proficiency. The question of whether or not new social workers are ready to apply these skills when they enter in the field is relevant to the future of the profession. It is imperative to explain what, if any, skills Bachelors of Social Work (BSW) students and Masters of Social Work (MSW) students are lacking within their field placements and explore what opportunities social work programs, organizations, and agencies are missing. Because technology pushes the bounds of how we work, students coming into practice having already utilized technology for innovative purposes will be better able to apply new technologies to age-old social justice issues.

Youn's qualitative research study compared the technology content in an MSW program with the technology needs of local human service agencies. The results indicated that the technology content of that MSW program was sufficient and that the student interns were adequately prepared for the technology demands of the local agencies. That study was a snapshot of a single MSW program in the United States and it was found that the agencies surveyed were not using technology to its fullest capacity. Further research is needed on this topic and in line with Youn's work, this current research study answered questions pertaining to the technology component of the social work curriculum and students' knowledge on how to apply technology within their field placements. Descriptive data were collected from BSW students, MSW students, and field supervisors. The following research questions were addressed:

What are the technology needs of local agencies?

Are these needs being fulfilled by the social work students placed there?

Where do the students learn critical technology skills?

What are the opportunities for utilizing technology skills within these placements?

This research study is exploratory in nature and also indicates suggestions for social work programs with regard to adding technology components to social work syllabi.

### Literature Review

This literature review identified research on technology use within social work practice, education, and the field practicum.

### Technology within social work practice

Many researchers have stressed the value of innovative practices within social work. The area of Internet services is growing as well. The first known online, fee-based mental health service was established by Sommers in 1995. If clients seeking this kind of service have Internet access, the potential to help people through such online social networking interventions is tremendous. Videka and Goldstein reported on a program that integrated text messaging into an adolescent mental health program and communicated the importance of social media to contemporary clinical social work practice<sup>[7]</sup>.

In terms of technology and broader implications within practice, Perron, Taylor, Glass, and Margerum-Leys reported on the effect that communication technologies have on the ethical standards of social work<sup>[8]</sup>. They wrote that technologies such as social networking, electronic messages, and the Internet in general all influence certain ethical principles of social workers. These principles include recognizing the central importance of human relationships, protecting the confidentiality of clients, continuity of services, seeking the advice of colleagues, and advocacy. Reamer cited the potential ethical dilemmas surrounding encrypting client information on databases, receiving accurate informed consent with cyber-therapy, or having dual relationships with clients over Facebook<sup>[9]</sup>. Reamer concludes that future social workers will have to walk a "fine line between valuable innovation that has therapeutic benefits and harmful, possibly exploitative treatment of vulnerable clients".

It is necessary for social workers to be cognizant of the lack of access to important online services, or the "digital divide", that exists for some people. It has been shown that computer ownership and access is less likely among people who are older, less educated; earn lower wages, or who belong to a minority group (U.S. Census Bureau, 2014)<sup>[10]</sup>. Although smartphone Internet access is more evenly distributed among demographics, the divide of who can easily get online or work on a computer is still present. This is significant because more job applications are offered online, more skill acquisitions take place online, and other important resources are migrating online all the time. Social workers advocate on behalf of these marginalized populations and the addition of a digital divide adds to the potential of economic and social isolation. These are issues very relevant to social work<sup>[11]</sup>.

The most prevalent technology used in social work practice today can be classified as information and communication technologies. This very general term includes all electronic delivery systems such as the Internet, radios, televisions, and computer-aided devices that can connect to Wi-Fi or other frequency. Experts agree that this is the largest area for growth within social work. Practical applications include Internet health discussion groups for healthcare management online mental health services smartphone applications and technology-enhanced simulations for worker education<sup>[12-15]</sup>. Although the essence of social work practice has historically involved face-to-face interactions, clinicians and researchers are moving towards communication with clients from a distance<sup>[16]</sup>. Even though social presence is embodied by physicality, it is no longer contained to the purely physical<sup>[17]</sup>.

It has been reported that when compared to fields such as engineering or business, social work uses less technology. De-

spite this disparity, technologies such as mobile devices or online simulations are increasingly becoming more important within practice. The need for technological proficiencies in practice creates the need for related education in social work programs because "merging technology and practice is important in social work education since most graduates will work in computer-supported environments".

### Technology Usage within Social Work Education

The social worker educational process has been altered in recent years and technology contributed to these changes<sup>[18]</sup>. Modern devices have contributed to the growth of technology based learning. Prevalent technologies mentioned in the social work education literature include course management systems (e.g. Blackboard, Moodle, and Web CT), email, smartphones, tablets, DVD/CD players, distance learning platforms, and the Internet in general. In an educational context, these technologies are used to help students and instructors facilitate the teaching and learning process. Some programs are teaching technology directly to social work students. UT Arlington had the class: Advanced Use of Information Technology in the Human Services and University of Minnesota still offers a technology and communication in social work class (University of Minnesota School of Social Work)<sup>[19]</sup>.

Distance education is by far the most widely studied aspect of technology in social work education<sup>[20]</sup>. Youn remarked on the abundance of distance education studies within the technology-focused social work literature. One definition of distance education is a separation of the instructor and student in time and/or place<sup>[21]</sup>. As a basis for peer collaboration, social work students have used distance technologies like wikis or course management systems to provide an arena for multiple collaborators to work on the same project across time<sup>[22]</sup>. Other examples include online course elements and/or video conferencing. The benefits of teaching online are becoming evident to programs as they build more online learning environments<sup>[23]</sup>. Higher education in general has moved more curricula online and in one study that measured student learning effectiveness online, Fillion, Limayem, Laferriere, and Manth found that there was not a significant difference in a student's increase in critical thinking skills, analysis of issues, or understanding of basic concepts in online courses when compared to the in-class counterpart<sup>[24]</sup>.

The general idea of teaching clinical skills outside of the traditional classroom is a complicated issue<sup>[25]</sup>. Faculty within social work departments sometimes report feeling apprehensive about using certain technologies to teach courses especially practice-based courses<sup>[26, 27]</sup>. There exists a hesitation for technology-based approaches toward areas that traditionally depend on face-to-face interaction<sup>[28]</sup>. The perceived limitations of technology may explain why, historically, faculty within social work programs are not overwhelmingly adopting teaching innovations and also explain why some faculty agree that the technology content of social work curriculum does not need to be enhanced<sup>[29]</sup>.

Nonetheless, social work educators are pushing the boundaries of educational technology. There are numerous studies on audience response systems, social media, and virtual learning environments<sup>[30-33]</sup>. Some educators are "flipping" the classroom, or viewing online lectures before class and dedicating face-to-face time to engaging students with collaborative case studies. Overall, this hybrid method of instruction seems to work best<sup>[34]</sup>.

### Intersection of Technology and Social Work Field Practicum

The literature pertaining to field instruction and technology includes much on virtual contact between students, field programs, and field supervisors. Recent research has focused on virtual elements within the field practicum. "With the emergence of new innovations such as tablet technology and smartphones, along with easy-to-use applications such as Skype and Face Time, virtual supervision of social work field students is even closer to becoming a reality". With field visits using a higher overall percentage of a program's travel budget virtual supervision is receiving more attention<sup>[35]</sup>. Colvin and Bullock reported that "it is of critical importance for field educators to embrace a mind-set of acceptance regarding technology-infused field education"<sup>[36]</sup>.

It has been suggested that field practicum pedagogy could focus more on technology-mediated exchanges between school personnel and field supervisors. An online syllabi search indicated that current field practicum requirements mention technology sparingly, as seen in a field education class at Baylor University that urges students to: "continuously discover, appraise, and attend to technological developments"<sup>[37]</sup>.

Although it is at a large cost, virtual simulations of home visits are being developed in spaces such as Second Life in order to jump start students' engagement and assessment skills before they practice the generalist model in face to face situations.

## METHODS

These methods were designed to make the research replicable and this research was approved by the Institutional Review Board (STUDY00001800). The data in this research study came from a cross-sectional survey sent online and concerns social work student and supervisor technology usage within field placements.

### Sample

A convenience sample was obtained of BSW and MSW students currently in their field practicum as well as field supervisors working or having previously worked with BSW or MSW students in a practicum setting. The population of the research study in question is representative of a BSW and MSW cohort and field supervisors at a large public university in the South (N= 614) and

approximately 25% of them were sampled. Email correspondence was sent out to a field education listserv. Some of the representative agencies in which these respondents worked included county family and children services, hospitals, K-12 schools, shelters for women or homeless, religious-based programs, and university departments.

**Instrument**

In line with Youn’s work and Quinn and Fitch’s research on field agency expectations regarding new social worker technology proficiency, an online survey was constructed for the purposes of this research study. An expert panel of professors evaluated the instrument for content and face validity. Items measured demographic information, technology usage, attitudes on technology, the readiness of social work student interns to use agency technology, and implications for future social workers [38]. Survey items included Likert-type scales and open-ended questions. The hosting site of the survey was SurveyGizmo.com, a site used for its smartphone survey compatibility. Although online surveys have been associated with lower response rates (Fan & Yan, 2010), this survey technology is appropriate for the research study [39]. Internet data collection procedure on a similar topic was analogous as well.

**Data Collection**

Survey links were emailed out to a listserv of students and supervisors. The average completion time for student surveys was four minutes; for supervisors it was nine minutes. A small percentage (15%) of students completed the survey on their smartphone as opposed to 1% of field supervisors. All surveys were submitted between April 14, 2015 and May 21, 2015. The data were confidential as the IP addresses of people surveyed was collected as a byproduct of Survey Gizmo’s protocol.

**Data Analysis**

Data were exported from the survey website into a spreadsheet. Certain items were uploaded and analyzed using both the Statistical Package for Social Sciences (SPSS) and R. The descriptive data and corresponding statistics and tables were reported. A two group comparison of student responses and supervisor responses was conducted for certain variables. A multiple linear model was attempted. The open-ended questions were analyzed and the resulting themes and statements were reported.

**Limitations**

The sampling method was non-probabilistic and may have attracted a technology-inclined sample due to the nature of the online-only survey [40]. The sample is non-generalizable; it only includes one social work department and so it is understood that the results cannot be projected beyond this sample. It may be considered a pilot research study.

**RESULTS**

The response rate for field supervisors and students was approximately 25% for either group (n = 95 instructors, n= 56 students). The descriptive themes identified in the survey include the most used and important technologies in the field, how important technology is to doing a good job, potential opportunities, how prepared students are coming into placements, and thoughts on where the primary responsibility of training new social workers lies with regard to teaching technology skills.

The technologies field supervisors identified as most used within their work include email (100% of respondents), the Internet (99%), documentation (79%), texting (77%), smartphone (69%), online education modules (67%, and teleconferencing and Facebook being used slightly less than 50% by all field supervisors. The data on students was similar although all types of technology were used less by students on average. Of note, field supervisors used teleconferencing 30% more than students, texting 22% more than students, and social media sites (YouTube, Facebook, & Twitter) 10%-20% more than students within their job. Table 1 below displays this data.

**Table 1.**Technology Used by Supervisors and Students at Work.

Type of Technology Used	Field Supervisors N=95	Students N=48
Email	100%	85.7%
The Internet	99.0%	92.9%
Documentation Software	79.0%	58.9%
Texting	76.8%	55.4%
Smartphone (iPhone, Android, etc.)	69.5%	60.7%
Online education modules	67.4%	41.1%
Teleconference (Skype, Google Hangout, etc.)	49.5%	19.6%
Facebook	46.3%	37.5%
Digital or still camera	39.0%	14.3%
Tablet (iPad, Galaxy, Surface, etc.)	35.8%	25.0%
YouTube	28.4%	7.1%
Twitter	25.3%	12.5%
Digital video camera	17.9%	8.9%

Podcasts	13.7%	5.4%
Audience response systems (Clickers, Socrative, etc.)	13.7%	1.8%
Virtual simulations (Second Life, VR headsets, etc.)	2.1%	0%

The majority of field supervisors agreed (50%) or strongly agreed (25%) that knowledge about technology was important to doing their job. Over 80% agreed that the social work students they supervise come into the placement with competent technology skills. Nearly 95% of instructors agreed that technology makes their job easier. 63% reported that there are more opportunities for technology usage within their agency. Some of the opportunities listed included tablet use, social media, and better website management.

Given that there was a need to compare the means of students and supervisors a two sample t-test was utilized. This test is also helpful in analyzing data gained from a small sample size. The distribution of the Likert-type question responses concerning how much knowledge about technology agencies require was a part of the t-test. From this test, it was concluded that these two variables were significantly different. This means that field supervisors agreed more often that knowing about technology is required to do a good job but students at similar agencies were more neutral in this regard.

A two sample t-test was used to establish equivalence between the mean scores for the question concerning student competency with technology when they first are placed at an agency. There was no significant difference found between the supervisors

( $M=3.97$ ,  $SD=0.81$ ) and students ( $M=4.20$ ,  $SD=0.67$ ),  $t(149)=-1.948$ ,  $p=0.0535$ . This means that both students and supervisors agree that students are entering field placements with enough technology skills.

Field supervisors believed their social work students learn to use technology on the job (40% strongly agreed) and on their own (22% strongly agreed). Similarly, students believed they learned these skills on the job (38% strongly agreed) and on their own (33% strongly agreed). There were differences with regard to student learning in the classroom, however. As shown in Table 2.

**Table 2.** Likert-type Scale Location of Student Technology Learning Items.

Social work students learn to use the technology required at an agency:	Field Supervisors (n=95)			Students (n= 56)		
	N	M	SD	N	M	SD
On their own	92	3.85	0.97	56	4.05	0.98
Classes in school	89	3.19	0.98	56	2.43	1.23
On the job	94	4.28	0.72	56	4.25	0.79

**Note.** 1=Strongly Disagree; 2=Disagree; 3=Neutral; 4=Agree; 5=Strongly Agree

A two sample t-test was used again, this time on belief about whether or not technology skills are taught in classes. There was a significant difference found between the supervisors ( $M=3.19$ ,  $SD=0.98$ ) and students ( $M=2.43$ ,  $SD1.23$ ),  $t(144)=3.92$ ,  $p=0.001$ . These results indicate that students are less likely to believe they learn appropriate technology skills in class as compared to supervisors. Supervisors agreed (38%) or strongly agreed (26%) that there are more opportunities to use technology within their agency while students agreed (35%) or were neutral (42%) on the same question.

With regard to where the opportunities were for promoting more technology, both students and supervisors agreed that social workers themselves had the most responsibility and those social work associations like NASW or CSWE had the least responsibility. An attempt was made to fit a multiple linear model for each variable but no relevant significance was shown. There were no gender or age effects.

When asked about technology opportunities within social work agencies on an open-ended question, both students and supervisors mentioned tablets, smartphones, and texting specifically as having an important future within their agency. One supervisor wrote that “allowing our text line to be accessed via internet” was imperative and a student said they were “experimenting with different technology opportunities to accommodate our growing text-line”, including using messaging apps so that multiple social workers could communicate over the same line. This student also said that their agency had not yet found a solution to this problem.

Documentation software was mentioned a great deal by students and supervisors as one of the most important technologies used. One student said that their documentation database was crucial but that the “one we currently have is outdated and unsupported”. Another student mentioned one day using computer software to automatically stamp documents at a click of a button because their current system involved physically stamping hundreds of pages manually. On the student end, documentation software was mentioned the most as the technological skill they lacked coming into their placement.

## DISCUSSION

The most important conclusion that can be drawn from this research study is that field supervisors and social work students themselves in this sample both agreed that students coming into placements are competent in using technology. However, the amount of technological opportunities mentioned in the open response data denotes a lack of potential technology that agencies could be using.

With regard to the question on where students are learning to use technology, students were more likely to report that they learn it on their own ( $M=4.05$ ) while instructors believed students learned it in class more ( $M=3.19$ ). Students also had a lower average agreement compared to supervisors with the question pertaining to colleges or universities being responsible for promoting technological opportunities within the field. These results might signal a supervisor disconnect with social work programs. This separation of beliefs demonstrates that students are less inclined to turn to their social work department for technology skills. Although these skills were measured as adequate within this limited sample frame, the future environment of social work will certainly require more skills. It is a dangerous belief to think that social workers can be as effective as possible while learning these innovative skills on their own.

With mobile technology and social networking changing client interactions and relationships with such abundance, social work programs need to look at their curriculum. Sending out student interns with untested skills in this area leads to missed opportunities and perhaps compromised competitiveness compared to schools that are including innovative coursework<sup>[41]</sup>. As one field supervisor put it, “we are unlikely to hire a social worker who is not proficient with using a computer”.

The themes identified in the survey items echo Youn’s work on a similar topic. There is a need for more establishments of best practices among new technologies in the field. If more social workers and faculty can collaborate and focus on technology content within social work programs, then this awareness can “push the issue” and establish a strong base with regard to innovative skills for graduating students.

Future studies on this topic should include a more generalizable sample and updated technology as it is tested in the field. As social work enters the second quarter of this century, there is a continued urge to build in more technology components within the curricula of social work programs<sup>[42]</sup>. Questions remain about understanding how social networking and media affect nonprofits, how budget constraints will force agencies to digitally interact more with larger client loads, or what new ethical boundaries will be raised when these new online relationships become the norm within social work<sup>[43]</sup>.

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