

**Using an Enhanced e-textbook to Facilitate
the Education and Practice of Social Workers**

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Julie Gilliam

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Abstract

This study examines part of a conundrum that arises in the training of Maryland social work supervisors. Experienced social workers are needed to bring their skills to supervisory duties, but the nature of the situation in which many such workers find themselves works against their ability to take on this essential work. Such workers are, for instance, spread out over a considerable distance once they have left their own training and taken up working responsibilities. Gathering them together at a centralized location for their supervisory training is a difficult matter of logistics. In addition, the time required for such training is not a minor consideration; it must be taken from jobs and other responsibilities, potentially leading to losses in productivity and income. Other similar issues are taken up as background for the work to be performed here.

Allowing more of this training to occur remotely would enable more Maryland social workers to take on the supervisory roles. Similarly, making the training more individualized would leverage the fact that different people learn differently. Some people learn most effectively from hearing a teacher speak; some learn most effectively from seeing a visual presentation of the material to be covered; some learn most effectively from a high-level overview of a topic; others learn most effectively working from low-level details to assemble a higher-level vision.

It is posited in this study that technology can play a useful and important role in dealing with several of these issues. Technology can help deal with issues of logistics, as more training time can be self-directed locally rather than requiring as much centralized instruction. This can also help in time management, making material to be learned available to the learning population on their own time schedules, leading to fewer disruptions in the remainder of their lives.

The most important conclusion of this work, however, lies in the nature of the interface that such technology should present to the prospective student. Rather than taking a one-size-fits-all approach, the technological solution presented could allow the student to choose from among a number of modules that present equivalent material in different ways. Some will appeal more to the verbal learner. Others will appeal more to the visual learner. The presentation lends itself naturally to traversal by breadth or depth, enabling students to take whichever approach to the material that most suits them, but resulting in all students arriving at the end at the same place.

This interface was tested using traditional technological means and employing well-understood methods. Suggestions from each test group were used to improve the interface for the next test.

The training of Maryland social work supervisors is necessary work. It is hoped that this study will contribute to this training in the future.

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Chapter 1: Problem Statement

Introduction

The social-work profession aims to strengthen the welfare of individuals, groups, and communities that suffer from poverty, social intolerance, and unequal human rights. The core values embodied in Social Work's Code of Ethics include service, social justice, integrity, and competence (National Association of Social Workers, 1999). The deployment of technology in social work is driven by a desire for access and equity, greater flexibility, and is affected by economic or geographic restraints (Jones, 2010). The National Association of Social Workers (hereinafter NASW) and Association of Social Work Boards have developed standards for technology and social-work practice (National Association of Social Workers & Boards, 2005). These guidelines were established so that the core values of social work would drive the implementation of technology when technology is used to fulfill the needs of individuals, groups, and communities.

As exemplars of their profession, certain social workers are called upon to mentor and train students new to the profession. Social workers who accept this role are referred to as field instructors. In their role as educators, field instructors also supervise graduate students entering the profession. This supervisory role and the training field instructors receive in order to accomplish it is the focus of this research.

Field instructors of graduate students must remain current in both field and supervision methodologies. They are required to know how to deal with student fears, anxieties, and doubts; how to recognize patterns of behavior; and how to analyze other interactional factors.

Background of the Problem

Service training for field instructors has normally taken place in a face-to-face classroom setting. However, since the late 1990s, many higher-education institutions in the United States have provided distance-education courses (Roberts-DeGennaro, Brown, Min, & Siegel, 2005). Distance education refers to delivering education without being physically located where the education is delivered. Distance education can be successful in teaching decision-making and critical thinking, and for encouraging learners to take ownership of their own learning.

There have, however, been some misgivings about delivering education from remote locations, especially in human-services courses such as social work (Oliaro & Trotter, 2010). However, it is the firm belief of the researcher that technology correctly implemented can strengthen the process of learning (by correctly implemented, we mean implemented with the needs of its audience in mind).

According to the NASW, technology is transforming the practice of social work. As a result, the role of the social worker is evolving, and social workers must adjust to the implications of the information era on their work (National Association of Social Workers & Boards, 2005). The rapid growth in the use of information technology in the field of social work has raised concerns. Beaulaurier and Haffey state that "social work faculty have remained concerned with the value placed on technology in the training and educating of social workers," noting that some faculty are worried that the "human" part of human services might be devalued (2005).

The incorporation of technology into social-work teaching and practice leads to the requirement that social workers become more technologically proficient. This in turn increases

the pressure on social workers, who are already required to absorb an increasingly complex body of knowledge in order to remain informed supervisors.

To survive in today's constrained financial climate, organizations have to operate with fewer employees. As a result, removing workers from their day-to-day responsibilities to enable time-consuming training is problematic for such organizations. Likewise, fewer and fewer organizations have budgets sufficient to send their employees to external training (Stober & Putter, 2013). Geographical access may also be a problem for workers at a distance from available training.

Consequently, old face-to-face instruction methods for keeping social workers current in their knowledge are becoming less and less practical for the organizations that employ them. The rapid expansion of computer-mediated technologies has propelled an interest in integrating technology in social-work education (Roberts-DeGennaro et al., 2005). Calls are being heard for social-work educators to become part of the process of developing electronic communications in their field of expertise.

Statement of the Problem

Even though distance education may appear to be a feasible solution for providing training, many learners have difficulty working with information and communication technology. *Information and communication technology* (hereinafter ICT) may be defined as the technological tools and resources used to communicate, create, relay, and manage information. One of the problems in the use of ICT for education is that adequate hardware and software are not equally available to all users. Chalmers (2003) refers to this problem of inaccessibility and a further problem that too much software lacks usability as the "digital divide".

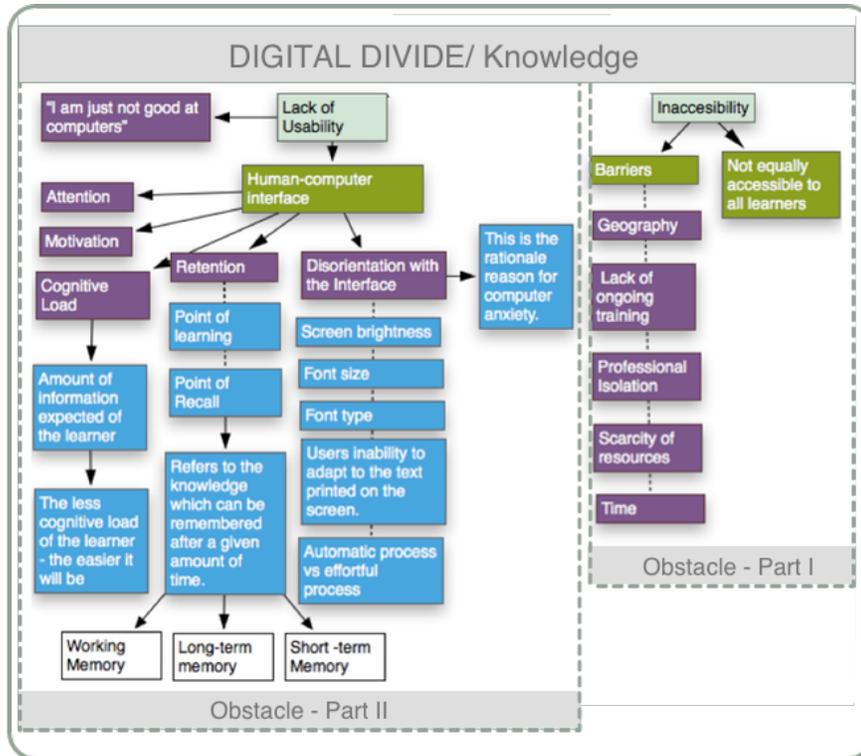


Figure 1. Statement of the Problem adapted from Chalmers, P. A. (2003)

This “digital divide” (illustrated in Figure 1) is thought to be a consequence of economic, educational, and social inequality among individuals and groups. Other barriers that have an impact on social-work education include geography, lack of ongoing training, professional isolation, scarcity of resources, and time. Most of these factors are beyond the scope of this study, but a strong effort was made to take into account any applications of these factors to material that is covered.

As a basis for discussing issues of usability and inaccessibility, we must understand how field instructors currently achieve their goals. Before we can begin to consider new technological solutions, we need to examine the current learning environment and see what challenges field instructors have with current applications.

A common issue with technology is the problem of becoming disoriented at the user interface. The user interface is the point at which the user and the technology interact; typically this will involve screen layout in an application. Disorientation is the inability to adapt to or navigate through the graphical layout of the application. Disorientation is one of the reasons for computer-related anxiety (Chalmers, 2003).

Another issue when designing technological solutions for social-work education is the question of cognitive load. Cognitive load is the amount of information processing that is expected of the learner at any given time. The smaller the cognitive load the learner has to carry, the easier it will be for the learner to retain information.

Conceptual Framework

The purpose of this study was to create a prototype of an enhanced textbook using human-centered design and then to assess the users' willingness to adapt to using that enhanced textbook. An enhanced textbook is a digital device that can combine audio files, animations, graphics, text, and video. Enhanced textbooks include the ability to view dynamic content, to take notes, to consult a glossary, and to view both audio and visual content. Human-centered design principles involved in the design of social-work education software must include an explicit understanding of the field instructor's tasks and environments (ISO 9241-210:2010, 2015).

To this end, field instructors were involved throughout design and development of the enhanced textbook. The prototype enhanced-textbook design was originally driven and then further refined by user-centered evaluation. The enhanced textbook is designed to address the whole-field instructor and user experience (ISO 9241-210:2010, 2015).

The process involved in designing this study examined the practitioner's technology skills, mobile device use, and motivational factors leading to the adoption of new technology. Human-centered design principles were incorporated to make certain the development of the solution for field instructors remained true to the social-work profession's values. The researcher focused on gaining an understanding of the field instructor's tasks, work processes, and environmental factors in the real-world settings in which field instructors find themselves.

Field instructors need access to information anytime, anyplace. Therefore, it was imperative that mobile technology be a part of the solution, in order that field instructors should be able to access the solution as needed. Since lack of usability can cause disorientation, aspects of the physical device used, the content presented, and the design of the user interface were determined to be key components in how information was to be delivered.

The literature framing this study pertains to mobile learning, e-textbooks, and cognitive psychology. The theoretical lens informing this study, its methods, and its strategies for analysis is comprised of grounded theory and human-centered design.

The study examines whether or not an enhanced textbook might facilitate learning and information retrieval of a complex, practice-based body of knowledge for social work field instructors. The enhanced textbook was designed to facilitate memory and information-retrieval processes. To illustrate a complex, practice-based body of knowledge, Dr. Carlton Munson's 2012 textbook, *Contemporary Clinical Social Work Supervision: A Mentoring and Monitoring Model*, supplied the content of the enhanced textbook.

Summary

This chapter introduced the research topic, provided the background for the present study, a statement of the problem, and the theoretical framework within which the problem is to be considered. Chapter 2 will present literature on mobile learning, human-centered design, cognitive psychology, and e-books that form the basis for the conceptual framework for this research. Chapter 3 explains methodology and research design from a grounded-theory research approach. In chapter 4 the actual development of the solution will be discussed, as will be the user-centered research testing that drove the design of the end product. Finally, Chapter 5 discusses conclusions, limitations, implications, and next steps.

Chapter 2: Literature Review

Introduction

The goal of literature review is to identify essential findings regarding mobile learning, human-centered design, cognitive psychology, and e-book design relevant to this research study. The goal of the evaluation was to extract a set of guidelines on how to develop and implement an enhanced textbook.

The focus is on what the literature has to say regarding design concepts and implementation practices with an emphasis on understanding lessons learned, best practices, and conclusions, especially those geared towards mobile technology. This review of the literature focuses on which practices have been successful, which practices have failed, and which practices are still under assessment as to their success or failure.

The methodology for this literature review follows the example suggested in Creswell's *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches* (Creswell, 2013). Creswell's model employs a literature map to demonstrate how four key components—mobile technology, human-centered design principles, cognitive psychology, and enhanced textbooks—are connected. Figure 2 shows details of this review's literature map.

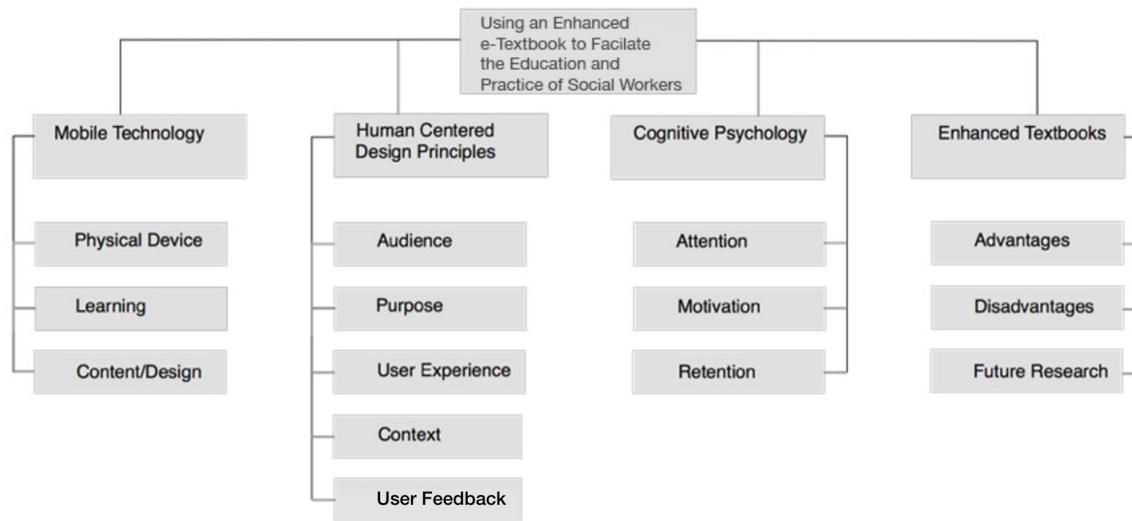


Figure 2. Literature Map based on Creswell’s Research Map on Mixed Methods

The literature map illustrates connections between the four specified areas and how each contributes to furthering the goal of developing an enhanced textbook. Mobile technology is a key component in developing learning that is available anywhere and anytime. *Learning* is concerned with recalling and recognizing a prior experience. Learning may be demonstrated by performing a task more rapidly and effectively than before (Kohl, 2011a). Human-centered design principles are essential to establishing a connection between the audience and the enhanced textbook. Human-centered design sets the stage for ensuring that the audience, not the technology, drives the design. The cognitive psychology component models how the mind operates and enables us to build on that knowledge to develop an interface designed to increase user information retrieval, defined in this context as the storage of information in the brain and the ability to retrieve that information when needed.

Mobile Technology

Most studies of mobile learning to the time of this writing have emphasized the implementation aspect of mobile learning. In other words, most studies have employed mobile

technology using the same presentation techniques as in traditional technologies, simply using the mobile device as a new platform (e.g., using a smartphone essentially as a blackboard).

Research has shown, however, that mobile learning can have some benefit by allowing learning to take place in the context in which the learning will be applied. Mobile-learning materials give users the ability to access information from their mobile devices, allowing them to learn regardless of location (Gikas & Grant, 2013). Mobile technology allows learners to work in their own environment, thus lending itself to lifelong learning (Kukulska-Hulme & Petit, 2009). The context in which learning takes place can even strengthen later recall of the learned material (Traxler, 2009). Learning information in settings in which field instruction takes place helps field instructors retain and use the knowledge gained.

Since the enhanced textbook envisioned will incorporate ease of information access in any setting, content can be usefully provided in the context where it is needed, allowing the field instructor or the student simple and direct access to needed information, and the mobile environment allows such access anywhere and at any time.

Implications for Enhanced Textbook Development on Mobile Devices

The developer of an enhanced textbook application designed for mobile device use will need to address issues raised in the literature of small screen size, suboptimal Internet connectivity, and slow connection speed (Rekkedal & Dye, 2009), and screen organization and layout (Seong, 2006). The developer will also need to attend to the human-interaction challenges of reading and navigating through textual and other forms of information.

Any problems currently inherent in mobile devices will undoubtedly be resolved by developments in the mobile device arena. While we await these, we wish to develop a prototype of an enhanced textbook that can be used effectively on current mobile devices.

Mobile Learning

Current research indicates the definition of mobile learning is still evolving and expanding. Mobile learning is not isolated to the classroom or to a set environment (Skiba, 2010). Learning isn't tethered to a physical structure or to a learning-management system; it occurs regardless of location (Gikas & Grant, 2013). Mobile learning emphasizes mobility, but can take place even in the classroom (Peng, Su, Chou, & Tsai, 2009). Traxler (2009) states that mobile learning is personal, contextual, and situational. Mobile learning can be interpreted as learning while traveling, driving, sitting, or walking. Mobile learning can be hands-free or even eye-free (Traxler, 2009). The design of the enhanced textbook should facilitate all modes of use to the degree possible. Kukulska-Hulme (2005) notes that mobile-learning activities can include listening to an audio file, reading e-news, taking photographs, text messaging, and browsing the Internet. The changes in the digital environment suggest the possible addition of other activities: watching a video, arranging a face-to-face consultation using an application like Apple's FaceTime, participating in a webinar, taking an online class, and so forth.

A variety of attributes of the environment in which learning takes place have been shown to affect learning and remembering (Koole, 2009). The learning environment, the physical device employed, the content and design of learning materials, the operation of the device, and the functionality available on the device in the setting in which it is used all play a role in learning and retrieving knowledge (Kenny, Van Neste-Kenny, Park, Burton, & Meiers, 2009). A positive aspect of a mobile-learning environment is the ability to apply what is being learned in

the environment in which that learning is occurring (Elias, 2010). Activities in a mobile-learning environment often facilitate education using real-life learning situations (Koszalka & Ntloedibe-Kuswani, 2010).

The mobile environment allows learning to be accessible, collaborative, flexible, and contextually relevant (Peng et al., 2009). One advantage of mobile learning is the possibility of collaborative applications that encourage sharing and that make use of the location of the learner (Clough, Jones, McAndrew, & Scanlon, 2009). Elias (2010) suggests that mobile learning can build and enhance a community of learners and encourages multiple methods of communication. These communication mechanisms may include short-message services (SMS), phone calls, electronic mail, and social networking, among others. A series of short interactive text messages can be used to guide a person through behavioral process changes (Abroms, Padmanabhan, Thaweethai, & Phillips, 2011). Purely text-based messages, however, are inherently limited in their ability to communicate inflections (Abroms et al., 2011). Ruskin (2010) recommends the SMS podcast, a method currently used for continuing education. Integrating these varied communication capabilities into the mobile learning process should help foster a sense of community.

Mobile learning tends to be user-driven. Kong (2008) indicates that learners have a sense of ownership over their learning when utilizing mobile devices, which gives them an incentive to participate in the learning process. Mobile applications must meet the learner's need to solve problems or must reward a spirit of inquiry (Gu et al., 2011). One of the strengths of mobile learning is the timely ability to solve problems and find answers (Skiba, 2010).

There are problems, however, inherent in the mobile learning environment. For example, the mobile environment may present opportunities for becoming distracted and may limit the

depth of thinking and learning. Kukulsa-Hulme posits that if the practice environment is fast-paced, noisy, light-limited, or contains distractive movements, then learning and remembering may be impaired (Kukulska-Hulme, 2005). If not carefully managed, the ability of mobile technology to adapt itself to a variety of uses could become a distraction to learning (Peng et al., 2009).

In general, attitudes in the user community regarding the use of mobile technologies can also create obstacles to mobile learning. Physicians, for instance, have been skeptical about using mobile resources. Administrative policies that set too-rigid practices as well as attitudes of older generations regarding mobile use could be obstacles for implementation in the practice setting (Ruskin, 2010).

Limitations created by outdated policies, rigid attitudes, and locations in which mobile-learning technology is used can create obstacles that education and emerging technology enhancements may be able to eliminate.

One study (Diliberto-Macaluso and Hughes, 2016) suggests that the use of mobile devices in general and mobile apps in particular in the classroom is enjoyable and enhances student learning. Apps allow faculty to develop new and different learner-centered educational activities or to adapt pre-existing activities to use in collaborative learning. Nevertheless, despite student perception of the value of this approach, research in higher education is mixed as to whether the use of mobile devices in the classroom promotes student learning. Faculty report anecdotally that the use of mobile devices during class increases the level of distraction of students, encourages a shallow level of cognitive processing, invites multitasking or task switching, and causes disengagement. Mueller and Oppenheimer (2014), for instance, found that

students who used a laptop to take class notes performed more poorly on an immediate memory test on conceptual (though not fact-based) questions than those who took notes by hand.

At present, there is limited evidence that mobile learning can replace traditional approaches in formal learning. But Kong (2008) perceives portability and versatility as keys to mobile devices becoming a powerful platform for learning. This study was designed to test, among other things, whether an enhanced textbook on a mobile device, created using the principles of human-centered design, could find acceptance among field instructors.

Another systematic and exhaustive review (Alrasheedi, Capretz, and Raza, 2015) collated responses from 4,755 university students collected in 30 studies conducted in 17 countries. This review indicated that while research conducted in the area of mobile learning is still fragmented, disorganized, and too much based on the understanding of the individual researcher, some conclusions about the effectiveness of mobile learning could be drawn:

- Learning became more interesting
- Productivity was increased
- Mobile learning could be assimilated into curricula (so-called *blended learning*)
- The ease of use of mobile applications is important. This involves
 - User-friendly design
 - Stability of Internet access
 - The application performing as expected
- The ability to try the application is significant. This involves
 - Platform accessibility
 - Learner autonomy

- Personalization
- The degree of technical competence matters considerably. This involves
 - Technically competent students
 - Technically competent educators
 - Learner community development

Information Content and Design

Representation of information on mobile devices can change learning and the successful application of knowledge in practice settings. Mobile learning is context-based, specific, and instantaneous (Traxler, 2009). Content can be developed to facilitate regular reminders, requests, quizzes, and questions (Elias, 2010). Reference applications, including dictionaries, translators, and e-books, can be used in conjunction with course content on mobile devices (Clough et al., 2009).

Merely extracting desktop materials and making their content accessible on mobile devices does not provide the optimal mobile educational experience. Rekkedal and Dye (2009) provide two examples, using course content originally designed for web, and discuss the users' experience of viewing the course content through their handheld devices. Rekkedal and Dye's courses included reading text-based materials, writing essays, submitting assignments, and communicating with fellow students. The results indicated that students were not satisfied with the download speed available to access graphical information on their handheld devices. As a result, projects had to be re-engineered for retrieving information on handheld devices (Rekkedal & Dye, 2009). Another study illustrates issues involved in simply retrieving course materials on personal digital assistants (PDAs) without modifying those course materials for the new environment. The results showed that learning effectiveness was not increased when using a

mobile device in the formal classroom environment, which led to the conclusion that content needs to be designed (or redesigned) to fit the features of mobile devices (Wyatt, Krauskopf, Gaylord, Ward, Huffstutler-Hawkins & Goodwin, 2010). Both examples demonstrate the importance of reviewing content and reformatting information to be delivered and viewed on a mobile device. Unlike desktop-application designers, mobile-application designers must consider that users need to interact with their devices while on the move. In a standard computing environment, lighting in the room can typically be adjusted to suit the user; however, when a mobile user moves, lighting may change frequently without regard to the user's preferences (Yamabe, Takahashi, & Nakajima, 2008).

Mobile devices that report location change the data available for query engines to work with. The needs of users can be more realistically evaluated by including the user's location and the context of the request (Koshman, 2011). Content for mobile interfaces must be able to meet the user's needs without overwhelming either the user or the capacity of the device. The interface system needs to be flexible and able to change based on the user's situation. Mobile learning is geared perfectly for situation-based scenarios, especially given the capabilities of GPS and wireless Internet.

Mobile technology holds the potential to facilitate the teaching and learning experience. The delivery of mobile instruction demands simple design so the focus is on the content. With the increased use of mobile-based instruction, it will be important for instructional designers to learn to develop mobile instructional content (Martin, Pastore, & Snider, 2012).

Media Types

Many mobile devices are able to display multimedia such as audio, video, and images. In order to effectively deliver video content for mobile learning, the length of the video needs to be

divided into short segments. Video alternatives also need to be created to deliver this content to mobile users who lack access to multimedia content. The video format needs to be encoded so that it will be operational and accessible to all mobile devices. Designers will need to consider the possibility of intellectual property and copyright issues when using multimedia content. Another consideration is the cost of streaming data based on the user's network access (Svetlana & Yoon, 2009). An alternative would be to deliver multimedia for offline access, but in this case the storage capacity of the mobile device must be considered.

Mobile Learning Summary

Mobile technology has become essential in many aspects of people's lives; however, the adoption of mobile technology as a platform for educational use has been less rapid. There seem to be barriers to the adoption of learning through mobile technology, particularly by institutions of higher learning. However, when tried, it has been found that users were satisfied with learning on a mobile platform and were open to doing so again in the future. It was thought to have improved efficiency and productivity among the learners (Alrasheedi, Capretz, and Raza, 2015).

Most studies to date have emphasized the technology side of mobile learning (e.g., simply deploying pre-existing materials without much redesign) and have not explored the effectiveness of mobile applications that are based on what is known about learning and remembering. The research literature in the area of everyday informal mobile learning and its integration with daily life is still limited (Kukulka-Hulme & Petit, 2009). Diliberto-Macaluso and Hughes (2016) concluded that the potential benefits of mobile apps as teaching tools in higher education had still not been studied sufficiently. Technology support and education have focused on problem-solving specific technical issues and technology implementations, rather than showing students how to use mobile technology in the context of learning. Learners are able

to figure out how to use their devices, but need help to incorporate their devices into the way in which they learn and collaborate (Kaganer, Giordano, Brion, & Tortoriello, 2013). Additional research is needed to improve designing mobile education for users (Gu et al., 2011).

The content layout for mobile devices should be geared towards short, precise, and instantaneous retrieval of knowledge. The content material might contain videos, audio clips, or text, but should provide a variety of ways to learn. Ideally, any such content should be developed so that all users can have access, regardless of their mobile device’s limitations. Understanding the limitations of mobile devices and developing approaches based on human-centered design will help address these issues. Figure 3 summarizes the best-practice findings in terms of the mobile physical device, learning, and content/design.

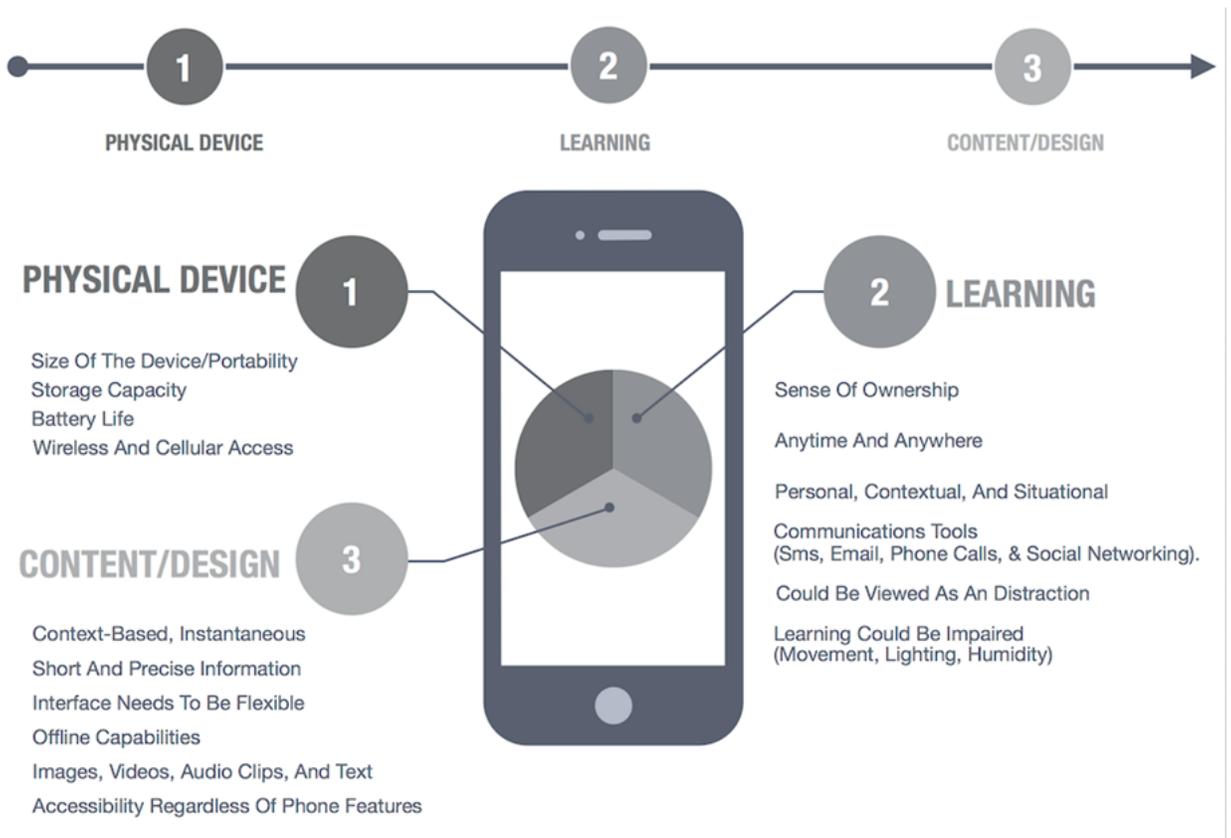


Figure 3. Mobile Technology Literature Review Best-Practice Findings

Human-Centered Design Principles

The concept of human-centered design reminds us that it is human users in all their manifold complexity that deal with interface designs (Boy, 2012). The human-centered design approach is based on an understanding of interactions with technology and how technology is actually used in social and personal contexts (Rogers, Harper, & Rodden, 2009).

As an example of this approach (Rose & Meyer, 2002) relevant to this study, Universal Design for Learning (UDL) is a set of principles for creating curricula and texts that give each student the tools he or she needs to succeed. It begins from the premise that individuals as well as society as a whole benefit from learning that is aware of the needs of students, advocating teaching materials that are responsive to the needs and interests of a broad range of learners. Drawing on research about how the brain learns, UDL suggests three design principles:

- Provide multiple means of representation — the “what” of learning (e.g., recognizing the difference between a news report and an editorial)
- Provide multiple means of action and expression — the “how” of learning (e.g., knowing how to write or podcast a news report)
- Provide multiple means of engagement — the “why” of learning (e.g., setting goals to become a journalist and investing effort in achieving those goals)

This suggests that in the development of the enhanced textbook, the characteristics and needs of the audience have to be considered in order to make the textbook useful. Standards can be extremely helpful in this respect, since they are objective and implementable. This study will incorporate human-centered design principles as outlined by the International Organization for Standardization (ISO 9241-210:2010, 2015). This ISO document includes both ergonomic recommendations, including such elements as keyboard interaction, workstation design, posture,

availability of help, and certain specific design elements, including implementation of dialogues, provision of accessibility for the differently abled, recommended testing and analysis regimes, and specific recommendations for newer light sources, such as LEDs. Naturally, this study is only concerned with a subset of these issues.

The discussion of human-centered design principles presented here is divided into five sections: audience, purpose, user experience, context, and user feedback.

Audience

The social worker may be imagined as an amalgam of problem solver, researcher, clinician, community activist, family therapist, child-welfare worker, art therapist, educator, and administrator. Many social workers in practice today started their careers using rotary telephones hardwired to walls, wrote up progress notes of clients on typewriters, and read hard-copy professional journals and books. The only work method available to social workers during that time period was to conduct their practice in physical offices and client homes. Much has changed since then. With the availability of the Internet and of mobile technology, social workers are now able to communicate with their clients on social networking sites, provide online and video counseling, and update client's progress notes in the cloud (Reamer, 2013).

Field instructors provide instruction and supervision to students, particularly those in Masters of Social Work (hereinafter MSW) programs. *Supervision*, in this context, is defined as the role of a person who has been designated to support an MSW student, providing help and counsel in the areas of administration, teaching, and the student's own practice. Under this supervision and with its help, MSW students support clients in overcoming physical, financial, social, and psychological challenges. Understanding what field instructors do, tasks they will carry out as well as characteristics they must possess and skills they need, provides a basis of

understanding the enhanced textbook's primary audience's needs. The five basic tasks of supervision for a field instructor include reading, writing, watching, talking, and listening. Reading is vital for the supervisor in order to keep up with the literature and to prepare MSW students to locate appropriate literature. Writing is an indispensable skill for field instructors, as many records and reports must be completed. Field instructors also need to be good observers and be thoroughly aware of each MSW student's performance. Because most supervision is conducted through face-to-face dialogue, listening to MSW students and providing supportive feedback about how to handle specific situations is an inherent part of supervision (Munson, 2012).

Field instructors must maintain a positive attitude when MSW students are seeking to understand how to do something in a different way. Field instructors must also be able to navigate the maze of organizational politics and opportunities in a productive manner. Patience, efficient decision-making, and the ability to work with others are but a few other qualities field instructors need to be effective in their craft (Munson, 2012).

Purpose

Another critical component of human-centered design is to clearly understand the purpose of what is being developed. Based on the researcher's professional experience as an instructional technologist, choices made as to technology to be used for any particular purpose tend to be based on what is familiar and known, rather than on the best technology for the purpose. For example, when a presentation must be developed and the user is familiar with Microsoft PowerPoint, the most common approach is to utilize Microsoft PowerPoint. Rarely are the questions asked: "What story am I trying to tell?" and "What technology can best demonstrate my purpose in the presentation?"

In order to develop something effectively, it is important that we seek to understand why it is being developed and what goal we are trying to accomplish. Donald Norman (2005) defines *purpose* as seeking to understand what the application needs to do and what function it is to perform.

The purpose of the enhanced textbook, then, is to improve access to information for the user and to increase the variety of presentation modes employed so that the technologies that best convey essential information are literally at the user's fingertips.

User Experience

Technology has changed the way that social workers learn, practice, and interact in their profession (Aguirre & Mitschke, 2011). Even though there is some skepticism and fear about the use of technology in social work, there is an undertone of acknowledgment that social workers need to change in order to advance as a profession (Ayala, 2009). Unfortunately, information technologists sometimes implement products based on their own knowledge and thought patterns rather than on the user community's perception of its needs. As a result, developers may not clearly understand the actual needs of the end users. This can easily (and too often does) result in a product that does not adequately meet the needs of end users. To resolve these issues, users need to be providing feedback throughout the entire process. The design can be reviewed and revised through user-centered evaluation or through user testing. This process needs to be iterative. If users are unclear about what they want, providing tools that allow for exploration and empowerment can provide clarity about the needs of the users (Norman, 2005, pp. 92-93).

More will appear about the specifics of this study below, but both a written test-participant screener and face-to-face in-depth interviews, supplemented by video and audio recordings, were sources for information on study participants. The field instructors' technology

skills and use were examined, as were their current tasks, work processes, and the environments in which they practiced. All of these sources of information formed the core of findings for a detailed analysis (about which more below), followed by peer review and input.

Context

An NASW standards document regarding the use of technology by social workers states, “The potential for harm or abuse of people can be increased by the use of technology in social work practice.” This statement makes it clear that there is still a certain concern about using technology in social work. Also stated is that it is the responsibility of the social worker to ensure the use of technology conforms to the standards addressing ethical conduct and the protection of the public (National Association of Social Workers and Association of Social Work Boards, 2005). Therefore, not knowing how to correctly use technology may cause a lot of guilt in the user’s mind. Technologists, who understandably tend to prioritize design specifications and features of the technologies they build, need to put greater emphasis on demonstrating to social workers how to use the technology appropriately in the context of their work.

Several critical issues need to be addressed: many technologies are powerful but fragile; crucial information can be lost or intercepted; not all Web sites providing information are reliable; service providers can easily misrepresent themselves and their credentials online; confidentiality in an electronic medium can quickly evaporate; jurisdiction, liability and malpractice issues blur when state lines and national boundaries are crossed electronically; numerous digital divides can thwart access and success; and clients and social workers alike may have unrealistic expectations for what a technology can actually provide (National Association of Social Workers, & Boards and Association of Social Work Boards, 2005).

User Feedback

A human-centered design seeks to understand what the audience needs, involving users from the beginning of the conceptualization process, through system analysis, interface, generation, and finally the testing of the application. After testing the application, it is important to follow up and verify that the application is meeting the user community's current needs, which may have changed. If the application doesn't meet their current needs, iterative changes to the product are necessary.

Understanding the field-instructor's audience, identifying his or her tasks, and studying the environment in which he or she works were the foundation of the enhanced textbook at the center of this study. Usability testing of that enhanced textbook formed the ground upon which that understanding was tested and refined. Figure 4 specifies the design perceptions of users, tasks, and environment.

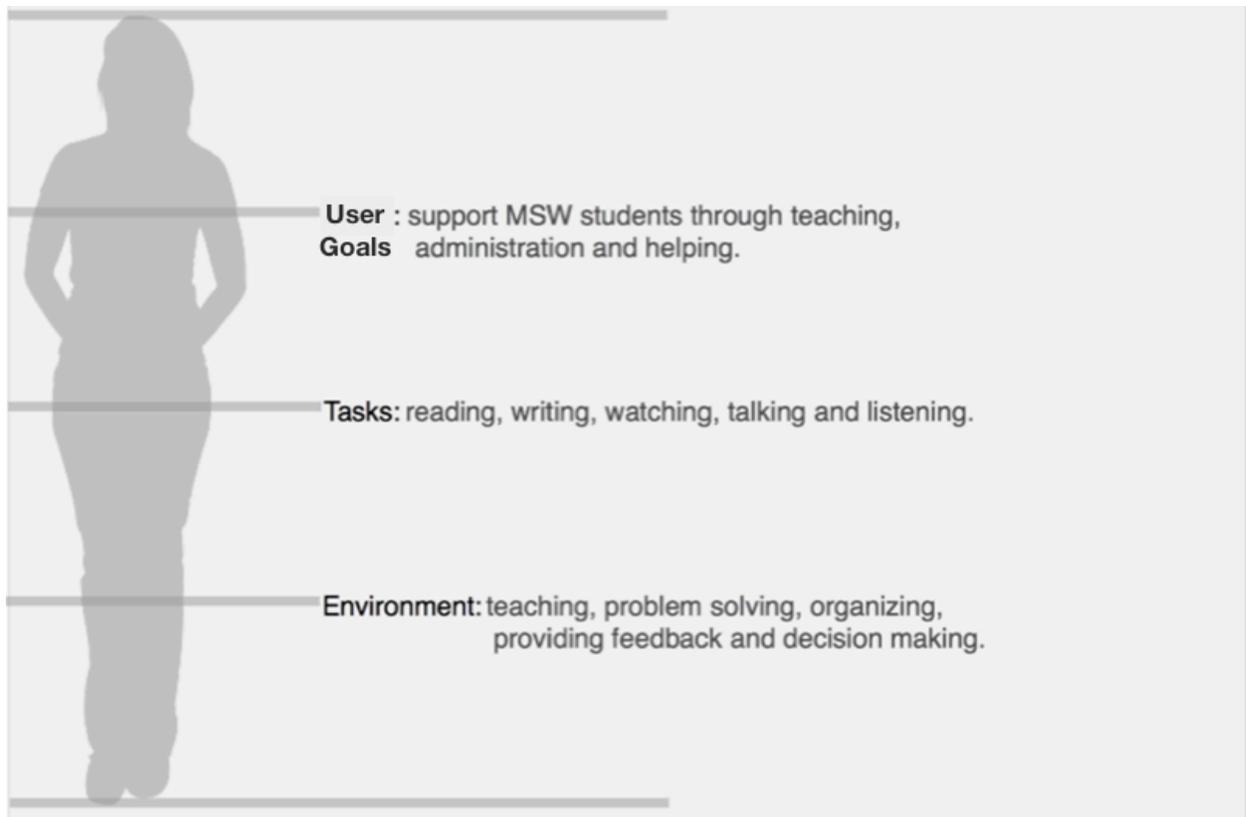


Figure 4. Design: Perception of Users, Tasks, and Environment (conclusions from Munson, 2012; conceptualization of graphic from van Eijk D, van Kuijk J, Hoolhorst, Kim, Harkema, Doorestijn, 2012)

Cognitive Psychology

Cognitive psychology is the examination of mental processes, including how people think, perceive, retain, and learn. The arrival of computers has influenced cognitive science, and cognitive science in turn affected how computers were fabricated (Hurtienne, 2009). The invention of mobile technology allows for mobile learning: the acquisition of knowledge, anytime and anywhere. Unfortunately, research has not yet fully caught up with the potential effects of mobile learning. However, learning and cognition research does demonstrate positive effects for the acquisition of knowledge for adult learners over the long term (Baddeley, 2002). Incorporating cognitive psychology concepts into the formal learning process could help make the transition to mobile learning more successful.

Attention

Memory is a key component of learning, and learning is a key component of attention and perception. This makes sense: a learner needs to learn the information first before trying to retain the information. Exposing information to someone only once virtually guarantees that they are going to forget the information. Mobile technology requires even more of the user's attention than stationary computing devices (Kohl, 2011a). The development of the enhanced textbook will need to include options for field instructors to review what they have learned and to refocus when distracted while learning the information. Feedback from field instructors will be needed as to how they usually adapt to distractions and how they are able to refocus.

Absentmindedness, divided attention, attentional blink, and blocking are cognitive situations that cause problems when trying to retrieve information from memory. One is considered *absentminded* when he or she is not paying attention at the encoding (learning) phase; since the information was not encoded properly, it is not accessible when it is needed. This usually occurs as a result of devoting one's mental resources to things considered more important. *Dividing attention* reduces the overall amount of cognitive resources available (Schacter, 2002). Matlin (2005) states that divided-attention tasks can be handled simultaneously, but only if these tasks are not demanding. *Attentional blink* occurs when a sequence of stimuli is presented rapidly and the system becomes overburdened. Identification of stimuli becomes muddled when the attention simply skips overburdening information. For example, viewers may be able to identify a first stimulus but miss a second (Matlin, 2005). *Blocking* occurs when one cannot get to information, either because one is overwhelmed or because the information is temporarily inaccessible for some reason (Schacter, 2002).

Because field instructors may encounter these cognitive situations, especially in circumstances that cause anxiety, it will be important for the developer to create explicit cues to help them in accessing learned information from memory. For example, built-in prompts could help field instructors avoid blocking of what to do next or where to go next. Understanding how attention affects learning will help the designer create a mobile-learning interface that works with its audience's attention span in the contexts they are likely to experience.

Motivation

Motivation is, to put it simply, why people do things. In the development of the enhanced textbook, it is important to understand what motivates field instructors and identify possible intrinsic and extrinsic motivations for wanting to use the enhanced textbook. Understanding these motivations can assist the developer in creating an interface that builds on and improves the user's motivation.

Motivation is broken down into two types: intrinsic motivation and extrinsic motivation. *Intrinsic motivation* is the case in which things are done because the individual wants to do them, and when doing so brings pleasure to the individual. *Extrinsic motivation* is the case in which something is done in order to earn a reward in the individual's environment (Kohl, 2011b).

Retention

Education has traditionally been concerned with recalling experiences as semantic rather than episodic memory (Baddeley, 2002). These two types of memory are related: semantic memory puts an emphasis on retention of disconnected facts; episodic memory focuses on retention of one's experiences. Currently, the educational system puts a great deal of emphasis on semantic memory, specifically on recalling information in a testing or examination form. The enhanced textbook would ideally enable the development of semantic memory in field

instructors by approaching information in a variety of different contexts. Mobile learning can also facilitate episodic memory by providing tools that can aid learners in transferring concepts learned into new contexts (Kooze, 2009).

Unfortunately, the more information being placed into a person's memory, the less space the person will have to process that information. There are, however, techniques to assist with storing and retrieving information from memory. For instance, cramming right before an exam is not as effective a method as studying 24 hours before the test. Learning material right before bedtime allows physiological processes to strengthen the memory trace at night. Completing one's study in the morning enables better maintenance of the knowledge learned (Baddeley, 2002). Repeated practice also improves memory, but Matlin's "spacing effect" indicates that students learn most effectively if their practice is distributed over time, rather than done all at once (Matlin, 2005). Based on these memory retention processes, the ability of the mobile learner to study anytime and anywhere could be advantageous in improving retention of information, especially if they were to periodically spend five minutes reviewing what they have learned. A mobile-based learning experience could even provide reminders to engage in periodic short reviews.

To incorporate techniques that may improve the learner's retention of information, the developer of the enhanced textbook will also need to understand the typical technical expertise of field instructors. Their existing skill level will define the approach needed to inform the user how to use the application. When coping with unfamiliar circumstances, most people would like to be informed what to do and how to do it (Kohl, 2011b). However, existing skill levels will differ. Consequently, the enhanced textbook will require a means of allowing the expert-level user the

ability to opt out of basic instruction, while still giving the beginner-level user step-by-step instructions about how to operate the application.

Another factor that may need to be considered in developing an enhanced textbook for field instructors is the issue of cognitive aging. *Cognitive aging* may be defined as changes in the rate at which the nervous system can receive and transmit information as the subject ages. As noted earlier in this chapter, many field instructors began their social work practice some time ago and in an earlier technological era. This means that some may be experiencing the effects of cognitive aging and some difficulty with the rapid change characteristic of the digital age. It is also important to remember that cognitive aging doesn't start at a set time. Dealing with age is a question of optimization and finding ways to ensure that increasing difficulty with technology does not mean a decrease in overall effectiveness (Baddeley, 2002). Some flexibility in the pace of content presentation, for example, will help facilitate learning and memory of the material in cases of cognitive aging. Not everyone learns at the same speed. Technology can be a patient teacher in this regard, making possible learning experiences more difficult to find in human-to-human interactions.

Audience characteristics such as attention and motivation, as well as the retrieval and storage of information, are cognitive-psychology concepts affecting learning and retention in adult learners when using a mobile device. These factors must be taken into account in the development of the enhanced textbook. By incorporating cognitive psychology based on formal learning processes, the transition to mobile learning will be eased.

Enhanced Textbooks

An e-book is an electronic-format book, accessed either through the Internet or offline, developed primarily for the purpose of reading. An e-textbook is an e-book focused on educating

its audience. For the purposes of this study, we will use the term *enhanced textbook* to describe an e-textbook containing some combination of audio, animations, text, and video presentation. Enhanced textbooks can be read on e-readers or tablets, and can be accessed offline or from the Internet. Unfortunately, there are as yet very few studies examining this kind of textbook.

One that does (Walters, 2014) concludes that the use of e-books in academia is not at all the same as the use of e-books by general consumers. Higher education faces a number of significant challenges in adopting e-books on a large scale. Among other things:

- Many institutional e-book licenses place major restrictions on the viewing, printing, saving, transferring, and copying of files by individual library patrons
 - Some are hard restrictions, which prevent unauthorized use
 - Others are soft restrictions that discourage the use of a function or eliminate the advantages it would otherwise provide
- Digital rights management, instituted by publishers and vendors to prevent the unauthorized use of e-books and other online materials, shifts the burden of proof from vendors to users: rather than requiring publishers and vendors to demonstrate that violations of copyright have occurred, the law now requires users to prove that certain kinds of use (viewing, printing, saving, etc.) are permissible
- E-book licenses restrict not just the activities of individual patrons, but the ways in which e-books can be circulated and shared by university libraries. Common restrictions include
 - Limits on the number of simultaneous users
 - Prohibitions on use by community patrons
 - Limits on the number of times a particular title can be viewed

- Limits on the use of e-books in course packs, as reserve readings, and in fulfillment of interlibrary loan requests
- The lending of e-book readers is subject to additional restrictions, many of which arise from attempts to adapt single-user licenses to the multi-user environment: proprietary software and file formats are especially challenging, since they make e-book access contingent on the sustainability of formats that may be obsolete in years or even months
- E-book readers typically require stable access to the Internet, access that gives vendors permanent control over the content to be downloaded to users' devices; many licenses grant vendors the right to alter or withdraw files without notifying the customer
- The management of e-book readers requires an extensive investment in staff time and equipment, much of it employed in attempts to provide multi-user access while adhering to single-user license restrictions

Olsen, Kleivset, and Langseth (2013) conclude from earlier studies regarding e-readers based on e-ink (e.g., the Amazon Kindle) that while this technology was sufficient for even deep leisure reading, it was still insufficient for serious study. Despite the fact that students in general were positive about using e-readers, this study concluded that current e-book readers loaded with curriculum-based e-books and articles could not fully provide for a productive learning experience in higher education. There were student reports of disappointing aspects of the e-readers. The comments, highlighting, annotation, and nonlinear reading often employed by students is not easy to do on these devices. This technology therefore still seemed immature for use in serious academic study. They reported that the question of using e-readers in higher

education was still in a state of flux: for instance, major publishers of academic textbooks had not yet embraced e-readers. It was recommended that universities and academic libraries moderate plans and projects for a transition to e-texts and continue studying e-book readers.

Tablets, such as the iPad, are a different type of device sporting better features for vital functions such as navigation, highlighting, and annotation (Olsen, Kleivset, Langseth, 2013). A project based at Oslo University College (Eikebrokk, Knutsen, and Thaulle, 2011) explored whether the use of an iPad could improve the study habits of students. The iPad was chosen because it was the tablet that matched most closely the licensed digital resources at the institution. After a semester of use by students in two study programs, a major finding was that students thought that facilities for taking notes, printing, and accessing documents were less than ideal. The participants found that the iPad worked well for reading online documents and shorter articles but did not do so well for books. DRM-related issues contributed to reduced user satisfaction.

In its most basic sense, the components for an enhanced textbook include a hardware reader and software that includes the content material of the book. The basic functionalities required by an enhanced textbook include the use of a keyboard to type notes; a highlighting function to annotate content; a tool for clicking on interactive graphics; the ability to change the light level of the screen, the font size, the format, and the column structure; search functionality; bookmarks; access to a dictionary and thesaurus; and Internet access if clickable links to websites are used.

Advantages

Among the advantages of an electronic textbook are its portability, dynamic and potentially up-to-date content, its ability to change the way the information is viewed, and its

decreased expense. The portability issue is a benefit of an enhanced textbook in that it can eliminate the strain of carrying around several heavy textbooks. Since the reader used for an e-book can be used for several e-books, information delivered on several e-books can be delivered in one location. E-book content is easily updated, making e-books more dynamic than printed books (Embong et al., 2012). Another strength of e-books is easy access to content anywhere throughout the world, with around-the-clock availability (Staiger, 2012). The interface for e-books on mobile devices—in terms of font-size, screen orientation, sequence, and ability to scroll up and down—is easy and convenient (Jeong, 2012). The cost of e-books also tends to be lower than hard-copy textbooks, reflecting their decreased cost of design, programming, and distribution. Where appropriate connectivity exists, e-books can promote engagement for students and promote their learning experience by providing a forum for inter-student discussion and exchange of ideas (Sun et al., 2012).

Disadvantages

Disadvantages of an enhanced textbook might include device issues, such as the limited features on certain e-readers; searching and navigation issues; eye fatigue; cognitive load; and the distractions caused by Internet access. As with all mobile devices, e-readers and other mobile devices that are capable of presenting e-book content do not conform to any one set of standards. This means that features available in an e-book on one device may not work on another. Memory or connectivity limitations of the device may also cause issues. Frustration is common regarding slow page loading and the resulting inability to scroll down in the electronic book (Muir & Hawes, 2013).

Another weakness of a poorly designed e-book may be insufficient accuracy in locating information; the search function for some e-books can indicate inaccurate results (Muir &

Hawes, 2013). E-books lack key physical clues prominent in a printed book. With a printed book, the reader can immediately identify the age and size of the book, and can also identify where desired information is located in physical terms (near the front, near the back, and so forth). E-books, however, provide only limited ways of understanding where the user is currently located in the book (Bansal, 2010). It has been observed that users of e-books struggle with determining where their page is located (Muir & Hawes, 2013).

E-books, like all information presented on electronic screens, share another problem: eye fatigue. Human eyes can suffer physical injury from a suboptimal environment for reading. Research also indicates that eye fatigue is more common when reading e-books than it is for printed paper books. Reading an e-book on a backlit computer screen or mobile device places stress on the eyes over time, which causes fatigue. This stress is by the fact that the longer one stares at a computer screen, the slower one's blinking rate becomes. The failure to blink reduces moisture in the eyes and can lead to irritation (Jeong, 2012).

Another problem arising from the electronic format of e-books is an increase in cognitive load. *Cognitive load* may be defined as the rate in which information is being processed (Kohl, 2011a). Jeong (2012) demonstrates a decrease in comprehension of information when that information is read from a computer screen; this difference in comprehension of information may be in part generational.

Finally, if the user of an e-book has access to the Internet and to social networking sites while reading on a device, such access could prove a distraction, hindering the user's ability to focus on assigned readings. The challenge will be to develop an effective learning experience that supports the positive aspects of the e-book while minimizing its roadblocks (Daniel & Woody, 2013).

Future Research in e-books

Research regarding e-books is still in its infancy. Jeong (2012) reported that most people still prefer to read lengthy texts on paper. Future research needs to understand how to incorporate some equivalent elements of the physical cues that paper is able to give a reader into an electronic text so that learning can be more efficient (Daniel & Woody, 2013). Developers will need to focus on eye-fatigue issues and to prioritize making navigation simpler (Jeong, 2012). There is a need to make available an index that is easy to use and that enables users to go to the index and to return easily to where they were (Browne & Coe, 2012). As technology continues to evolve, the critical question must be whether e-books are merely a cool technology or actually something that can be made advantageous to the learning process (Szapkiw, Holder, & Dunn, 2011).

Literature Review Summary

Mobile technology allows for learning to be accessible, collaborative, flexible, and context-aware. The limitations of the mobile environment include organizational policies that have not been updated to current needs, generational attitudes, and exclusion of mobile technology from certain locations, all of which can be attended to by applying what we already know and what we will learn. The research in this study builds on abovementioned instructional-technology methods, cognitive psychology, and literature on mobile technology and e-books.

Chapter 3: Methodology

Introduction

As has already been said, the problem of how to better enable field instructors to be successful in their work suggested the creation of a prototype of an enhanced textbook using human-centered design and an assessment of user willingness to adapt to using that enhanced textbook. The study means to examine how to provide value to the field instructor and to demonstrate that such value can be seen in the reactions of those who have actually tried the prototype enhanced textbook.

In this way, the researcher hopes to demonstrate that the human-centered design approach of incorporating the audience, identifying the tasks, and understanding the environment in which users work (in the case of this study, where field social-work instructors ply their craft) can positively impact the development of an enhanced textbook. It attempts to contribute to viable solutions to navigation and search functionality for enhanced textbooks.

There is a demand among educators for the development of pedagogically sound educational tools for mobile learning. This study is intended to contribute a conceptual framework incorporating methodologies, perspectives, and best practices for teaching and learning, all the while utilizing mobile technology and enhanced textbooks. By understanding the limitations of mobile learning and developing solutions to meet these limitations, this research is intended to show that mobile information technologies can have a positive impact on learning and can make field instructors more effective in the application of learned knowledge.

The tool for conducting this research was an enhanced e-textbook, created to take advantage of innovative uses of technology. The developmental foundation of the enhanced

textbook was driven by grounded-theory research, which will be introduced later in this section. The enhanced textbook enables limited selection among different learning preferences and styles and makes some use of multiple forms of memory, including but not limited to motor memory, auditory memory, and visual memory. The enhanced-textbook focuses on enabling the learner to acquire information without being fully aware of the learning process. Opportunities to work with what was taught were built into the interface by including carefully planned components of frequency and redundancy and allowing the user frequent and clear successes at responding to questions about the learned materials to build confidence and to reinforce those materials. The researcher used principles of concept formation and cognitive psychology to structure information in such a way as to make retention and application of that information easier. All representations of information in the enhanced textbook were based on human-centered design to make them easy to use. The prototype enhanced textbook presents Carlton Munson's supervision book, *Contemporary Clinical Social Work Supervision: A Mentoring and Monitoring Model*. The resulting enhanced textbook was tested at the University of Maryland School of Social Work to determine whether field instructors might accept e-textbooks as a useful part of their education.

This study was a qualitative research study employing grounded theory to guide data collection and analysis of how field instructors learn and retrieve information. A framework of conclusions generated by grounded theory was used to drive the design of the enhanced-textbook solution and its interface, as will be seen below. Each of these elements is discussed in turn.

. Figure 5 gives an overview of the study methodology.

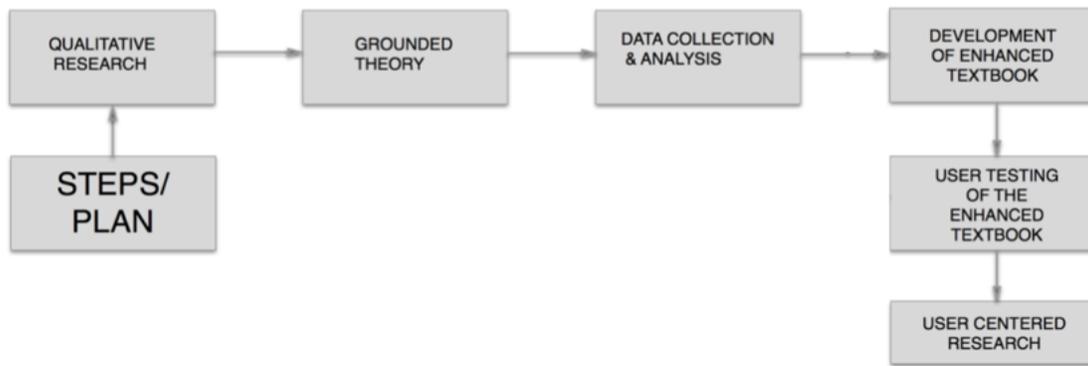


Figure 5. Overview of the Study Procedure

Recruitment

The identification of potential participants and initial interactions with them were straightforward: an email describing the study and containing contact information for the principal researcher was sent to all faculty members of the University of Maryland School of Social Work. The email was sent through a school-wide distribution list. Therefore, no identifying information was required for recruitment (see Additional Documents). Those individuals interested in volunteering for the study were requested to contact the researcher for additional information.

Types of Data Used in Research and Development

Observations and Field Interviews

- Involved 25 participants
- Collected information on how social workers currently retrieve knowledge in a practice setting

Use Cases

- Used to examine workflows of field instructor's methods of learning and retrieving information

Audience and Tasks Analysis

- Used in assessing tasks involved in social workers' learning and retrieval of information and in developing proposed task flows

Test Participant Screener

- Used to identify target user groups useful for enhanced-textbook user-research testing
- Assisted with prioritizing tasks and deciding which tasks to test

Grounded-Research Interviews

- Collected opinions as to whether the participants would want to adopt this technology
- Found no foreseeable risks to the human subjects for this research study
- Protected privacy and preserved confidentiality
- Did not involve vulnerable populations
- Needed two Institutional Review Boards (IRBs) that reviewed the study proposal in order to ask questions of participants
 - The first IRB approved was from University of Baltimore, where the researcher is a student (see p. 120)
 - The second IRB is from the researcher's employment at University of Maryland, Baltimore (see p. 121)

- Since UMB is both a research institution and a medical campus, the IRB protocol requirement entailed additional questions; both applications were adjudged exempt

Enhanced-Textbook Content

- Permission was granted by Carlton Munson for the use of the content of his book “Contemporary Clinical Social Work Supervision: A Mentoring and Modeling” (see p. 128)

Grounded Theory

Grounded theory is an approach to extracting pragmatic and usable theories from subjective data. Grounded theory is deeply rooted in a pragmatic approach to gathering information (Oktay, 2012).

The general concept, which will be explored in greater detail during this section, is that data is gathered from a sufficient sample to allow for the extraction of usable conclusions. This data is then carefully examined and coded. Coding is a form of content abstraction (e.g., seeing recurring concepts in disparate testing responses), intended to extract information from the data. Coding is initially undertaken in terms used in the data, typically interview results; in this way biases that might be introduced by pre-coding are avoided. Through visiting and revisiting the data, constantly comparing to uncover similarities and differences in the data, higher and higher levels of abstraction (e.g., concepts, categories) can be created to unify initially disparate coded data (Oktay, 2012). In the end, a rigorous theoretical framework can be assembled from the data that can be tested normally.

Research Questions and Goals

Current and future information technologies are transforming and will continue to transform the essence of the practice of social work. As a result, the role of the social worker is evolving; social workers need to adapt to changes in the information age (National Association of Social Workers & Boards, 2005). Beyond the pressures to become technologically competent, however, social workers are required to master an ever-growing body of knowledge to function well in the practice setting. Given these evolving pressures and considering current mechanisms for training and educating social workers, the present study examined whether an enhanced textbook was a viable means to facilitate learning in social workers, and particularly social-work field instructors. An enhanced textbook, as has already been discussed, is a digital book potentially combining text, videos, audio files, animations, and graphics.

The goal of this study is to determine if having information developed as an enhanced textbook on a mobile device might enhance the practice of social work by giving field instructors quick and easy access to critical information.

By conducting qualitative research, information was gathered that could be used to strengthen future processes of learning and acquiring knowledge. The user-centered research approach focused on the development of a mobile enhanced textbook.

While the effectiveness of learning using mobile devices has not yet been fully established, some factors that must be considered, however, are summarized by Wilson and Bolliger (2013):

- Most university students carry web-enabled mobile devices, and they send text messages and search webpages throughout the day

- Even with the overwhelming availability of such devices and the abundant number of applications written for them, student-led educational opportunities are not as common as might be expected: students are rarely directed or asked to use these devices for course work or made aware of their possible use outside the classroom
- Educators today may not be as prepared as they would like to believe if they have yet to consider mobile learning for instruction or the potential that technology introduces in designing their educational experiences
- Instructors and instructional designers should keep in mind that most students cannot print from mobile devices (depending on the device and their location relative to a printer-enabled network)
- Learners may need technical support because of their technical skills and experience with m-learning
- Other issues, such as limited Internet connections, may affect a learner's mobile learning experience: in some geographic areas, Internet connections may be unavailable or weak, which may be frustrating and disappointing for students trying to watch a presentation or download a large document
- All these negatives of mobile devices are very real and must be considered when instructors try to integrate m-learning into their curricula
- Before adopting mobile learning, instructors must understand their student demographics
 - If mobile devices are not readily available to all, in-class activities might be designed for pairs or teams of students

- Classroom policies are needed to provide clear guidelines for the use of mobile devices during class time

Sarrab, Elgamel, and Aldabbas (2012) conclude that many educators, particularly those in higher education, do not yet grasp the possible applications of mobile devices or integrate mobile learning significantly into their courses.

Since most studies to date have emphasized the technological aspects of mobile learning, they have not explored the actual effectiveness of mobile applications based on what is known about learning and remembering. While this is beyond the scope of the present study, some research has shown that mobile learning can be beneficial in the learning environment that takes context (e.g., location, identity, and so forth) into account (Koole, 2009). By understanding the limitations of mobile devices and developing approaches based on human-centered design, this study contributes to the question, “are current mobile design principles sufficient, or will new principles need to be developed to empower and engage the mobile user?”

The conceptual framework for this study is integrated in what Maxwell (2005) calls a concept map. Figure 6 is a concept map illustrating the major components of the study. The key components include mobile technology, human-centered design principles, cognitive psychology, and an enhanced textbook. The map illustrates what the researcher believes to be the key components of the study. This map can be used as a starting point to validate the results of a study using an audit trail (Maxwell, 2005). An audit trail is an after-the-fact mechanism that captures the means used to acquire knowledge. The audit trail enables the researcher to revisit the steps taken during the study to double-check methodology and validity of conclusions, and enables third parties to review the study step-by-step.

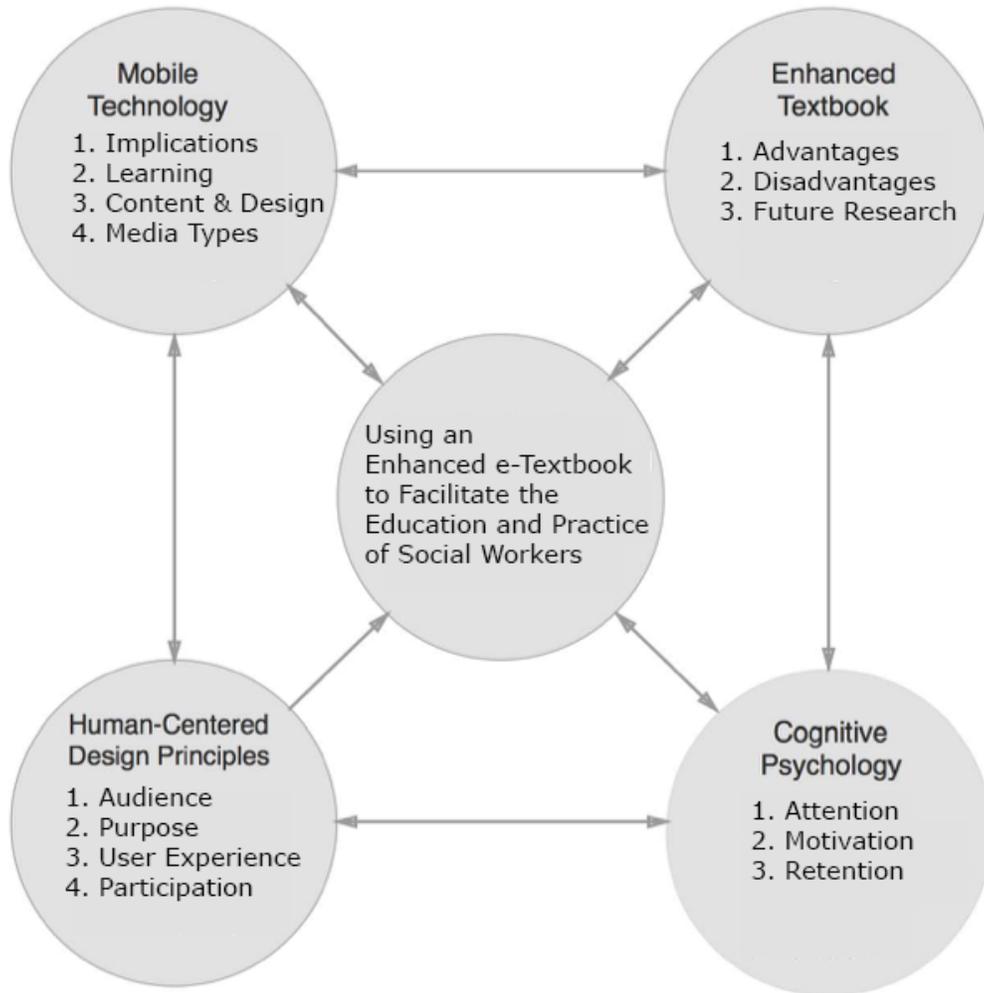


Figure 6. Research Study Concept Map

With the concept map developed, a qualitative research design was developed with the purpose of defining the goals of the study, the conceptual framework to be applied, methods to be used, research questions to be examined, and validity checking.

Qualitative Research

Qualitative research is an appropriate approach for this study, since there is little known about the topic. This is, after all, a topic that elicits sensitivity and deep emotional reactions, and it is a topic that depends upon the lived experience of those who work in the field and create

meaning from it. These questions explore how a social process works, which requires a different approach from questions that attempt to determine causality (Oktay, 2012).

It is important in such a study to view the world from the participant's perspective and identify any source of potential bias, specifically the researcher's own background and experience and how these may both help and hinder the proposed study (Oktay, 2012).

Mitigation of Bias

To mitigate bias from the researcher that might impact the study, a research identity memo was developed. The research identity memo, developed by Maxwell (2005), examines a researcher's goals, experiences, assumptions, and feelings. The memo also includes the researcher's values as they relate to the research. The research identity memo discovers what resources might be made available and what potential concerns might be exposed by the researcher's identity and experience. The purpose of the exercise is to pinpoint those goals, experiences, beliefs, and emotions that are most applicable to the study, and to learn how it can enlighten and influence the research.

Looking back to the start of this study, it is clear that the researcher's viewpoint has changed. The researcher originally held a considerable bias to the effect that technology alone could solve any problem. The research experience has demonstrated to the researcher that the important element in the enhanced textbook is not the technology itself, but rather the participant's experience with the technology.

Research Design

A goal of this study is to develop a prototype enhanced textbook solution based on grounded-theory data analysis, since it was postulated that this would yield a clear path to successful development.

Grounded theory emerged as an appropriate methodology for developing a framework within which to develop the enhanced textbook, as it was considered important to choose a theory that the social work community considers rigorous. Grounded theory meets that requirement.

The use of grounded theory in this study included carefully gathering data, performing analysis, returning to the data, using theoretical sampling to ascertain emerging categories, concepts, and codes, and continuing this process until the point of theoretical saturation is reached. The study exercised two methods of data gathering: interviews and observations. The goal of grounded theory is to develop a theory or framework by theorizing through the data. This is a continuous circular process that brings the researcher closer and closer to the final framework until that framework emerges from the data and finally presents itself (Oktay, 2012). Figure 7 summarizes the research model.

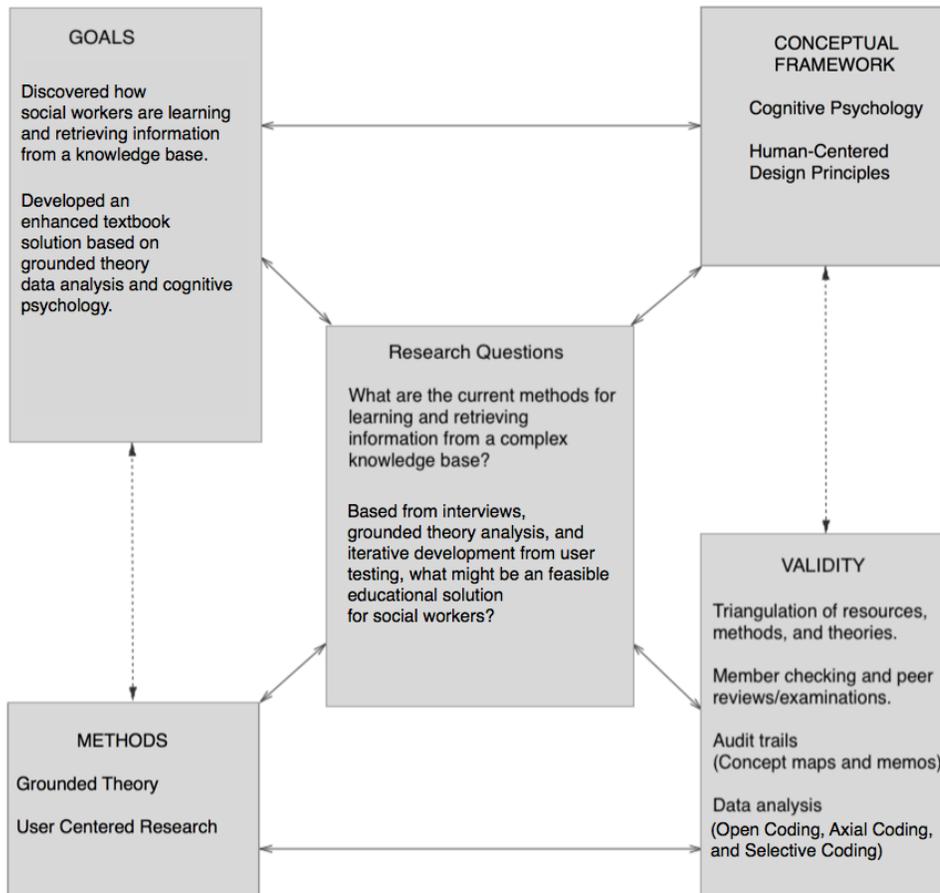


Figure 7. Qualitative Research Design Model (developed from Maxwell, 2005)

Pragmatism and Symbolic Interaction

Grounded theory is based upon theoretical models emphasizing pragmatism and symbolic interaction. In this context pragmatism is simply defined as doing what works. It is important to recognize that this process is dynamic and not static (Oktay, 2012).

Theoretical Sensitivity

The theoretical sensitivity of a research design is defined as whether or not the research can examine what is being studied in theoretical terms and go beyond raw data to identify characteristics inherent in that data. Theoretical sensitivity is in part based on familiarity with

sociological theories and concepts, but is also based on personal experience, professional experience, and temperament (Oktay, 2012).

Sampling

Grounded theory employs sampling, which is driven by the developing theory. Since the theory evolves as the study progresses, the sampling strategy may change over the course of the study, as it did in this study, and thus cannot be fully determined in advance (Oktay, 2012).

In grounded theory, the goal is to develop a theory or framework that will be useful in situations similar to the one in which the theory was generated. A demographically representative sample is not required (Oktay, 2012). Creswell states that the sample sizes in qualitative research can range from 15-20 participants (2013) to 20-30 participants (2012). The sample size in the present study, for example, was 25. Qualitative data analysis in the present study used a grounded-theory approach, which began with open coding of data (developing initial themes and categories), then moved to axial coding (developing broader themes and categories and making connections between the categories) and selective coding (looking for a core concept or variable and moving toward theory development) (Strauss & Corbin, 1998).

Data Collection

The participants were recruited from the University of Maryland School of Social Work, social service agencies, and community organizations in the state of Maryland. Participants were between 21 and 70 years of age, and had completed at least a bachelor degree in the liberal arts or social sciences. Participation in the study was voluntary. A test-participant screener was developed and was used to select a sample of participants (see p. 0). The researcher interviewed approximately 25 practitioners for observations and field interviews and winnowed this group down to 8 participants for user-centered enhanced textbook testing. The rationale for selecting

participants was to try to find those who might be open to exploring new ways to access information. What emerged, then, was a sample of participants who were interested in or open to alternative methods for obtaining information to replace or supplement a traditional, paper-based approach.

The specific goal of data collection was to understand how field instructors learn and retrieve information. The study examined each field instructor's technology skills, mobile-device use, and motivations for adopting new technology. The researcher focused on gaining an understanding of the practitioner's current tasks, work processes, and environmental factors of the practice setting. Data collection methods included observations and face-to-face in-depth interviews, with video and audio recordings. These were followed by peer review after the preliminary findings had been analyzed.

The data was evaluated using the Strauss and Corbin (1998) approach to grounded theory, consisting of open coding, axial coding, and selective coding. Later, a peer-review panel, comprised of six experts from education, information technology, and social work, provided comments regarding the decision-making process involved as a way of refining and confirming the results of that process. The researcher continuously explored whether or not the participants' original interview analysis results still reflected their current viewpoints. The data was transcribed by the researcher using the qualitative analysis software NVivo. This data analysis suggested primary themes, development of a theory, and validation of the theory (Strauss & Corbin, 1998).

Development of an enhanced-textbook prototype began once the responses from observations and interviews had been analyzed. Both these responses from analysis and also human-centered design principles were incorporated into the design of the enhanced textbook.

Storyboards were initially created to aid in the design of graphical views, screen layout, and interface design in the prototype of the enhanced textbook.

Any participant who would have liked to speak to the primary investigator, Julie Gilliam, about this research or the participant's experience of the research was able to do so and was given her contact information. Identifying information such as names and email addresses were collected from the participants strictly for use in contacting users to set up field interviews and user-research prototype testing. To address privacy and confidentiality concerns, all identifying information was removed from the dataset and will be destroyed one year after the study was completed. The videotaping of the field interviews and user-prototype testing will also be destroyed one year after the study was completed.

Constant Comparison

Constant comparison is the basic method used in grounded theory to create theory out of empirical data (Oktay, 2012; Strauss & Corbin, 1998). By comparing each case to the others (whether this be individual cases, cases based on organizations, or cases based on larger structures such as societies) the researcher begins to see concepts emerge. The process of constant comparison makes similarities and differences among cases apparent. Conceptual categories are always specified and described based on data, not on abstractions (Oktay, 2012).

Evaluation of Data

Open Coding. The first step of analysis in grounded theory, open coding, is most similar to the data analysis done in other qualitative methods. Most, though not all, qualitative methods begin with data analysis by coding, or breaking down and splitting up of data. Grounded theory differs from qualitative methods in that data gathering and data analysis are integrated in the

grounded-theory methodology. Grounded theory involves a multistage process, and data analysis is incorporated into even the earliest stages of the study (Oktay, 2012).

Coding means assigning data to codes that reflect themes or categories. These are simply words used to convey meanings. Creating codes in theory prior to data gathering can be problematic in grounded theory, since the analyst may, even unconsciously, force his or her data into pre-existing categories and hence be unable to see beyond prevailing paradigms in their field. Purely theoretical codes or even codes created early in the coding process should be examined to ensure that the researcher discovers any theoretical perspectives the researcher is bringing to the research. In the initial stage of coding in grounded theory, then, it is important to stay very close to the data in terms used within the world view of the respondents. Initial codes should be treated with caution (Oktay, 2012).

Open coding is the first step in coding. Open coding usually involves line-by-line coding. In the beginning of the study, the researcher should code everything, even if it seems insignificant. The truth is, the researcher cannot know at this point what is significant or insignificant, since the whole idea is that the theory should be guided by the data, not the other way around. It is helpful to code quickly and not to think too deeply as coding begins. This will help avoid any forcing. It is important not to let the work jump too quickly to an abstract theoretical level (Oktay, 2012).

Tips for Open Coding (Oktay, 2012)

- Code words and phrases that describe or evoke strong emotion
- Combine words and segments to describe actions

- Code material that reflects symbolic interaction concepts, such as a sense of self, expectation of social goals, assessment of judgments of others, and justification for actions
- Look for red flags such as phrases that reflect assumptions (e.g., “everyone knows”, “always”, “never”, and so forth)

Following the earliest stages of analysis, the researcher identifies, refines, and asks questions concerning more abstract concepts and categories suggested by already coded materials, reinforced by continuous review of the data. This is known as axial coding (Oktay, 2012).

Axial Coding. Axial coding involves further exploration of categories and concepts that appeared in the process of open coding. This form of coding looks for clues in the data about how major categories might relate to each other and brings out such relationships. In addition, it looks to identify conditions, actions, interactions, and consequences associated with each category, relating each category to any subcategories (Oktay, 2012). Figure 8 describes the differences between open and axial coding as applied in this study.

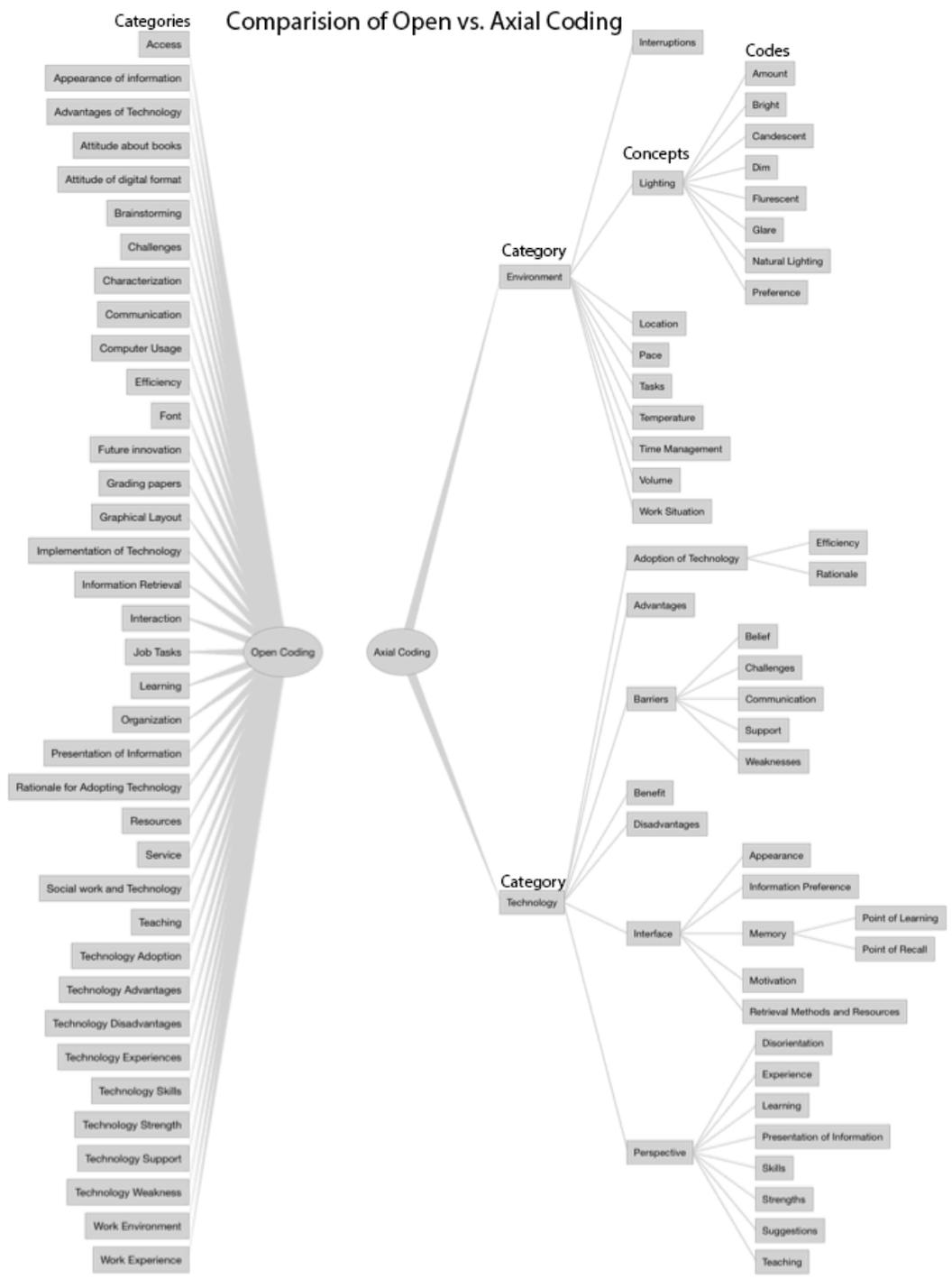


Figure 8. Open vs. Axial Coding

Figure 8 describes Open Coding categories that were identified in this study:

- Access
- Appearance of Information
- Advantages of Technology
- Attitude about books
- Attitude of digital format
- Brainstorming
- Challenges
- Characterization
- Communication
- Computer Usage
- Efficiency
- Font
- Future innovation
- Grading Papers
- Graphical Layout
- Implementation of Technology
- Information Retrieval
- Interaction
- Job Tasks
- Learning
- Organization
- Presentation of Information
- Rationale of Adopting Technology
- Resources
- Service
- Social work and Technology
- Teaching
- Technology Adoption
- Technology Advantages
- Technology Disadvantages
- Technology Experiences
- Technology Skills
- Technology Strength
- Technology Support
- Technology Weakness
- Work Environment
- Work Experience

Axial Coding identified categories, concepts, and codes in this study. Figure 8 may be displayed in outline form as follows:

1. Environment
 - a. Interruptions
 - b. Lighting
 - i. Amount
 - ii. Bright
 - iii. Candescant
 - iv. Dim
 - v. Fluorescent
 - vi. Glare
 - vii. Natural Lighting
 - viii. Preference
 - c. Location
 - d. Pace
 - e. Tasks
 - f. Temperature
 - g. Time Management
 - h. Volume
 - i. Work Situation
2. Technology
 - a. Adoption of Technology
 - b. Advantages

- c. Barriers
 - i. Belief
 - ii. Challenges
 - iii. Communication
 - iv. Support
 - v. Weaknesses
- d. Benefit
- e. Disadvantages
- f. Interface
 - i. Appearance
 - ii. Information Preference
 - iii. Memory
 - 1. Point of Learning
 - 2. Point of Recall
 - iv. Motivation
- g. Retrieval Methods and Resources
- h. Perspective
 - i. Disorientation
 - ii. Experience
 - iii. Learning
 - iv. Presentation of Information
 - v. Skills
 - vi. Strengths

vii. Suggestions

viii. Teaching

Selective Coding. In selective coding, the researcher integrates and refines a theory that has emerged in the open and axial coding stages. This involves identifying a core category or categories and relating other important categories and concepts to the core category. Once the core category is clear, the grounded-theory researcher begins to focus analysis around this core category (Oktay, 2012). Figure 9 describes selective coding as it applies to the current study.

Theoretical Saturation

Theoretical saturation occurs when no additional data are found in the process of constant comparison whereby the researcher can develop new and relevant theoretical constructs. At this point, no useful new concepts are merging and the emergent theory reflects the data from which it is drawn (Oktay, 2012).

In grounded theory, data is gathered until saturation of the core category or categories is reached. An individual category is saturated when no new information emerges during coding. No new properties, dimensions, conditions, action, interactions, or consequences are seen in the data (Oktay, 2012).

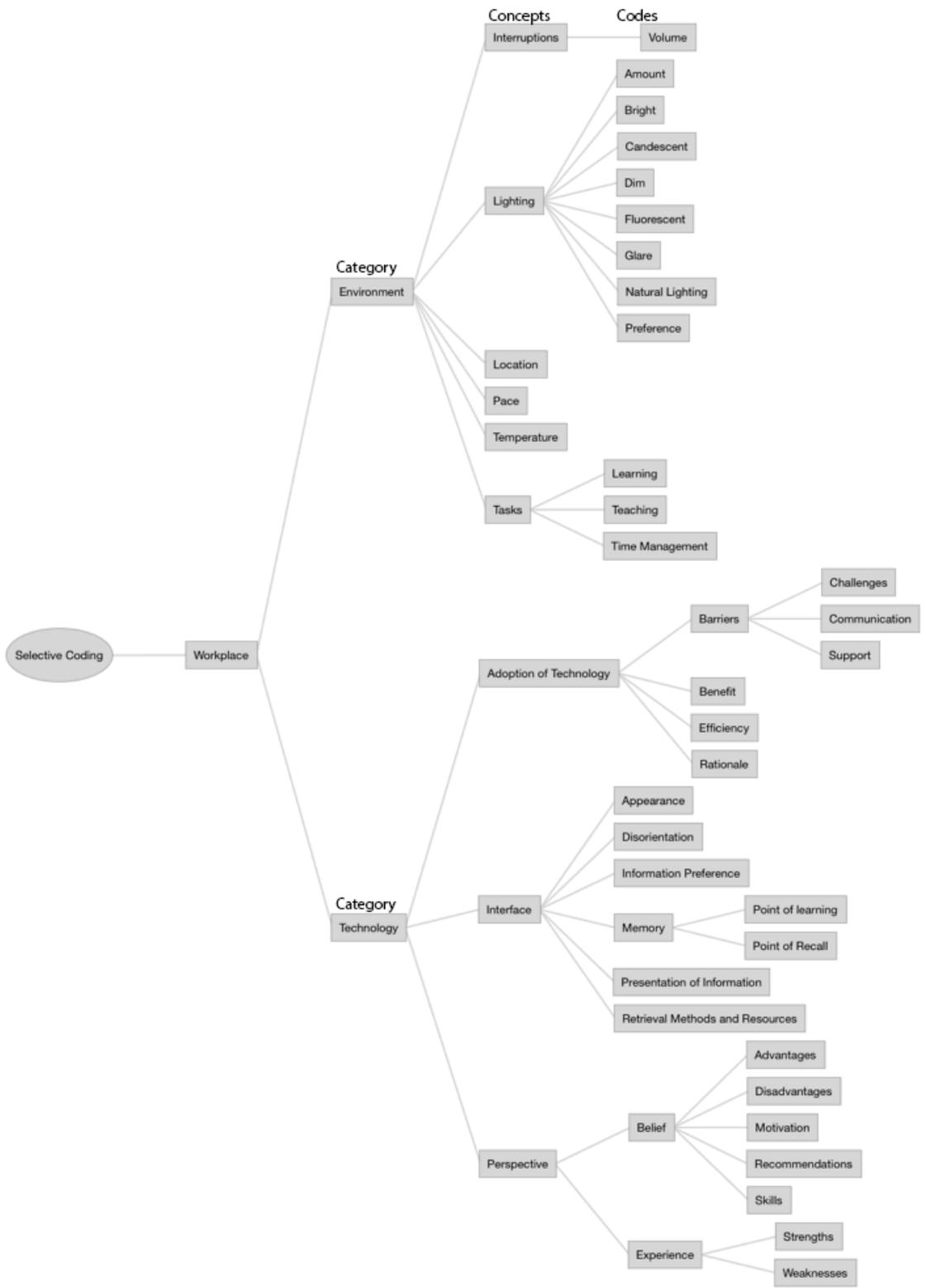


Figure 9. Selective Coding

Through constant comparison, selective coding was able to identify “Workplace” as the main heading. Figure 9 may be displayed in outline form as follows:

1. Workplace
 - a. Environment
 - i. Interruptions
 1. Volume
 - ii. Lighting
 1. Amount
 2. Bright
 3. Candescent
 4. Dim
 5. Fluorescent
 6. Glare
 7. Natural Lighting
 8. Preference
 - iii. Location
 - iv. Pace
 - v. Temperature
 - vi. Tasks
 1. Learning
 2. Teaching
 3. Time Management

b. Technology

i. Adoption

1. Barriers

a. Challenges

b. Communication

c. Support

2. Benefit

3. Efficiency

4. Rationale

ii. Interface

1. Appearance

2. Disorientation

3. Information Preference

4. Memory

a. Point of Learning

b. Point of Recall

5. Presentation of Information

6. Retrieval Methods

7. Resources

iii. Perspective

1. Belief

a. Advantages

b. Disadvantages

- c. Motivation
 - d. Recommendations
 - e. Skills
2. Experience
- a. Strengths
 - b. Weaknesses

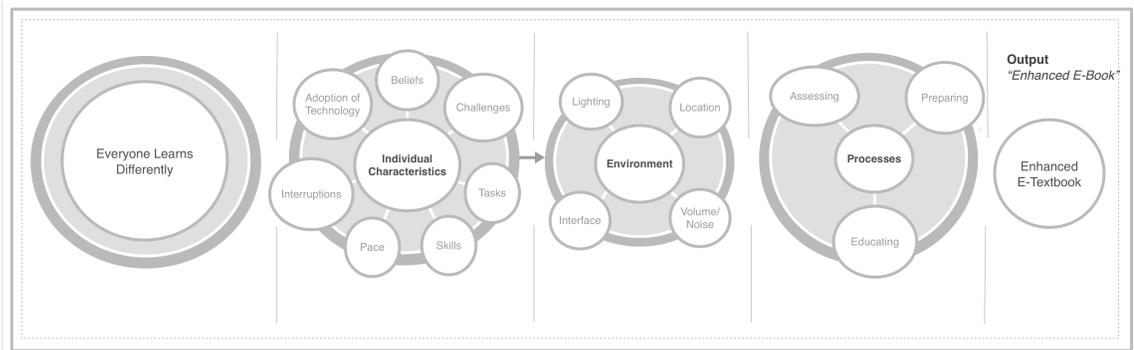


Figure 10. The Grounded Theory Basis for Enhanced E-textbook Development

When all core categories reach saturation, the theory is complete (assuming no new data is to be introduced). Once this stage was reached, it was ready to be used as a basis for e-textbook development. Figure 10 shows a high-level abstraction of the factors that enter into a grounded-theory view of the basis for enhanced e-textbook development. Given the tremendous variety of issues and concerns raised by the participants and their implications for the learning mechanism of each participant, what emerges is the conclusion that each participant (and by extension, everyone) processes and learns differently, which raises the question, “if everyone learns differently, why do we continue to teach using the same solution for all?”

This point was evident in interviews for this project, which provided a rich source of information useful in developing solutions that could incorporate all learning strategies (Figure 10 and Figure 11):

1. Individual Characteristics

- a. Adoption of technology (impacted the physical design of the enhanced textbook)

- i. Accessibility
 - ii. Efficiency
 - iii. Whether adoptees will be open and motivated to learn
 - iv. Portability
 - v. Finding needed tools

- b. Beliefs (guided choices made in subject matter presentations)

- i. [Regarding Adoption]
 1. Fear of technology
 2. Doubts about their capabilities
 3. Concerns about agendas behind technological innovation
 4. Reluctance to use technology
 5. Technology must be simplified to be useful
 6. Skepticism about technology
 7. Concern about not being knowledgeable about technology
 8. Not understanding expected outcomes
 9. Technology is a means to an end
 10. Territoriality about information sharing

- ii. [Regarding Usage]
 - 1. A feeling of disempowerment
 - 2. Worry about distraction in the classroom
 - 3. Concerns about dependence on continual connectivity
 - 4. Experiences of frustration with technology
 - 5. Technology as impediment
 - 6. Technology can be inconsistent and unreliable
 - 7. Coordinated adoption of technology is impossible in the field
 - 8. Ask for help as a last resort
- c. Challenges (guided presentation options selected for specific materials)
 - i. Easy-to-use teaching tools
 - ii. User-friendly, non-overwhelming interface with useful features
 - iii. Preoccupation with disruptions and noise.
- d. Tasks (guided thinking about how the enhanced textbook might be used)
 - i. Contacting people
 - ii. Counseling people
 - iii. Email
 - iv. Presenting to audiences
- e. Skills (guided technical choices, since users were already familiar with these applications; already familiar patterns of technology use would be more easily adopted by users)
 - i. Databases
 - ii. Email

- iii. Evernote
 - iv. Electronic resources
 - v. Internet
 - vi. Electronic Field Notebook
 - vii. Learning Management Systems
 - viii. Macintosh
 - ix. Mobile devices
 - x. MPlus
 - xi. Papers citation
 - xii. Photoshop
 - xiii. PPT
 - xiv. Presentations
 - xv. NVivo
 - xvi. SAS
 - xvii. Search Engines
 - xviii. SMS
 - xix. SPSS
 - xx. Spreadsheets
 - xxi. Word Processing
 - xxii. Windows operating system
- f. Pace (useful in designing for multiple preferred learning styles)
- i. Constant
 - ii. Comfortable

- iii. Quick
 - iv. Rate changes based on tasks and workloads
 - v. Slow
 - g. Interruptions
2. Environment
- a. Lighting (useful in considering the sorts of readers that might be targeted)
 - b. Location (useful in evaluating connections that might be possible)
 - c. Interface (useful in making designs appealing and rewarding)
 - d. Volume and noise (useful in evaluating audio and video presentation)

In addition, three learning processes identified by interviewees demonstrated what the enhanced e-textbook should be designed to support:

- Accessing information
- Educating others
- Preparing and sharing

These details of the relationship between grounded-theory and GUI development are shown in greater detail in Figure 11. In other words, based on the grounded-theory conclusions, certain graphical user interface findings were recommended for incorporation into the enhanced e-textbook.

- To aid adoption of technology, the enhanced e-textbook needs to be easy to use and accessible on many platforms
- There should be a help page or the capacity to send an email to get help when the user needs assistance using e-textbook features

- The enhanced e-textbook needs to be accessible for online or offline usage
- The enhanced e-textbook must utilize the language of social work
- There should be continuity of presentation
- There should be consistency of workflow

Other suggestions:

- Make the e-textbook useful both as a teaching tool for the student and also as a resource applicable in doing social work
- Make information accessible anytime and anyplace
- Give the user the ability to make the enhanced e-textbook full screen to eliminate distractions
- Provide a mute button
- Allow the pace of use to be self-driven by the user
- Use common, familiar application features in the user interface

	Grounded Theory	Graphical User Interface (GUI)
INDIVIDUAL CHARACTERISTICS		
Adoption of Technology:	Accessibility, Efficiency, Open & motivated to learn, Portability, Skillful in discovery	Easy of Use, Ensuring solution can be assessed through all common technology platforms
Beliefs:	Ask help as last resort, Disempowerment, Distraction, Doubtful, Fear, Freedom from continual connectivity, Frustration, Hidden Agenda, Impediment, Inconsistent, Need for purposeful implementation, Reluctant, Simplify, Skeptical, Technology is a means to an end, Territorial, Unpredictability, Unknowledgeable, Undetermined outcomes	Email & help page, Purposeful implementation in terms of goal, Offline or online access, Social Work languages is utilized and continuity is developed throughout the application Consistent workflow to retrieve information
Challenges:	Limited easy to use teaching tools, need to demonstrate applicability integration of technology in social work	Integrate tools for teaching, Demonstrates applicability integration of technology in social work
Interruptions:	Ability to work anywhere, limited writing due to interferences, preoccupied with disruptions/noise	Information is accessible any place and anywhere, the ability to turn full screen to eliminate distractions and has a mute button
Pace:	Constant, comfortable, quick, rate changes based on tasks and workloads, slow	Self driven so pace is predetermined by audience
Skills:	Databases, Email, Evernote, Electronic Resources, Internet, EFN, LMS, Macintosh, Mobile devices, MPlus, PAPERS Citation, Photoshop, PPT, Presentations, Nvivo, SAS, Search Engines, SMS, SPSS, Spreadsheets, Word Processing, Windows,	The user interface will contain the common application features mentioned from the applications to transferrable to theTextbook
Tasks:	Communicating: Contacting, Counseling, Email, Presenting Teaching: Apply relevant resources, Case-based learning & methodology, Incorporate learning objectives & measurements, Minimal evidence based research, Over-utilization of PPTs, Prefer instructor to move around than behind the podium, Using the chalkboard	Communicating: Ability to email and communication to others, Possible discussion board, Utility to be used in presentations Teaching: Apply relevant resources, Case-based learning & methodology, Clear expectations of learning objectives & measurements, Provide evidence based research, Dynamic information, Demonstrate the process of thinking
ENVIRONMENT		
Lighting	Bright, Dim, Fluorescent, Incandescent, Natural	Ability to change the lighting in the application
Location	Portability, Someone's office, Training rooms, Work from home (most write at home), Work at School	Transportable to any location
Volume/Noise:	Audible, Background Sound, Noise level is non-factor, Silence/quiet	Contain ability to have background music, mute, audio
Interface	Disorientation: Disorganization of information & presentation, Finite uniformity of applications, Information is static/need to be dynamic (geocoding), Limited knowledge of OS, Retrieval & archaic backup systems, Future Possibilities: Bring paper to life, Connectivity with other systems, Engaging and Interactive content, Incorporating webinars, Life books, Multimedia, RSS feeds, Taking an digital object & putting it in the physical world and being able to put it back in the electronic world Information of Preference: Access and triangulate current, relevant & credible sources, Ability to locate information quickly, Color consideration for color blind, Need to print Presentation of Information: Font (Arial, Helvetica, Non-serif, Times Roman), Images (cartoons, diagrams, graphics,photos), Media (Animation, Audio, Video), Small size font, Text-based, Use of color, space and perception of functionality	Disorientation: Organized and dynamic use of information & presentation, Provide uniformity of applications Future Possibilities: Bring paper to life, Connectivity with other systems, Engaging and Interactive content, Incorporating webinars, Life books, Multimedia, RSS feeds, Taking an digital object & putting it in the physical world and being able to put it back in the electronic world Information of Preference: Access and triangulate current, relevant & credible sources, Ability to find information efficiently, Color consideration for color blind Presentation of Information: Font Use Arial, Helvetica, larger font, use of color, space, and Perception of functionality

Figure 11. Grounded Theory and Graphical User Interface (GUI) Design

Combining Human-Centered Design and Grounded Theory

The relationship between grounded-theory theoretical development and the human-centered design and implementation deriving therefrom becomes clearer when viewed together visually, as in Figure 12.

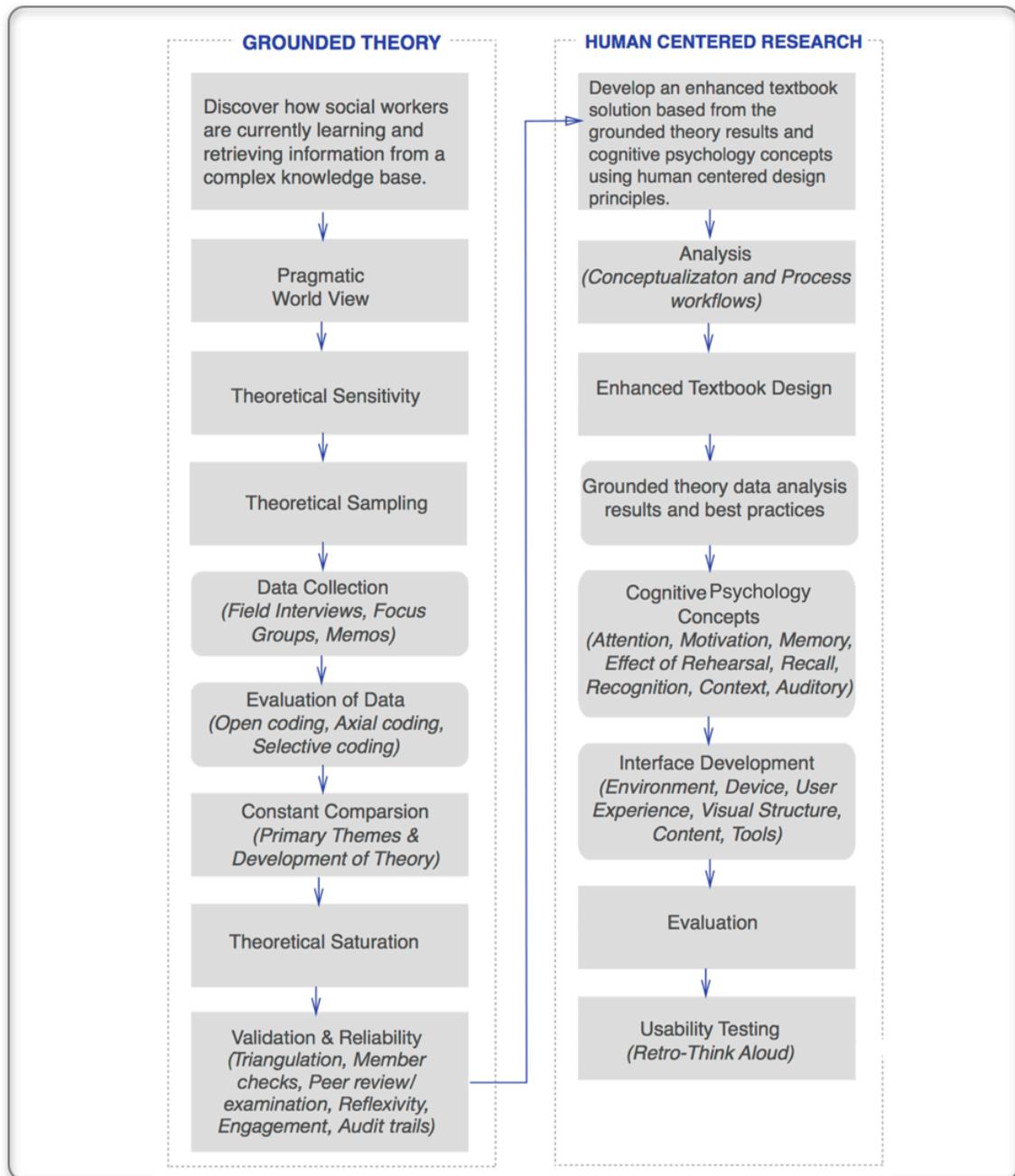


Figure 12. Grounded Theory Theoretical Development with Human-Centered Design

Chapter 4: E-textbook Development and Testing

Introduction

As stated before, the idea behind the enhanced textbook was to provide an up-to-date (and potentially updatable), portable, and easy way to retrieve information about field supervision. The content selected for the prototype e-textbook was written by Carlton Munson and is taken from his “Contemporary Clinical Social Work Supervision: A Mentoring and Modeling”. The prototype uses a small portion of the total contents of the printed book and converts that content into an enhanced textbook.

The enhanced e-textbook was initially developed using an Apple platform for mobile devices. However, the output of the e-textbook followed the EPUB3 standard, a vendor-independent XML-based standard that enabled most of the textbook prototype to be published and utilized on other platforms. The development plan was to create a first prototype that might be utilized on other platforms. The EPUB3 standard works on Android and Windows platforms as well as in Apple’s iBooks reader. In the end, there was a focus on the Apple platform, owing somewhat to limitations of time but also to the additional features the iBooks reader brings to the table. The iBook reader allows enhanced e-textbooks to be made accessible to on- and offline users once download had taken place.

The development environment used for prototype development is called iBook Author. This is an e-book development space that allows the user to create works like the e-textbook. iBook Author allows the developer to create assets including galleries, media, reviews, presentation incorporation, interactive images, 3-D images, popovers, and HTML code.

Functionality

The functionality of the e-textbook was intended to serve as a way to deliver content that can be taken in through different learning modalities (e.g., text-only, visual, auditory, etc.). The e-textbook includes images and text. No video content was included in this study. The player may additionally supply audio capability.

The main goals of e-textbook development were to produce a result that could:

- Easily access information, anytime, anywhere
- Provide information dynamically, including context-sensitive games, quizzes, checklists, and dictionary entries
- Provide visual representations of textual information regarding social work

Players

Since the EPUB3 standard was used to create the e-textbook, several different players on different platforms could be used to access the e-textbook. The e-textbook, for instance, could be published and distributed through Apple's iTunes platform as well as through Amazon's Kindle platform. For this prototype, the e-textbook was downloaded via a web link to iBooks.

One of the issues the researcher found during testing was that more of the testers seemed to be familiar with Kindle than were familiar with iBooks. In addition, the functionality of the iBooks platform itself didn't seem as user-friendly to the testers as the Kindle platform did.

User Testing

Eight participants were eventually selected to test the prototype. The ages of the participants ranged from 37 to 60 (see p. 138 for more demographic and other details). All participants owned a computer and also a mobile device of one kind or another. All indicated

that they were comfortable with a computer. Half indicated that they were completely comfortable with their mobile device. Three of 8 indicated that they were somewhat comfortable; 1 of 8 indicated that they were neutral regarding their mobile device.

All participants have a doctoral-level education; all are social workers at the University of Maryland School of Social Work.

User testing was thirty minutes long. In addition to the questions detailed below, user testing was captured in video using a portable iPevo device connected to an Apple iMac.

Questions were asked about the navigation of the e-textbook. Table 1 details the usability observations, findings, recommendations, and corresponding changes that were considered for incorporation into the e-textbook.

Table 1. Usability Observations, Conclusions, Recommendations, and Implementation

Observations	Conclusions	Recommendations	Implementation
Several participants were unclear as to how to jump back and forth between pages, and chapters.	Navigation was confusing. Finding the search page and table of contents was difficult for some participants.	Make navigation to the search page and table of contents consistent and easy from all pages.	Created two icons to put on all pages, a Table of Contents icon and a Help icon. The Table of Contents icon is the same icon used by Apple for this purpose; the Help button will explain each feature in a context-sensitive manner.

Two participants were unable to click on the links in the first chapter page because the background image obstructed their view of the links.	Finding information about chapter titles and sections was difficult at the beginning of each chapter, because a background image was too opaque and could not be made less opaque.	Remove background image.	Removed background image, leaving information about chapter titles and sections easy to navigate.
Participants were uncomfortable with a red font for hyperlinks. They are accustomed to blue as the normal color of hyperlinks.	The default red color for navigation links is not the accustomed color and also would be an issue for many colorblind users.	Change e-textbook color for navigation links from red to blue.	Changed the font from red to blue for the navigation links on the index page and throughout.
One participant who was looking for the image on the paperback version of the text was confused about where to access the book when the image in the library was not the same as they remembered.	The image of the Munson book was confusing, as it was not the same as the paperback version, which is better known.	Replace the image with the image on the cover of the paperback book.	Replaced image with the cover of the paperback book (same edition).
A majority of users from the first round of testing had difficulty finding the information they needed to navigate. In particular, they were unclear as to how to access the Table of Contents. The native iBook Author navigation is not consistently available.	It was difficult to understand how to come to and go from each section.	Enclose the Table of Contents and Help icons in a bar that appears consistently.	An icon was added that looks exactly like the consistent bar called Table of Contents and holds the Table of Contents and Help icons.

<p>One user stated that the images in the e-textbook were distracting. Many other users, however, stated that the images broke up the text and made the content more interesting.</p>	<p>A participant would prefer an all-text presentation and made a good point of wanting to be able to view just text, without images. Others felt differently.</p>	<p>An ideal solution, out of scope for this study, would be to allow the user to select options based on a learning style stored in the user profile.</p>	<p>Unable to resolve this point as it is out of scope for this study. Some users prefer all text. Some prefer all images. The book should ideally display itself in whatever learning mode you prefer.</p>
<p>Several users mentioned that the images seemed to be merely placeholders that did not serve a purpose.</p>	<p>Pictures need to have a purpose. Putting images for image's sake adds nothing to the e-textbook.</p>	<p>The images need to support the story they are trying to tell.</p>	<p>Selected images that support the story in the text.</p>
<p>Participants were looking for more definitions (in the first round of testing, the prototype didn't have all the word definitions completed).</p>	<p>Word definitions need to be completed.</p>	<p>Add remaining word definitions.</p>	<p>Added remaining word definitions.</p>
<p>One user had difficulty navigating between newly opened browser windows back to the book. The participant stated that multiple windows were confusing and that exercises should be in another screen within the book itself.</p>	<p>Bookwidgets widgets use an Apple format that opens up new browser windows when clicked, which was confusing to users.</p>	<p>Consider the use of Bookry widgets rather than Bookwidgets, since these keep the user in the book.</p>	<p>Used Bookry widgets.</p>

One participant mentioned that ongoing assessments of whether the reader had comprehended what was read would be helpful.	It was unclear until the review questions at the end of the chapter what objectives were to be gained from reading the chapter.	Add checklist at the beginning of each chapter to show the objectives to be gained from reading the chapter.	Checklist items were created to correspond to questions at the end of each chapter testing whether or not the user accomplished the desired goals.
Users didn't like blank pages in the book. They didn't understand their purpose and mentioned that this confused them as to where to find content.	Some blank pages appear that seem to be artifacts of the program: when making edits, white pages appear.	Remove the blank pages after the chapters.	Removed the blank pages.
One user was looking for quizzes in the Table of Contents and could not find them.	The quizzes were not shown in the Table of Contents.	Add quizzes to Table of Contents.	Quizzes in each chapter were referenced in the Table of Contents.
Several participants were unclear that the red-font links in the Table of Contents were clickable links to another page.	The default red font in the Table of Contents is a poor color choice (see comments above).	Change red font in the Table of Contents to blue.	Red font in the Table of Contents changed to blue.
One participant stated that Chapter 1 was confusing because images made the effect too "busy".	Chapter pages are too cluttered with images.	Remove all but essential images	Non-essential images were removed.

<p>In the matching questions, participants stated that matching words did not seem as natural as matching equivalent pictures and suggested that this needed to be changed.</p>	<p>Text matching features were confusing: participants were more used to matching images than words.</p>	<p>Replace text matching with image matching.</p>	<p>Text matching replaced with image matching.</p>
<p>Several participants mentioned that the opening video containing the introduction of the book didn't seem to serve any purpose. They preferred to have a video of someone talking about the features of the e-textbook and how to use them instead.</p>	<p>Some sort of introduction on the features of the e-textbook and how to use them was needed.</p>	<p>Record new introductory video explaining these points.</p>	<p>Recorded and incorporated new introductory video.</p>
<p>Several participants seemed to be confused because they were not clear of the purpose of the special features of the prototype e-textbook (e.g., the game, or the quiz, in each section).</p>	<p>Many of the special features were confusing. The participants did not know what they were for or how to use them.</p>	<p>Include explanations of the purpose of each special feature. Detail how and why the user might want to use them. Don't assume they know how to use them.</p>	<p>Incorporated explanations and instructions for special features.</p>

Several participants were unclear on how to use the unique features of the e-textbook. They stated that it would be helpful to have instructions as to what features exist and how to find them.	The e-textbook has unique aspects not anticipated by participants. They do not know how to find or use them.	Create a simple tutorial on how to use several of the unique aspects of the e-textbook.	Tutorial created and incorporated.
Several participants went to the Table of Contents, but could not locate the introductory video.	There is no link to the introductory video from the navigation.	Add a link to the navigation.	Link was added to navigation.
In the first round of testing, users were observed to have difficulty in navigating a chapter with many pages.	The titles refer to broad sections (e.g., chapters), within which there may be many parts. It is difficult to find a specific part of a chapter.	Break the e-textbook into short topics, to ease finding a specific location within a chapter. The titles should then refer to these topics by number.	Broke the e-textbook into short topics and included titles that refer to the topics by number.
Several users used to the Notes icon in iBook Author trying to get to the table of contents. The icon was inconsistent and confusing.	Notes icon is very confusing. It is not easily accessed from pages. It appears and disappears from page to page.	Create consistent Table of Contents and Help icons throughout the e-textbook.	Created Table of Contents and Help icons which mirror Apple's navigation practices in iBooks.
Several users tried to go to the task of "Testing Your Knowledge" exercises, but there were not found in the Table of Contents.	"Test Your Knowledge" exercises are not in the Table of Contents.	"Test Your Knowledge" exercises should be added in the Table of Contents.	Added "Test Your Knowledge" exercises to the Table of Contents.

Participants stated that they would like more opportunities to test their knowledge acquisition, such as quizzes at the ends of chapters.	There are no quizzes in the original book for each chapter.	Create quizzes to be placed at the end of each chapter for review.	Created and incorporated quizzes for each chapter.
Several users expected to be able to get information quickly; other participants preferred more in-depth information.	The e-textbook does not have a summary for each page.	Each page should have a summary.	Created and incorporated summaries of each page.
Several participants had difficulty reading the text because of the font size. One in particular asked whether or not the text could be larger.	Font needs to be larger or potentially variable by user.	Enlarge default font and explore possibilities for dynamic sizing.	Enlarged the default font. Dynamic sizing depends upon the reader employed.

Walkthrough

This section presents a walkthrough from the user's point of view of the completed enhanced e-textbook.

The user navigates to the iBooks author section (Figure 13). There, the user can find the book they want. A generic book icon was replaced with an original image of the physical book, since user feedback indicated that having a representation of the physical book was more easily recognized.

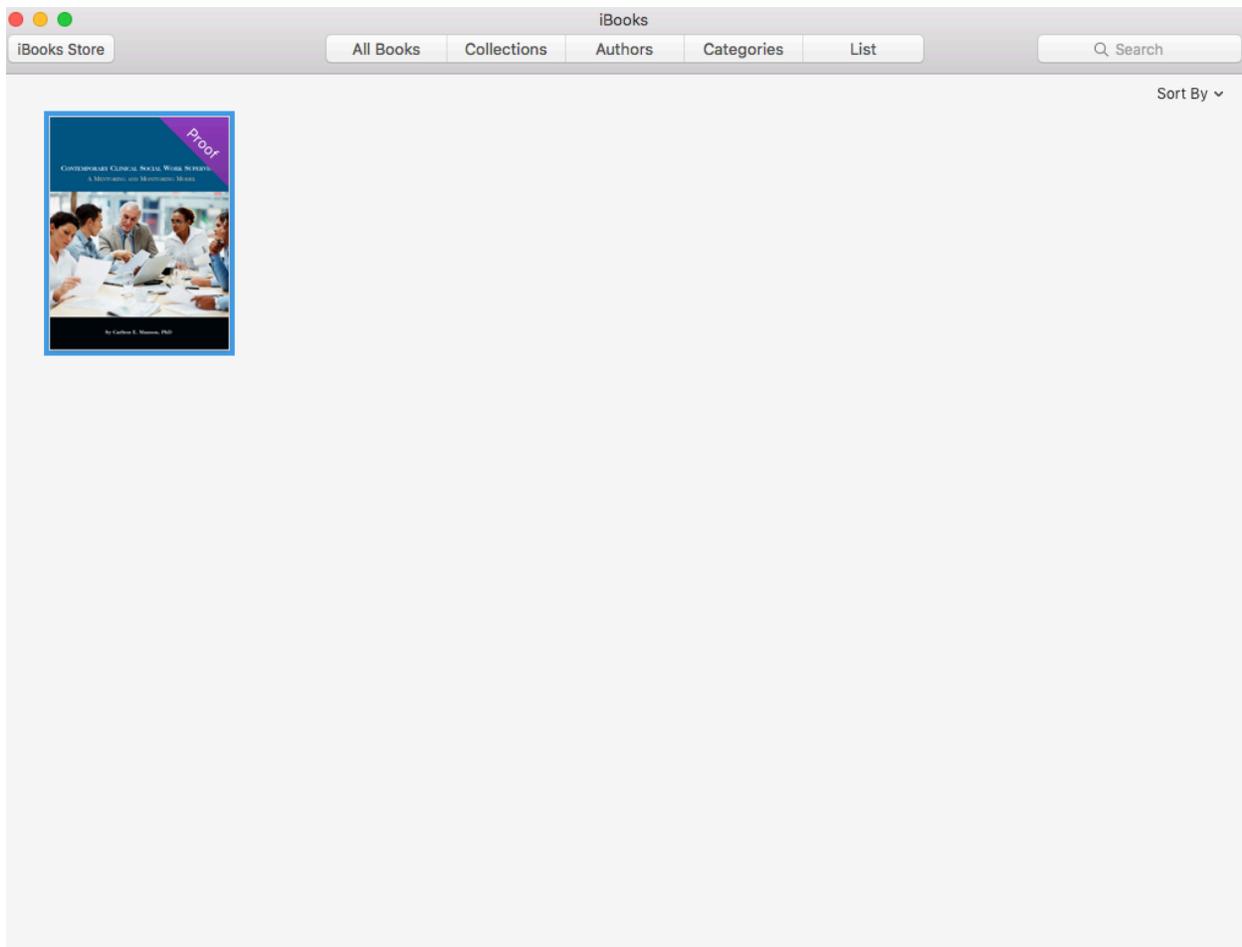


Figure 13. iBook Author Listing

The Table of Contents and navigation of the e-textbook was originally confusing for users, as the text in the table of content links was shown in a red format. This was the default in iBook Author. Because people who are color blind might not be able to view the font, however, a workaround had to be developed. That workaround was to use a blue font instead (Figure 14), which unfortunately was not as simple as just changing the color via a property. However, research in help posts for iBook Author suggested a solution.

TABLE OF CONTENTS

CHAPTER 1 (INTRODUCTION)

- ✓Assessment
- ✓Introduction to Supervision
- ✓Heritage
- ✓Need for Supervision
- ✓Changes in Professional Standards
- ✓Cost of Supervision
- ✓Clinical Practice/Supervision Defined
- ✓Activity/Practice Differentiation

CHAPTER 4 (SUPERVISEES)

- ✓Characteristics of Supervisees
- ✓Beginning Professionals
- ✓Organizations
- ✓Needs of Supervisees
- ✓Clinical Assessment and Diagnosis

CHAPTER 2 (PURPOSE)

- ✓Function of Supervision
- ✓Congruence of Perception
- ✓Foundation of Effective Supervision
- ✓Supervision Perspectives
- ✓Supervisory Practice Activity
- ✓Supervisory Thought Process

CHAPTER 5 (GUIDANCE)

- ✓Beginning Guidelines
- ✓On Becoming a Clinical Supervisor
- ✓Authority
- ✓Avoiding Supervision as Treatment
- ✓Support for Supervisors
- ✓Unanticipated
- ✓Supervision Practice
- ✓Expectations of a Supervisor
- ✓Supervise Expectations of a Supervisor
- ✓Supervise Expectations of a Supervisee

CHAPTER 3 (PRACTICE)

- ✓Style
- ✓Resurgence of Clinical Practice
- ✓Clinical Social Work in Mental
- ✓Theory Explosion
- ✓Continuing Education
- ✓Supervision Training
- ✓Stress
- ✓Ethics in Practice

CHAPTER 6 (PRACTICE STANDARDS)

- ✓Clinical Social Work Practice Standards
- ✓Use of Other Professions' Practice
- ✓Categories of Performance Expectations
- ✓Standard of Care
- ✓Practice Standards
- ✓Professional Ethics

Figure 14. Table of Contents

Another valuable feature of the e-textbook was that clicking on the magnifying glass icon brings up a search field; typing in that field brings up results of a search for the word typed in.

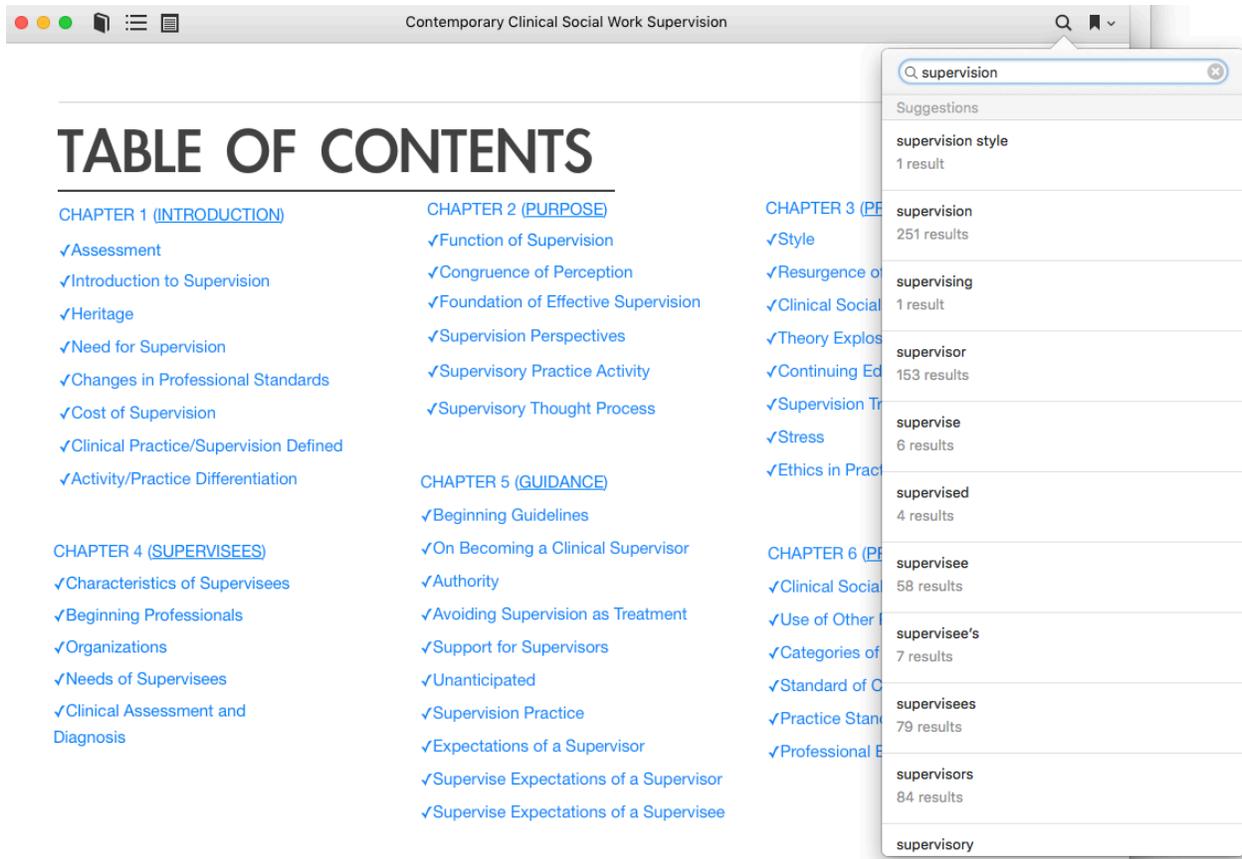


Figure 15. Word and Cognate Search

A glossary holds cross-referenced information regarding a wide array of relevant topics (Figure 16). For example, Anna Freud was included due to her work in supervision. Clicking on her name, the user could get information on Freud as well as links to related glossary terms.

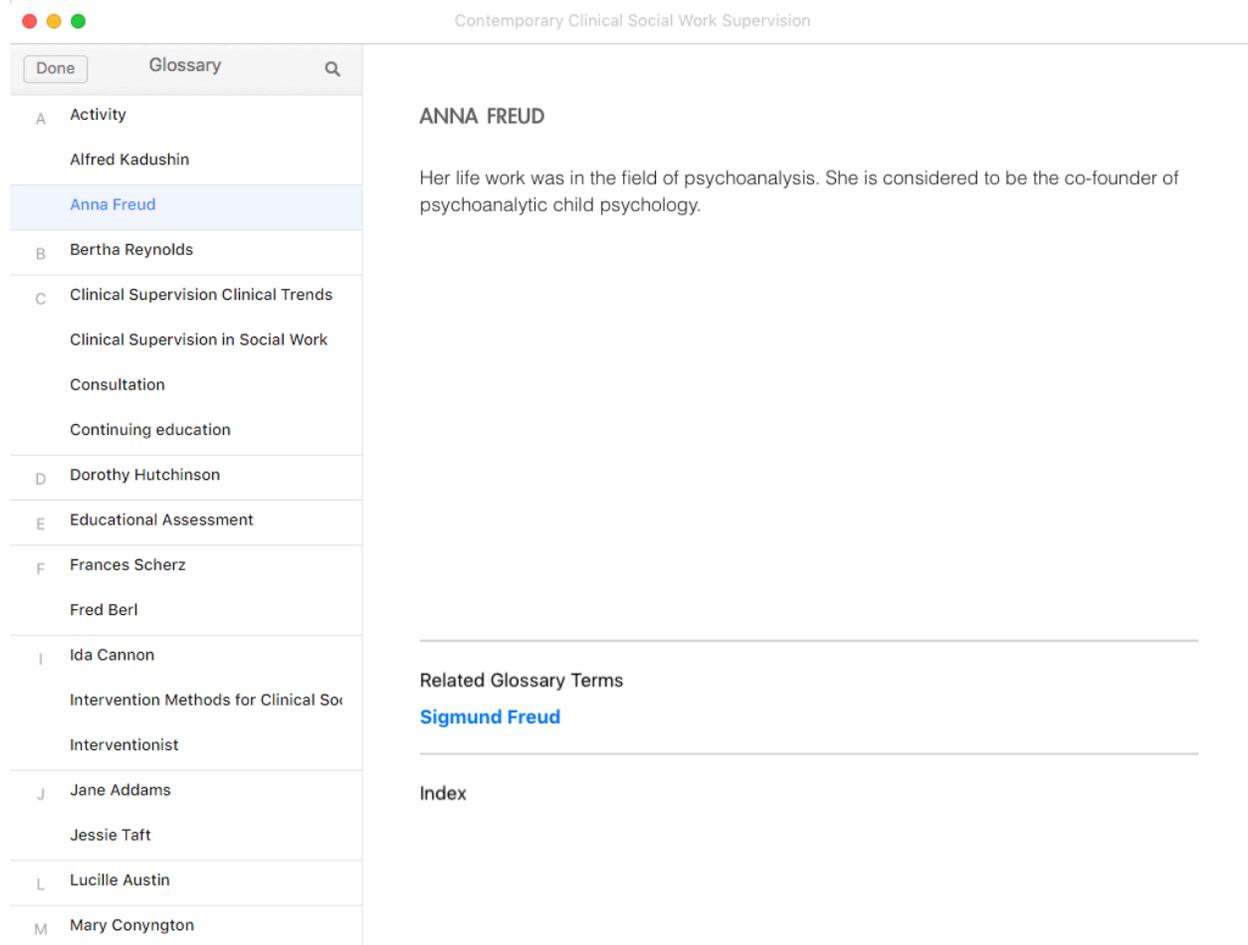


Figure 16. Glossary

Feedback from user testing suggested that the navigation bar iBook Author supplied could be confusing. Based on this feedback, Table of Contents (TOC) and Help buttons were created and supplied on each page. Wherever the user was (Figure 17), he or she could easily access the Table of Contents or ask for help to understand what features are available and where they could go to receive help.

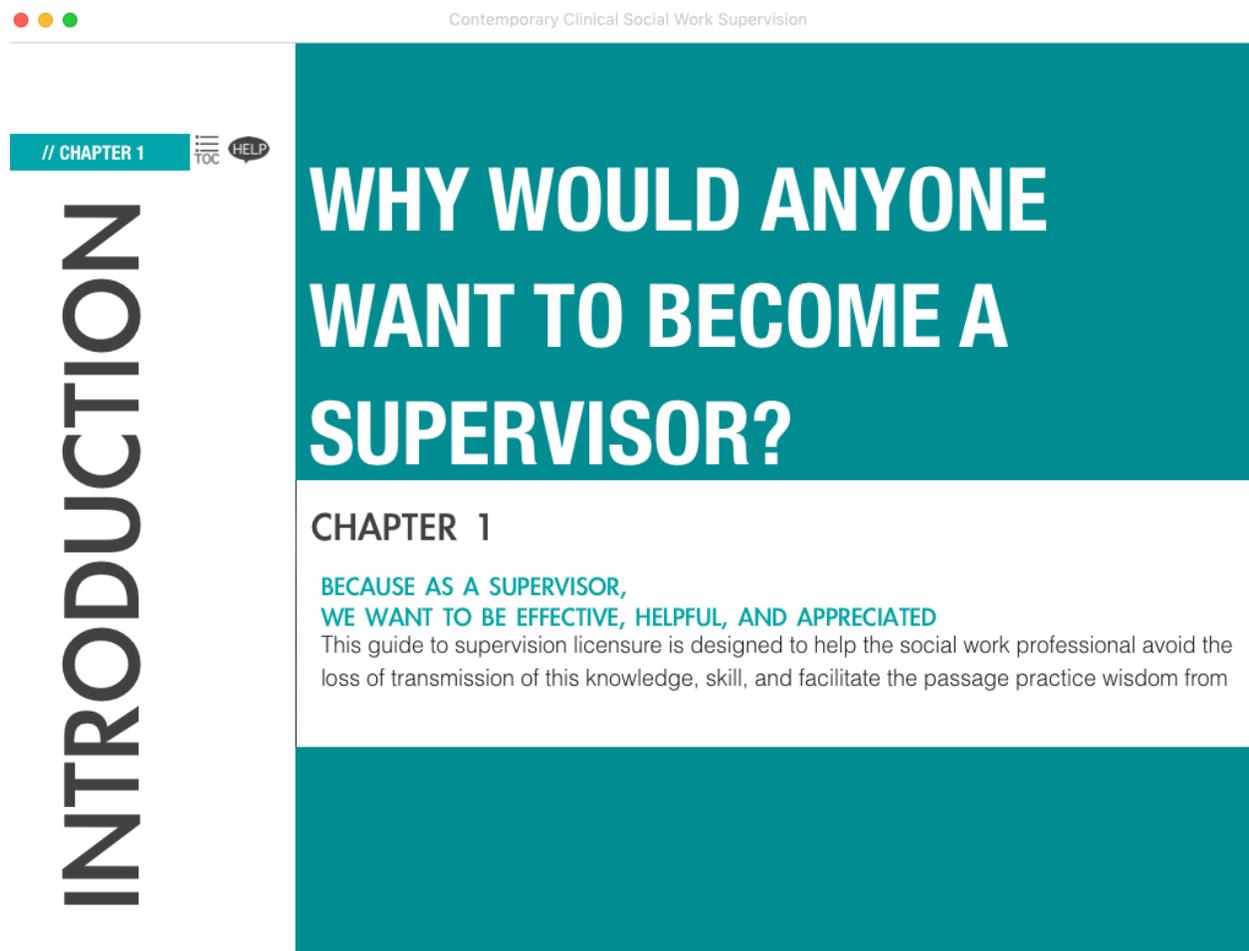


Figure 17. Table of Contents (TOC) and Help Buttons

Another method of navigating the e-textbook was for the user to pinch his or her fingers and scroll from right to left to go to the page desired, shown in thumbnails at the bottom of the screen. Yet another was to click on links supplied on the first page of each chapter (Figure 18).

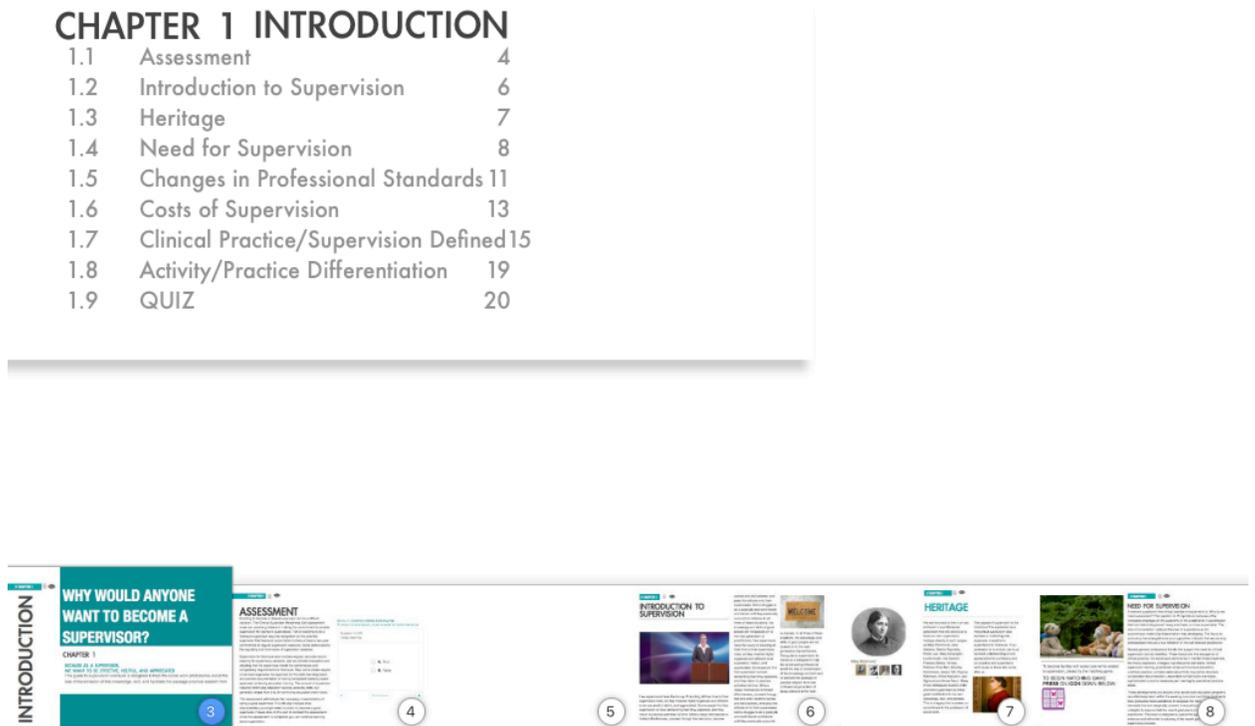


Figure 18. Chapter 1 Navigation Links

The e-textbook began with an introductory assessment (Figure 19). The original of this assessment is in the back of Munson’s book. For the e-textbook this is repositioned to be one of the first things the user is asked to do, as it brings to the fore the overall purpose of the training: the assessment helps the social worker see and understand the type of mindset needed to become a supervisor and decide whether or not they have or wish to develop that mindset. Answers could be checked.

The screenshot shows a digital interface for a chapter. At the top left, there is a teal header with the text "// CHAPTER 1" and icons for a table of contents (TOC) and a help button. Below this is the section title "ASSESSMENT" in large, bold, black letters. To the right of the title is a sub-header "REVIEW 1.1 INTRODUCTION ASSESSMENT -" followed by the instruction "TO BEGIN THE ASSESSMENT, PLEASE ANSWER THE QUESTIONS BELOW". The main content area contains three paragraphs of text. The first paragraph discusses the difficulty of becoming a clinical supervisor and the role of a self-assessment scale. The second paragraph details the requirements for licensure, including recognition by a supervisor and documentation of continuing education. The third paragraph explains that the assessment will indicate necessary characteristics of a good supervisor. Below the text is a question box with the text "Question 1 of 20" and "I enjoy teaching". The question box contains two radio button options: "A. True" and "B. False". Below the question box are two buttons: "Check Answer" and a right-pointing arrow icon.

// CHAPTER 1 TOC HELP

ASSESSMENT

REVIEW 1.1 INTRODUCTION ASSESSMENT -
TO BEGIN THE ASSESSMENT, PLEASE ANSWER THE QUESTIONS BELOW

Question 1 of 20
I enjoy teaching

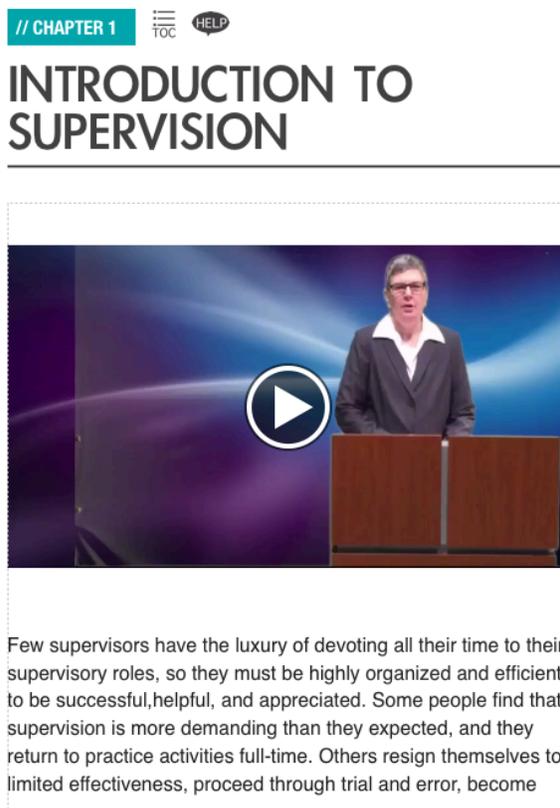
A. True

B. False

Check Answer >

Figure 19. Introductory Assessment

The introductory video (Figure 20) originally took a fairly casual approach. Among the results of user testing was that this video needed to be more professionally presented. Another result was that the focus of the video needed to be about the differences in functionality available in the e-textbook as opposed to the physical textbook, rather than a literal introduction to supervision. The users wanted to be introduced to the differences of functionality in the e-textbook, what the expectations were for their use, and how to use them.



cynical and disillusioned, and pass this attitude onto their supervisees. Some struggle to do a good job and work harder and harder until they eventually succumb to distress. In all three of these situations, the knowledge and skills of good people are not passed on to the next generation of practitioners.



Figure 20. Introductory Video

Feedback from users indicated that having pictures of the people important in the content's sections on social work history (Figure 21) helped users to build a connection to each person.

HERITAGE



Mary Richmond



We are fortunate to live in an era and work in a professional generation that still allows us to trace our own supervisory heritage directly to such people as Mary Richmond, Jane Addams, Bertha Reynolds, Porter Lee, Mary Conyngton, Lucille Austin, Ida Cannon, Frances Scherz, Yonata Feldman, Fred Berl, Dorothy Hutchinson, Jessie Taft, Virginia Robinson, Alfred Kadushin, and Sigmund and Anna Freud. Many of our colleagues studied under and were supervised by these great contributors to our own knowledge, skill, and practice. This is a legacy that sustains our commitment to the profession of social work.

This aspect of supervision is the function of the supervisor as a mentor, but supervision also involves a monitoring role, especially in relation to supervision for licensure. If our profession is to endure, we must transmit understanding of and appreciation for our history and our practice and supervisory techniques to those who come after us.



Figure 21. Portraits of Historical Figures

A feature of the e-textbook was a matching game (Figure 22) designed to assist in understanding and retaining relevant vocabulary. The original used words rather than images, as it was thought that looking for words would help build memory for the definitions needed to come away with a good foundation. Instead, users indicated that words didn't convey the messages as well as was needed, because the expectation of matching is for images and not text. Also, it was thought important to state why the user is performing this task: the learning objective was vital for the user to understand why he or she should participate in this activity.



NEED FOR SUPERVISION

A relevant question in the clinical practice of social work is: Why do we need supervision? This question is of importance because of the increased emphasis on the autonomy of the practitioner in a profession that has historically placed heavy emphasis on close supervision. The idea of consultation replaced the idea of supervision as the autonomous model of professionalism was developing. The focus on autonomy has emerged more as a supportive indicator that we are truly professionals than as a true reflection of the self-directed practitioner.

Several general professional trends that support the need for clinical supervision can be identified. These trends are: the resurgence of clinical practice, the social work dominance in mental illness treatment, the theory explosion, changes in professional standards, limited supervision training, practitioner stress and burnout prevention, unethical practice, complex external controls on practice structure, complicated documentation, expanded confidentiality mandates, sophisticated outcome measures, and new highly specialized practice areas.

These developments are beyond what social work education programs can effectively teach within the existing curriculum and time constraints. New graduates need assistance to integrate the many practice demands that are marginally covered in educational programs. It is unhelpful to assume that the recent graduate is a totally prepared practitioner. This book is designed to assist the supervisor in efforts to enhance and refine the functioning of the recent graduate through the supervisory process.

To become familiar with some core terms related to supervision, please try the matching game.

**TO BEGIN MATCHING GAME
PRESS ON ICON DOWN BELOW:**



Figure 22. A Matching Game

Feedback received indicated that having a quiz at the end of each chapter (Figure 23) created a way for the user to understand their individual progress through the material presented.

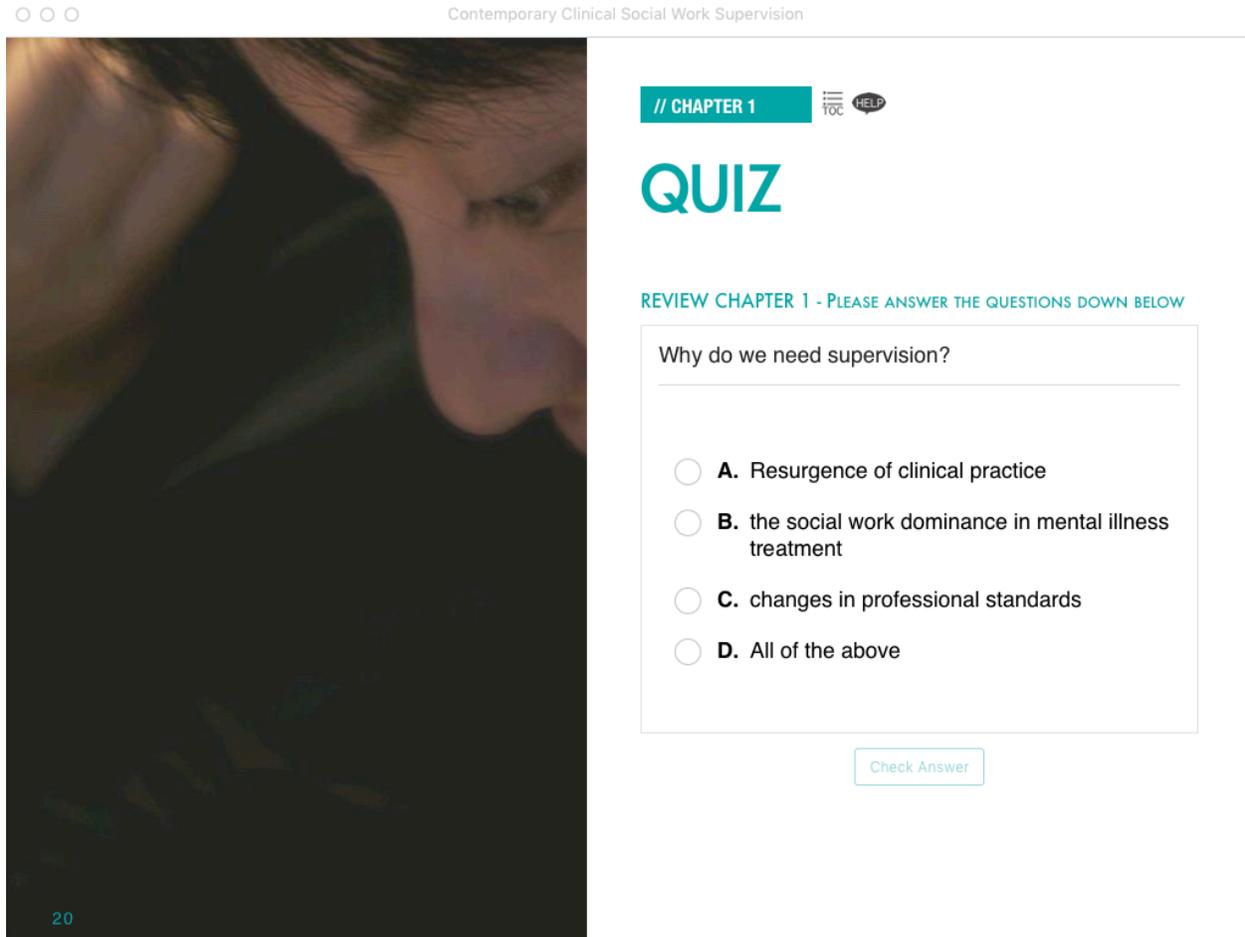


Figure 23. A Quiz

The question of how much text should be put into the prototype was interesting. Originally it was thought that less text was better, that people would respond more readily to images and activities. But feedback indicated that most of the users did not want to lose any of the text. One user, at least, stated he would want just text, but the majority of the users preferred both text and images (Figure 24 through Figure 27).

Another result of feedback suggested that the text be separated into columns so as to be less overwhelmingly dominant. A compromise that was adopted was to put a summary button on each page, so that if the user wanted to just get the gist (“executive summary”) of each page without reviewing the entire page, he or she had only to press the button.

SUPERVISORY PRACTICE ACTIVITY

// CHAPTER 2



AN IMPORTANT QUESTION IS: WHAT DO SUPERVISORS DO? A MORE DIFFICULT QUESTION IS: WHAT DO GOOD SUPERVISORS DO? OR, WHAT SHOULD SUPERVISORS DO?

SUMMARY BUTTON

THE ANSWER TO THE FIRST TWO QUESTIONS IS THAT THE FIVE BASIC ACTIONS OF THE SUPERVISOR ARE:



READING

It is essential that the supervisor keep up with the literature and be prepared to guide the **supervisee** to appropriate literature. There has been an explosion of practice research and vast expansion of practice specializations. Supervisors must devise a method to systematically keep up with the literature if they are to be effective with and helpful to **supervisees**.



WRITING

The supervisor is required to do various forms of writing in addition to charts and records. This can vary from setting to setting, but preparing reports, drafting grant proposals and writing articles for publication or presentation are common writing activities. Supervisors need to develop a system to manage all the writing tasks they must do. Supervisors can be effective role models for **supervisees** by sharing items they have written with **supervisees**.



WATCHING

Supervisors need to be keen observers. It is the same observational skills that are necessary for good clinical practice. The supervisor must be continually alert to the performance of **supervisees**. Not all observations need to become the focus of the supervision, but supervisors should be aware of more than what the **supervisee** presents to them. The supervisor who relies completely on input from the **supervisee** for judgements and decision-making is at a disadvantage.



TALKING

Most supervision activity is accomplished through discussion. The supervisor must possess skill at talking about material with **supervisees**. This is also the same skill that is needed to be an effective clinician, but the discussion and the techniques to promote participation need to be altered from the manner it is used in the practice situation. **Supervisees** become uncomfortable and frustrated when the supervisor treats them like clients.

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Figure 24. Incorporation of Text and Images in Columns with Summary Button

Feedback suggested that bulleted information along with images broke up the text material and made it a more pleasant reading experience.

BEGINNING GUIDELINES

Research conducted with supervisees has revealed a number of factors the new supervisor must be aware of and prepared to deal with. These factors

are particularly appropriate to beginning supervisors and beginning practitioners, but they apply in most cases to any supervisory situation:



Guidelines

- The supervisee will likely have limited experience applying theory, concepts, and techniques.
- The supervisor should demonstrate what the practitioner is to do.
- Emphasis should be on evaluation of the supervisee's practice as well as emphasis on evaluation of the supervision process.
- The supervisor should observe the supervisee's practice periodically.
- The supervisor should make the details of expectations clear.
- The supervisor should refrain from criticizing the supervisee's educational program or experience.
- The supervisor should avoid criticizing the profession.
- The supervisor should refrain from using supervision as a forum to criticize other professions or other agency staff.
- The supervisor should avoid comparing the supervisee's performance to that of other supervisees or other staff.
- The supervisor should monitor the supervisee's work load.
- The supervisor should share knowledge and skills with the supervisee.
- The supervisor should strive to be a model of a competent and informed master teacher and professional.

Figure 25. Incorporation of Bulleted Information

User Testing revealed that text from the traditional textbook was necessary to achieve the learned objective as well as having an image that reflected the paragraph's point.

adapt to the authority that goes along with the new role. Frequently the most skilled worker experiences a high degree of difficulty in making the transition to supervisor and focusing on getting the job done through other people.

On becoming a clinical supervisor, the shift in responsibility is often vague and unclear. Many clinical supervisors are autonomous, professional practitioners rather than exclusively subordinate employees before they become supervisors, and upon assuming supervisory responsibilities, they often continue to practice. The assumption has long been that to be a good

supervisor, you must be an active practitioner. This is undoubtedly a good premise, but it can create dilemmas for the supervisor carrying a dual role, such as the problems of time management and establishing priorities when practice demands and supervisory demands conflict.



Figure 26. Incorporation of Text and Image Reflecting the Textual Point 1

The illustrated image provides a context of the text presenting on the left side of the page.

// CHAPTER 6



GENERALLY ACCEPTED PRACTICE STANDARDS

GAPS

Generally Accepted Practice Standards (GAPS) are what the “majority” of practitioners would do or what a “reasonable practitioner” would do in a given situation. These two standards are currently in use. The “majority standard” and the “reasonableness” standard have both been applied in legal matters. The test of the “majority” standard is the most comprehensive and becoming more widely used. It holds the practitioner to the standard of asking:

“What would the majority of the practitioners in this profession, with this population, in this setting, and this locale do.” This is the standard that is recommended for the licensure supervisor to use because it is recognized in the legal arena and can be precisely applied by the clinical supervisor when assessing whether **supervisees** are meeting practice standards. The reasonableness standard is an older model and is decreasing in use because of its lack of specificity. The reasonableness standard simply asks: “What would a reasonable practitioner do in this situation.” These standards are aspirational and are often not followed by a majority of practitioners. Lamb, Sternberg, and **Esplin** in an article in *Child Abuse and Neglect* pointed out that research indicates the most effective methods do not readily become accepted practice standards, which makes it difficult to distinguish what the most effective method is and what the majority of practitioners

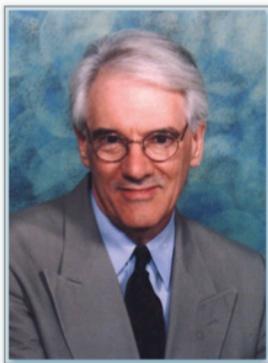
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Figure 27. Incorporation of Text and Image Reflecting the Textual Point 2

The copyright page was put at the end of the e-textbook based on feedback received that this information was appropriately placed there (Figure 27).

Carlton E. Munson, PhD



Dr. Carlton Munson, professor of clinical social work at the University of Maryland, has devoted his career to advancing clinical social practice and supervision. He has published more on clinical social work supervision than any scholar in the history of clinical social work literature. In this book he presents a comprehensive view of licensure and nonlicensure clinical supervision.

The book has been under the auspices of the Association of Social Work Boards since 1996. This new edition has been thoroughly updated line by line to meet current demands for supervision in an increasingly complex clinical practice world.



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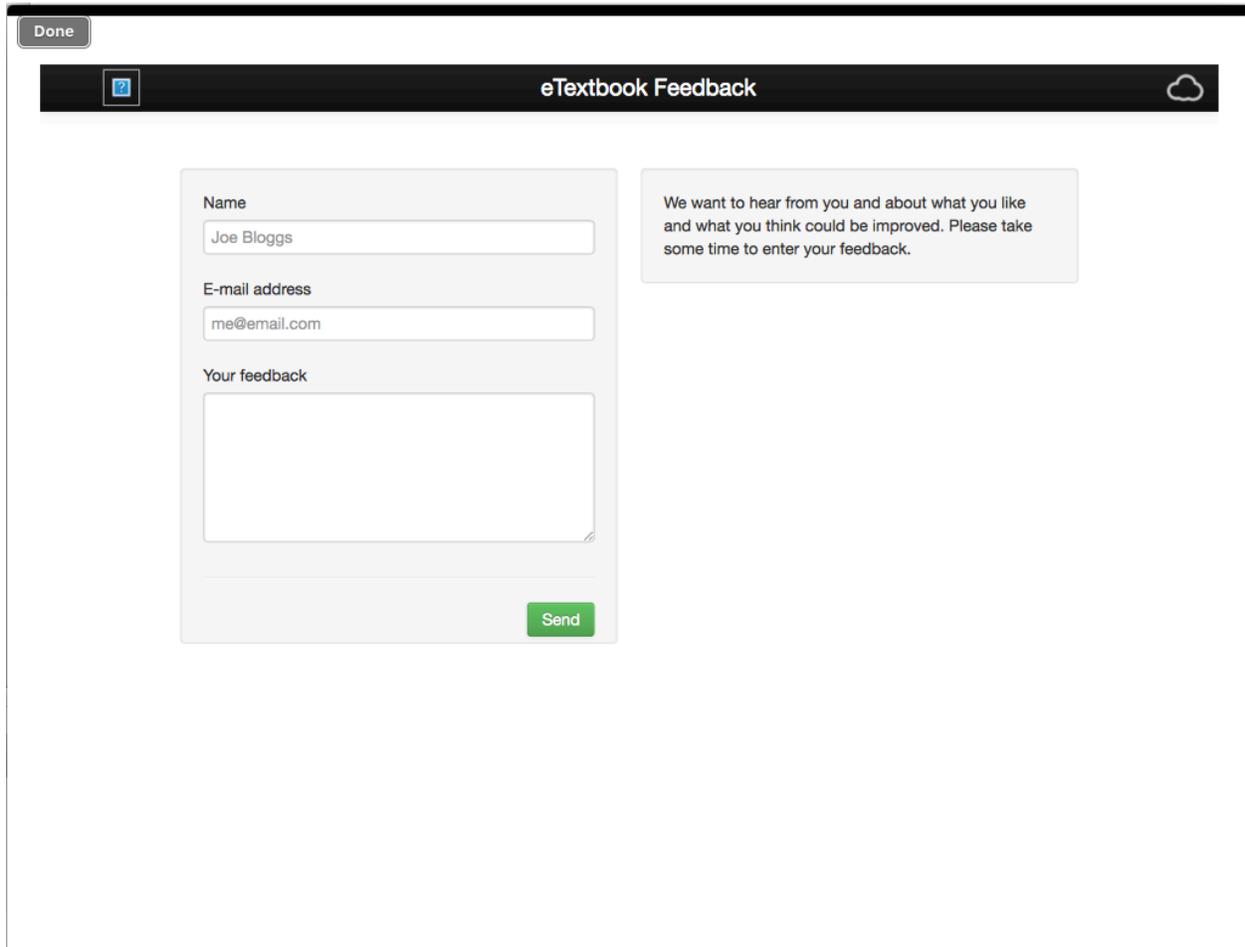
Ordering Information:
Contact ASWB at the above addresses.

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ISBN 978-0-98538982-6

At the end of the e-textbook a form was supplied allowing the user to submit feedback to the e-textbook (Figure 28), which would be automatically emailed to the author. Users were encouraged to share how they felt about the e-textbook and the information found in the book.



The image shows a screenshot of a mobile application interface for submitting feedback. At the top left, there is a "Done" button. Below it is a dark header bar with a question mark icon on the left, the text "eTextbook Feedback" in the center, and a cloud icon on the right. The main content area features a light gray feedback form on the left and a message box on the right. The form has three input fields: "Name" with the text "Joe Bloggs", "E-mail address" with "me@email.com", and a larger "Your feedback" text area. A green "Send" button is located at the bottom right of the form. The message box on the right contains the text: "We want to hear from you and about what you like and what you think could be improved. Please take some time to enter your feedback."

Figure 28. Feedback Form

Chapter 5: Conclusions

What was Learned?

The ability to present the same material in a variety of ways and to enrich the learning experience with interactivity gives e-textbook technology some significant advantages over the traditional textbook. Material can be presented to appeal to those who learn and retain better textually, visually, or (where players have audio capacity) even aurally.

Initial concerns involved whether or not social workers, who are not often represented in the literature as competent with technology, would respond well to the use of technology as a learning tool. The participants in the study were selected on the basis of openness to the use of technology in their practice (e.g., the screener on p. 122), and they responded quite well to the use of the prototype e-textbook. It seems the literature's representations might have been based on social worker's poor experiences in the technological realm. When presented with technology specifically designed for ease of use and attractiveness, at least this sample appeared to be perfectly competent.

But it is also important to recognize that there may in the end be no perfect solution for presenting content and making it engaging and attractive. Different people learn differently, and the perfect platform for all learners may therefore be impossible. But if the e-textbook could be made flexible enough to learn from a series of questions or choices just what works for each individual learner, that might be close to an ideal solution. Owing to time constraints, changes accepted from testing feedback were chosen to reflect what the majority of the audience would prefer.

In much of the literature, social workers are represented as not competent with technology. This may no longer be true: in this study, which, to be sure, involved a select group of users, participants frequently found information utilizing technology resources, checked email, retrieved voicemails, contacted others, text messaged, and introduced technology into many of their normal practices: the design of workshops, the proofreading of grants, the giving of lectures, and the grading of papers. In addition, they utilized various computing programs. Twenty-four of 25 of the participants at the time of the interviews had a cell phone. All the participants could successfully complete basic computing tasks.

It is clear based on participant responses in this study that field instructors have not always had positive experiences with technology. Here are some participant comments that reflect their perspectives on technology: “I think often times, people like ‘Oh, technology! Let's use it’ without ... That’s the wrong way to think about it. The technology should not drive the application. Your application should drive the technology.” “I would adopt new technology if it advanced the profession, if it made my day-to-day work easier, more efficient, more predictable, more reliable.”

Challenges

Many of the limitations of this study revolve around the time constraints involved. These necessitated choices that were not always what the author would have liked to be able to make. For instance, it would have been useful to create more audio-visual, video, and interactive content. In part, the limitation here was in the text chosen for use, a book focused on licensure and not containing interactive or role-playing content; but with more time, more of such content could have been developed.

The textbook of Carlton Munson is, naturally, rather text-heavy and the content doesn't readily lead to examples (e.g., role playing), since the book is geared towards licensure. However, if that content were to be supplemented with more dynamic scenarios, the book might be more appealing.

Another challenge is the e-textbook audience. It would be fairly easy to create something with all the bells and whistles of e-books, but social workers will not be likely to use it. They seem to want simple solutions; the change from a regular textbook to an e-textbook might be jarring for many. To create something that represented too great a change might "throw them over the edge", so to speak.

Another limitation was the platform chosen, iBooks iAuthor. While it initially seemed a good choice, once in the development process some difficulties surfaced in terms of the ability of the platform to respond to certain kinds of change (for example, changing font size). Other platforms might well surpass iBooks iAuthor in flexibility and performance. For example, hyperlinks are only allowable through red text. In the enhanced textbook, the researcher had to find a workaround to eliminate the red text. Blue text is preferable in that the color blue is calming and the color red presents issues for people who are colorblind. Another issue with iBooks iAuthor is the size of the text. On the Kindle platform, it is very easy to change the background color, size of the text, and lighting. Unfortunately, this is not the case on the iBooks platform, for which the iBooks iAuthor Development environment is the main EPUB environment.

Time was another challenge. It would have been a nice feature to create an offline or online choice for presentation of the e-textbook. Also feasible but out of scope due to time constraints was the ability to email, to communicate with others, to have discussion boards, and

to share annotations. Given more time, it would also have been interesting to add video features to the text and to develop more multimedia features.

Next Steps

The prototype e-textbook is the first of its kind in the social work field, but it is hard to imagine it will be the last. A younger generation is already coming up that is far more technologically savvy, and it is difficult to conclude that this will not continue to be so. Younger people are far more used to technology in their lives, and in particular to the benefits of technology in allowing for multimedia presentation. The combination of interactivity, text, video, and audio is normal for them, and increasingly will become the standard for textbooks in a variety of fields. The addition of game-like scenarios involving role-playing and feedback is also a part of their daily lives and will eventually move into the educational sphere. Utilization of all these features of technology will improve their learning experience and make it more relevant to what they do every day.

Based on the limited literature to date, research has not yet clearly demonstrated that e-books are a positive technology for use in learning. Enhanced-textbook information should be meaningful and be able to be incorporated into the everyday life of a field instructor. Reviewing advantages, disadvantages, and future research regarding e-books would hopefully reveal improved ways of developing an enhanced textbook that could lead to positive learning experiences for field instructors.

Field instructors need to be supported in learning and retaining information. In order to help them acquire and maintain knowledge through mobile learning, questions such as how quickly information can be learned, how long it is stored in memory, and how quickly it is lost to memory should be explored. To build mobile interfaces designed to facilitate long-term learning,

there is a need to investigate the role of memory as regards attention, motivation, and retention for adults utilizing mobile devices. In addition, interfaces addressing issues of usability and inaccessibility may reduce some barriers to effective social-work education.

Students may perform well on tests and exams, but this does not prove that the information will be retained. It is not enough to study for hours with the intention that the information read be retained: there is a need to ensure that study methods are working effectively. One method of ensuring the information is retained includes writing down questions and verifying their answers. Performance is evaluated by completing a task, and learning is demonstrated by completing the task more rapidly or effectively (Baddeley, 2002). This suggests that the enhanced textbook might in the future incorporate some sort of checkpoint mechanism when reviewing material, which will indicate to the learner whether or not the information they have read has been retained. In addition, the idea that technology might incorporate periodic reminders and quick-study activities might contribute significantly.

Verification that the human-computer interface facilitates learning is another next step. The key components of attention, motivation, retention, and cognitive load will need to be emphasized in future evaluations of the e-textbook.

The multimedia capabilities of mobile devices allow an enhanced textbook to take advantage of auditory and visual memory techniques to improve retention. There is a strong tendency to supplement other aspects of memory by verbalizing and by turning visual tasks into combined visual/verbal tasks to allow for verbal coding (Baddeley, 2002). An additional contribution using visual memory is visual imagery: learners create an image of each item they want to remember (Matlin, 2005). Based on this information, it will be helpful to incorporate

auditory and visual memory cues in the further development of the enhanced textbook. Such memory cues must be present at the time of learning (Baddeley, 2002).

Also, the idea of software that might learn how its user learns is one that should be explored. Is the user best served by visual, auditory, or text content? How does the user use interactivity and game-playing? If the software can build up a profile of its user, this might be useful not only to other e-textbooks on the same subject, but potentially to other programs as well.

The development of a more complete enhanced-textbook prototype, further research, including field research, beta testing of a provisionally complete enhanced-textbook solution, and measurement in the field of benefits, including improved learning and retention, constitute the practical next steps of this work; in other words, continuing to develop the e-textbook into a full-featured solution for learning in social work.

The conversion of textbooks to e-textbooks is a good start. Ultimately, however, one would want to begin creating works explicitly for the new medium and making use of all of its potential.

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Consent Form For Participation in Human Research for Interviews

INFORMED CONSENT FOR PARTICIPATION IN HUMAN RESEARCH

"Investigating the Role of an Enhanced Textbook: Using the Principles of Human Centered Design."

Contact Information:

Principal Investigator: Julie Gilliam (Doctoral Student) | julie.gilliam@ubalt.edu | 410-585-7094
Department: Division of Science, Information Arts and Technologies
Faculty Advisor: Dr. Deborah Kohl | dkohl@ubalt.edu | 410-837-4698
Address: University of Baltimore | 1420 N. Charles St. Baltimore, MD 2120

You are invited to take part in a research study entitled "Investigating the Role of an Enhanced Textbook: Using the Principles of Human Centered Design." This research does not foresee any risks or discomforts during this study. By participating you will be improving the interface functionality and human user design of this application.

Participation in this study requires an approximately 25-minute time commitment. Your participation is voluntary. You may decide to stop participating at any time. It is your right to refrain from answering any question you do not want to answer during the interview.

The interview will be video and audio captured. You can be assured of your confidentiality by destroying the files within one year after the transcription of the interviews. The only individuals having access to the files, transcription files, signed informed consent forms, and questionnaire is the Principal Investigator and the University of Baltimore Institutional Review Board (IRB). Your privacy will be protected to the fullest extent of the law.

You will not be paid anything for your participation in this project, and your participation will not cost you anything.

The principal investigator, Julie Gilliam (the student researcher) and Dr. Deborah Kohl (the faculty advisor) has offered to answer all questions regarding your participation in this research study. If you have any problems or questions about this study, feel free to contact Julie Gilliam at (julie.gilliam@ubalt.edu or 410-585-7094) or Dr. Deborah Kohl at (dkohl@ubalt.edu or 410-837-4698).

VOLUNTARY PARTICIPATION

I have read the information in this consent form including risks and possible benefits. All my questions about the research study have been answered to my satisfaction. I consent to participate in the study. I authorize the use and disclosure of my information and video and audio to the party listed above of this consent form.
Please keep a copy of this document in case you want to read it again.

SIGNATURE FOR CONSENT (You will be given a copy of this consent form to keep.)

The above-named investigator has answered my questions and I agree to be a research participant in this study. By signing this consent form, I am acknowledging that I am at least 18 years of age.

Participant's Name: _____ Date: _____

Participant's Signature: _____ Date: _____

Investigator's Signature: _____ Date: _____

For questions about rights as a participant in this research study, contact the UB IRB Chair: Eric Easton, Chair, University of Baltimore Institutional Review Board, 410-837-4874, eeaston@ubalt.edu.

INFORMED CONSENT FOR PARTICIPATION IN HUMAN RESEARCH

Consent Form For Participation in Human Research for User Testing

INFORMED CONSENT FOR PARTICIPATION IN HUMAN RESEARCH

"Investigating the Role of an Enhanced Textbook: Using the Principles of Human Centered Design."

Contact Information:

Principal Investigator: Julie Gilliam (Doctoral Student) | julie.gilliam@ubalt.edu | 410-585-7094
Department: Division of Science, Information Arts and Technologies
Faculty Advisor: Dr. Deborah Kohl | dkohl@ubalt.edu | 410-837-4698
Address: University of Baltimore | 1420 N. Charles St. Baltimore, MD 2120

You are invited to take part in a research study entitled "Investigating the Role of an Enhanced Textbook: Using the Principles of Human Centered Design." This research does not foresee any risks or discomforts during this study. By participating you will be improving the interface functionality and human user design of this application.

Participation in this study requires an approximately 45-minute time commitment. Your participation is voluntary. You may decide to stop participating at any time. It is your right to refrain from answering any question you do not want to answer during the interview.

The interview will be video and audio captured. You can be assured of your confidentiality by destroying the files within one year after the transcription of the interviews. The only individuals having access to the files, transcription files, signed informed consent forms, and questionnaire is the Principal Investigator and the University of Baltimore Institutional Review Board (IRB). Your privacy will be protected to the fullest extent of the law.

You will not be paid anything for your participation in this project, and your participation will not cost you anything.

The principal investigator, Julie Gilliam (the student researcher) and Dr. Deborah Kohl (the faculty advisor) has offered to answer all questions regarding your participation in this research study. If you have any problems or questions about this study, feel free to contact Julie Gilliam at (julie.gilliam@ubalt.edu or 410-585-7094) or Dr. Deborah Kohl at (dkohl@ubalt.edu or 410-837-4698).

VOLUNTARY PARTICIPATION

I have read the information in this consent form including risks and possible benefits. All my questions about the research study have been answered to my satisfaction. I consent to participate in the study. I authorize the use and disclosure of my information and video and audio to the party listed above of this consent form.

Please keep a copy of this document in case you want to read it again.

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Participant's Name: _____ Date: _____

Participant's Signature: _____ Date: _____

Investigator's Signature: _____ Date: _____

For questions about rights as a participant in this research study, contact the UB IRB Chair: Eric Easton, Chair, University of Baltimore Institutional Review Board, 410-837-4874, eeaston@ubalt.edu.

INFORMED CONSENT FOR PARTICIPATION IN HUMAN RESEARCH

University of Baltimore's Exempt Determination



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June 13, 2012

Julie Gilliam
Science Information Arts and Technology
University of Baltimore
1420 N. Charles Street, AC 200
Baltimore, MD 21201

Dear Ms. Gilliam:

This letter serves as official confirmation of the Institutional Review Board's review of your protocol for a study entitled "Investigating the role of multi-touch textbook using the principles of human centered design," submitted for review on May 14, 2012 and revised on May 26, 2012.

The Institutional Review Board considered your request and concluded that your protocol poses no more than minimal risk to participants. In addition, research involving the use of widely acceptable survey procedures where the results are kept confidential and the questions pose minimal discomfort to participants is exempt from IRB full-committee review per 45 CFR 46.101 (b) (2). As a result, the Institutional Review Board has designated your proposal as exempt.

Investigators are responsible for reporting in writing to the IRB any changes to the human subject research protocol, measures, or in the informed consent documents. This includes changes to the research design or procedures that could introduce new or increased risks to human subjects and thereby change the nature of the research. In addition, you must report any adverse events or unanticipated problems to the IRB for review.

If you have any questions, please do not hesitate to contact me directly by phone or via email.

As authorized by Eric B. Easton, J.D., Ph.D.
Chair, Institutional Review Board

Marc P. Lennon
Coordinator, Institutional Review Board

cc: Dr. D. Kohl

University of Baltimore
1420 N. Charles St.
Baltimore, MD 21201-5779

University of Maryland Baltimore's Exempt Determination



University of Maryland, Baltimore
Institutional Review Board (IRB)
Phone: (410) 706-5037
Fax: (410) 706-4189
Email: hrpo@som.umaryland.edu

EXEMPT DETERMINATION

Date: July 19, 2012

To: Bruce DeForge
RE: HP-00053281
Type of Submission: Initial Review
Type of IRB Review: Exempt

Determination Date: 7/19/2012

This is to certify that University of Maryland, Baltimore (UMB) Institutional Review Board (IRB) has reviewed the above referenced protocol entitled, "*Investigating the role of an enhanced textbook using the principles of human-centered design.*"

Your protocol has been determined to be exempt under 45 CFR 46.101(b) from IRB review based on the following category(ies):

45 CFR 46.101(2) Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior, unless: (i) information obtained is recorded in such a manner that human subjects can be identified, directly or through identifiers linked to the subjects; and (ii) any disclosure of the human subjects' responses outside the research could reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, or reputation.

The IRB made the following determinations regarding this submission:

- No specific determinations made.

In conducting this research you are required to follow the requirements listed in the INVESTIGATOR MANUAL. Investigators are reminded that the IRB must be notified of any changes in the study. Research activity involving veterans or the Baltimore VA Maryland Healthcare System (BVAMHCS) as a site, must also be approved by the BVAMHCS Research and Development Committee prior to initiation. Contact the VA Research Office at 410-605-7131 for assistance.

In conducting this research you are required to follow the requirements listed in the INVESTIGATOR MANUAL. Investigators are reminded that the IRB must be notified of any changes in the study. Research activity in which the VA Maryland Healthcare System (VAMHCS) is a recruitment site or in which VA resources (i.e., space, equipment, personnel, funding, data) are otherwise involved, must also be approved by the VAMHCS Research and Development Committee prior to initiation at the VAMHCS. Contact the VA Research Office at 410-605-7000 ext. 6568 for assistance.

Participant Screener for Participation in Human Research

PARTICIPANT SCREENER FOR PARTICIPATION IN HUMAN RESEARCH

Investigating the Role of an Enhanced Textbook: Using the Principles of Human Centered Design

Contact Information:

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INTRODUCTION

You are invited to possibly participate in a research study entitled "Investigating the Role of an Enhanced Textbook: Using the Principles of Human Centered Design." By participating you will be improving the interface functionality and human user design of this enhanced textbook.

Participation in this study requires an approximately 45-minute time commitment located at the University of Maryland School of Social Work in Baltimore, Maryland. Your participation is voluntary.

Does this sound like something that interests you? Before I schedule a session with you, I will need you to answer a few questions.

GENERAL QUESTIONS

1. Are you a female or male?

_____Female

_____Male

2. Which of the following best describes your age?

_____18 to 20

_____21 to 25

_____26 to 39

_____40 to 59

_____60 to 70

_____71 and older

PARTICIPANT SCREENER FOR PARTICIPATION IN HUMAN RESEARCH

PARTICIPATE SCREENER FOR PARTICIPATION IN HUMAN RESEARCH

3. Which of the following best describes your highest level of education?

- Some high school TERMINATE
- High school graduate TERMINATE
- Some College TERMINATE
- College graduate CONTINUE
- Postgraduate (MA/PhD) CONTINUE
- _____ Other TERMINATE

TECHNOLOGY WILLINGNESS TO INNOVATION QUESTIONS

4. Do you use a computer?

- Yes CONTINUE
- No TERMINATE

5. Do you use a mobile device?

- Yes CONTINUE
- No CONTINUE

6. Besides reading email, what typical activities do you do on a computer or mobile device?

- Gaming/entertainment CONTINUE
- Reading the news CONTINUE
- Shopping/banking CONTINUE
- Graphic design/digital pictures CONTINUE
- Programming/word processing CONTINUE
- Reading books electronically CONTINUE
- _____ Other CONTINUE

PARTICIPANT SCREENER FOR PARTICIPATION IN HUMAN RESEARCH

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6. Besides reading email, what typical activities do you do on a computer or mobile device?

- Gaming/entertainment
- Reading the news
- Shopping/banking
- Graphic design/digital pictures
- Programming/word processing
- Reading books electronically
- _____ Other

7. Which of the following best describes you?

- I usually avoid using new technologies
- I generally take a while to use technologies
- I use new technologies the same time other people do.
- I tend to use new technologies somewhat before others do.
- I usually use new technologies before anyone else.

8. How would rate you overall ability to use technology?

- I can use technology without assistance whenever I need to.
- I need minimal assistance when using technology.
- I need a lot of assistance when using technology.
- I can't use technology without assistance.

Thank you for your answering these questions. If your background matches the people we are looking for in the study, we will contact you by email.

PARTICIPANT SCREENER FOR PARTICIPATION IN HUMAN RESEARCH

Participant Screener Criteria for Participation in Human Research

GUIDELINES FOR SCREENING INTERVIEW PARTICIPANTS

Investigating the Role of an Enhanced Textbook: Using the Principles of Human Centered Design

RESPONDENT PROFILES

Before developing the enhanced textbook for practitioners, face-to-face interviews will be conducted to seek to understand how they learn, share, and retrieve information in social work practice. The questions will focus on dissemination and retrieval of information, experience of using of technology, and exploring possible changes when using technology in practice.

The researcher will interview approximately 20 to 30 practitioners. The participant's age will be between 21 and 70 years of age, who have completed at least a bachelor degree in liberal arts or social sciences. The participants will be recruited from the University of Maryland School of Social Work, social service agencies, and community organizations.

The rationale for selecting participants who want to try an alternative method would be to have users who are open to learning a new way to accessing information. The focus would be to assist participants who are having difficulty learning and retrieving information with the paper format.

Does this sound like something that interests you? Before I schedule a session with you, I will need you to answer a few questions.

GENERAL QUESTIONS

1. Are you a female or male?

Female CONTINUE

Male CONTINUE

2. Which of the following best describes your age?

18 to 20 TERMINATE

21 to 25 CONTINUE

26 to 39 CONTINUE

40 to 59 CONTINUE

60 to 70 CONTINUE

71 and older TERMINATE

PARTICIPANT SCREENER FOR PARTICIPATION IN HUMAN RESEARCH

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3. Which of the following best describes your highest level of education?

- Some high school TERMINATE
- High school graduate TERMINATE
- Some College TERMINATE
- College graduate CONTINUE
- Postgraduate (MA/PhD) CONTINUE
- _____ Other TERMINATE

TECHNOLOGY WILLINGNESS TO INNOVATION QUESTIONS

4. Do you use a computer?

- Yes CONTINUE
- No TERMINATE

5. Do you use a mobile device?

- Yes CONTINUE
- No CONTINUE

6. Besides reading email, what typical activities do you do on a computer or mobile device?

- Gaming/entertainment CONTINUE
- Reading the news CONTINUE
- Shopping/banking CONTINUE
- Graphic design/digital pictures CONTINUE
- Programming/word processing CONTINUE
- Reading books electronically CONTINUE
- _____ Other CONTINUE

PARTICIPANT SCREENER FOR PARTICIPATION IN HUMAN RESEARCH

Permission Request Letter for Use of Text



Julie Gilliam, D.Sc. Candidate
Senior Instructional Technologist
School of Social Work
University of Maryland
525 W. Redwood Street
Baltimore, MD 21201

Dear Dr. Carlton Munson,

I would like your permission to use the most current "*Contemporary Clinical Social Work Supervision: A Mentoring and Monitoring Model*" book for my doctoral research on "Investigating the role of an enhanced textbook using the principles of human centered design."

Given these pressures, and current mechanisms for training and educating social workers, the proposed study examines whether an enhanced textbook on an iPad might facilitate the learning and information retrieval of a complex, practice-based body of knowledge.

To illustrate a complex, practice-based body of knowledge, I would like your approval to use the *Contemporary Clinical Social Work Supervision book*. The study will focus on if having practice-based information developed as an enhanced textbook on a mobile device will make it easier for practitioners to find information.

Munson, Carlton. (2012). *Contemporary Clinical Social Work Supervision: A Mentoring and Monitoring Model*. Virginia: H.B.P., Incorporated.

Thank you very much.

Sincerely,
Julie Gilliam

A handwritten signature in black ink that reads "Julie Gilliam".

Date: August 8, 2012

Permission Letter for Use of Text from Dr. Carlton Munson

Carlton E. Munson, PhD
Professor
School of Social Work
University of Maryland-Baltimore
525 West Redwood Street, Baltimore, MD 20201
Telephone: 410 706-3602

August 10, 2012

Julie Gilliam, D.Sc. Candidate
Senior Instructional Technologist
School of Social Work
University of Maryland
525 W. Redwood Street
Baltimore, MD 21201

Dear Ms. Gilliam:

In response to your letter of 08/08/2012, this is to grant you permission to use content from my book, *Contemporary Clinical Social Work Supervision: A Mentoring and Monitoring Model*, as part of your doctoral dissertation research on "Investigating the Role of an Enhanced Textbook Using the Principles of Human Centered Design."

Sincerely,

Carlton E. Munson, PhD, LCSW-C

Carlton E. Munson, PhD, LCSW-C, Professor
University of Maryland Baltimore
School of Social Work

Participant Letter for Interviews for Faculty Liaisons

Dear Faculty Liaisons,

I am currently a doctoral student at the University of Baltimore and work full-time at the University of Maryland School of Social Work as a Senior Instructional Technologist. I started out as social worker in my undergraduate education and then found that my passion and talents are in technology and instructional aids. Working here at the School of Social Work I have been able to merge these two interests.

For my doctoral dissertation I am conducting a research study, which will examine whether an enhanced textbook (digital book with videos, audio files, animations, and graphics) on an iPad might facilitate the learning and memory of a complex, practice-based body of knowledge (*Contemporary Clinical Social Work Supervision: A Mentoring and Monitoring Model*" book). After speaking with the Office of Field Education it is clear that faculty liaisons could be a significant participant in bridging the gap between social work and technology.

Therefore I am asking for your assistance. Having now received IRB approval, I can begin conducting interviews for this study. The interviews will be approximately 20 minutes and will be followed up with an additional focus group session approximately two weeks later. I could really use your assistance and participation in this study. You are in the 'ideal role' to impact on the development of this enhanced textbook. The feedback from the interviews will drive the design and user interface of the enhanced textbook. The second phase of this process will be to develop the enhanced textbook and conduct user testing.

If you are willing to participate in this project and improving the design of a mobile textbook application, please email me at JGilliam@ssw.umaryland.edu. If you have additional questions about this project please contact me.

Thank you for your time and consideration to help contribute to this study.

Sincerely,

Julie Gilliam, D.Sc. Candidate
Senior Instructional Technologist
School of Social Work
University of Maryland
525 W. Redwood Street
Baltimore, MD 21201
410-706-5972
jgilliam@ssw.umaryland.edu

An Interview Guide for Research

Interview Guide - Investigating the Role of an Enhanced Textbook: Using the Principles of Human Centered Design

Interview ID: ___ - ___ - ___ - M - M - D - D - Y - Y

Specific Aims

(1) Describe the practitioner's traditional paper format methods for learning and retrieving information in social work practice.

(2) Describe the practitioner's current tasks, work processes, and environmental factors of the practice setting.

(3) Identify the practitioner's technology skills, mobile device use, and motivational factors for adopting new technology.

Research Questions

(1) How do enhanced textbooks on an iPad facilitate learning and information retrieval of a complex knowledge?

_____ Informed consent signed by study participant. Copy left with study participant.

Next, I have several personal history questions about you.

BIOGRAPHICAL INFORMATION

Age: How old are you?

Level of Education: What is your highest level of education?

Work: Briefly describe your work experience.

GENERAL COMPUTER & MOBILE DEVICE INFORMATION

a) Do you own a computer? Yes or No

b) Do you own a mobile device? Yes or No

c) Please describe your comfort level when using your computer?

Very comfortable	Somewhat comfortable	Neutral	Not very comfortable	Not at all comfortable
5	4	3	2	1

d) Please describe your comfort level when using your mobile device?

Very comfortable	Somewhat comfortable	Neutral	Not very comfortable	Not at all comfortable
5	4	3	2	1

These next questions are general but I might ask you to explain in more detail your answer to the question. Feel free to state what first comes to mind and feel free to go back and discuss in more detail if you need to further explain your answer.

This study is concerned with understanding how practitioners currently learn and retrieve information in social work practice.

CURRENT INFORMATION PROCESS

1.0 INQUIRY: Please describe a typical workday.

2.0 INQUIRY: Please tell me about the routine tasks and activities related to learning and acquiring new knowledge.

2.1 INQUIRY: How often do you complete these routine tasks and activities?

2.2 PROMPT: Does this occur once every day, once a week?

3.0 INQUIRY: Describe the normal appearance, design, and presentation of your work communicated in a typical day of work.

4.0 INQUIRY: Discuss any challenges or factors of how knowledge has been presented in social work practice when trying to learn and retrieve information.

5.0 INQUIRY: Please tell me about any changes you might make to the current information process in social work practice.

LEARNING & RETRIEVAL

6.0 INQUIRY: Please tell me about a particular experience in which you had to learn and retrieve information related to your job.

7.0 PROBE: Explain your retrieval methods when trying to recall the knowledge necessary to complete specific tasks related to social work practice.

ENVIRONMENT

8.0 INQUIRY: Please describe your work environment.
(Illustrate the typical pace, noise level, and lighting conditions of your work environment.)

9.0 INQUIRY: Discuss any environmental factors that might impact learning or retrieval of information.

TECHNOLOGY USE & SKILLS

10.0 INQUIRY: Describe your technology skills related to social work practice.
(Include both your strengths and weakness).

11.0 QUESTION: What are the major advantages with using technology in social work practice?

11.1 QUESTION: What are the major disadvantages with using technology in social work practice?

FUTURE TECHNOLOGY ADOPTION

12.0 INQUIRY: Please explain your rationale for adopting new technology.

13.0 INQUIRY: Please explain your motivation for adopting new technology.

Research Identity Memo

The purpose of this memo is to make you examine your goals, your experiences, assumptions, feelings and values as they relate to your research and to discover what resources and potential concerns your identity and experience may create.

What prior connections (social and intellectual) do you have to the topics, people, or settings you plan to study?

The topics I plan to study are mobile devices, learning, and content and design of mobile technology. The people I will be interviewing are social workers who have been field instructors. The settings I will examine will be where social workers learn and retrieve information. My prior connection to these is the fact that I was a Child Protective Service Worker and Foster Home Finder, so I am familiar with social work profession. Based on my own experience, I have concluded that not all people learn best in the same way.

How do you think and feel about these topics, people, or settings?

I am extremely passionate about technology and how technology can facilitate learning for those who struggle. I have had my own struggles and have found tools to help me overcome issues that I have in trying to learn and retrieve information. My conclusions about learning are not based on empirical evidence but my own experiences and what I've seen in supporting users.

I think social workers are often misunderstood as to their accomplishments and their ability to do whatever it takes to find a solution regardless of the lack of resources they are given. They are not ones to ostentatiously speak of their impact or advocate the difference they make in our communities. They are given little support by what tools are available in becoming more

effective and efficient in their daily tasks. These are observation-based conclusions; I have no other evidence supporting these statements.

I think that is interesting that there is literature pointing to the fact that social workers need to get on the bandwagon and to understand technology. This literature points out what they need to know but doesn't tell them how. I also think it's important that social workers are involved in creating technical solutions that work for them. It's been my experience even when given technology and resources, social workers are not shown the most effective ways to use that technology or those resources.

I think mobile technology can be beneficial in the environments in which social works practice. I think having the ability to learn and retrieve information anytime, anywhere, and to be able to do it using images, text, and video can provide alternative ways to learn and retrieve information. I think that current teaching method work for the people who use paper and are not familiar with other technologies. I think that once exposed to the tools that can offer more flexibility and different ways of learning, they may be able to retain more information and access information more effectively.

I am clearly biased when it comes to Apple's Macintosh products. I think Apple designs better human interfaces than the industry standards, and that their products are easier to use. They are, however, more expensive so they're not accessible to everyone. I am open to looking at what is available on other platforms.

In my experience, the Mac's operating systems for their mobile technology and laptops are far superior. I do, however, think that viruses and security will eventually come around to vulnerabilities in Apple's operating systems. I think Apple is not doing a good job of educating

our community on protecting themselves using virus software. I think that's going to cause a problem in the future.

Social work practice settings seem to be very fast-paced. Lighting is limited, the noise level is high. Based on my experience of 20 years ago and on talking to my peers, it still seems that social workers learn their craft from more experienced social workers. They often don't learn from their supervisors, because there is not time to get the support they need. So it's very important to build relationships with senior members of their team to get the information they need. If they don't have relationships or build them, they don't have the support they need.

What assumptions are you making, consciously or unconsciously, about these?

When I started this research project, I was convinced electronic textbooks could help everyone learn and retrieve information. I was fairly certain that this technology was going to change the way in which social workers look at paper and make them want to embrace technology. After some initial discussions with my friends and my colleagues, I am now skeptical that social workers are going to easily embrace the use of electronic textbooks. They love paper and what I've found is people who struggle with learning don't like paper. People who love paper don't want to change it anytime soon. I think I was biased initially (and I was rightly questioned by my chair about my bias) that the introduction of electronic textbooks was going to work.

What do you want to accomplish and learn by doing the study?

I want to learn by doing the study how social workers learn and retrieve information. I want to know if they would be willing to adopt electronic textbooks. I noted that some social workers have fear of technology so I'm hoping that they possibly might overcome that fear. I

want to try something new. I also want to know if creating learning-condition variables in the interface that are empirically defined will facilitate learning and retrieval. I also want to know if the changes that occur when technology is not used hinder or help the learning and retrieval of information.

The purpose of this exercise is not to write a general account of your goals, background, and experiences. Instead, identify those goals and experiences, and beliefs and emotions that connected these, that are most relevant to your planned research, and reflect on how these have informed and influenced her research. The memo is intended mainly for your benefit.

What prior experiences have you had that are relevant to your topic or setting?

My prior experience is from work and personal experience. During my educational journey I have constantly struggled with learning and retrieving information. So I have a lot of experience from a struggled learner perspective. But I do not have experience from someone who doesn't struggle. I also have experience teaching others how to learn technology and showing them the different tools that are available to help facilitate learning and retrieval. I've seen that when they have embraced technology and viewed the positive impact it has on their efficiency and learning.

What assumptions about your topic or setting resulted from these experiences?

I assume everyone loves Apple. I assume everyone wants to embrace technology. I want everyone to love technology. I want everyone to see the value of technology. I want them to overcome when something happens: it's not a major crisis. I want them to understand that if issues arise, it's not a reflection on them and that they can move past it and still see the value of technology. I assume that social workers will benefit from mobile technology. I assume that if

they were given those resources, they would want those resources. I assume it's going to be easier for them to use the new technology suggested than to use the current technology. I assume they are motivated to learn and want to use what resources are given to them.

What goals have emerged from these, or have otherwise become important for your research?

The goal that is emerged thus far is to gain a greater understanding of the process of how social workers learn and retrieve information. It would also be to find out whether or not social workers are more likely to adopt or reject this new technology. Does having this new up-to-date technology enhance the profession, or does add to more chaos? Are people willing to learn and are motivated to embrace new technology, or would they rather live in a cave? I would also like to learn whether we technology people are in touch with what it is social workers need, and whether the esthetics we think are important are important to them. I want to learn if all they really need is a tool for teaching and not a tool for being in the field.

How have these experiences, assumptions, and goals shaped your decision to choose this topic, and the way you are approaching this project?

I think the reason I chose this topic is that I have a great interest in learning and mobile technology. I believe getting information anytime, anywhere, on a device that has an easy-to-use interface can facilitate learning and retrieval information. I also believe that if you create something using human design principles, the usability of the interface will lead to more adoption of innovation. I have found tools that helped me learn and I'm passionate in trying to show others that these tools can help them as well.

What potential advantages do you think the goals, beliefs, and experiences that you described after your study?

I am hoping the results of the study will predict that people want to be able to use electronic textbooks and that they will become more effective in learning and retrieving information. It is my goal that they would adopt this technology and more effectively learn and retrieve information in the field of social work practice. It is my hope that social workers will want to embrace technology and see there is a purpose in using technology in their field. I would hope they have a positive experience with using enhanced textbooks and that it would give them a different insight that might make them want to embrace other technologies.

What potential advantages do you think these may create for you, and how might you do with these?

I think there is a potential that more people will want to have enhanced textbooks and that from this study some best practices can be created to implement more enhanced textbooks. I would hope that we will learn what works and what doesn't, so we can do a better job of developing enhanced e-textbooks in the future.

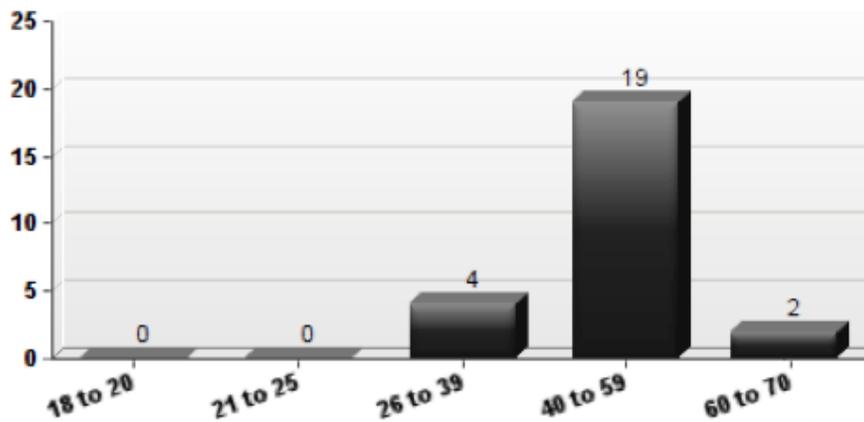
Participant Screener Criteria for Participation in Human Research Results

Summary: Twenty five participants were chosen for the grounded-theory portion of this study; 17 of 25 were female. Nineteen were between the ages of 40 and 59. Four were between 26 and 39 and two were between 60 and 90. All participants had received a PhD or postgraduate education. All participants use a computer and all but one use a mobile device.

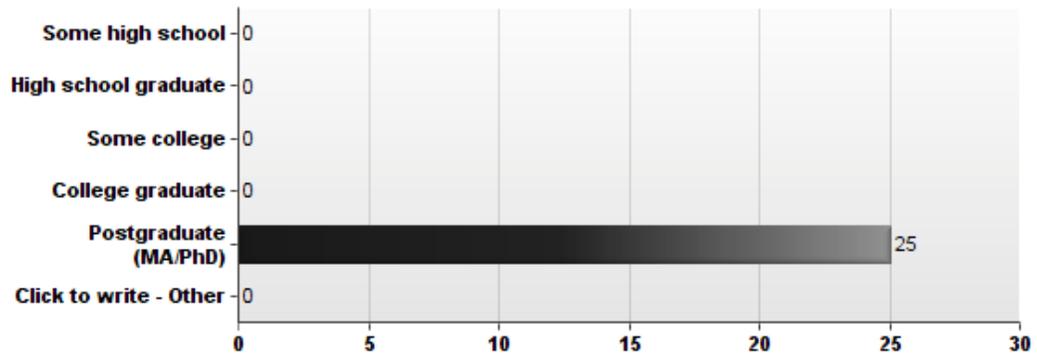
1. GENERAL QUESTIONS: Are you a female or male?



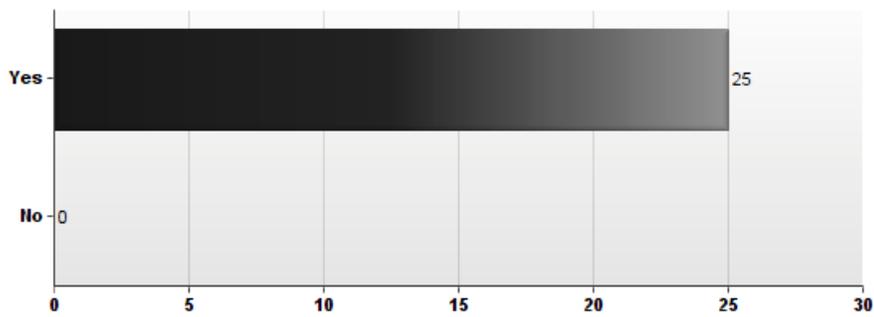
2. Which of the following best describes your age?



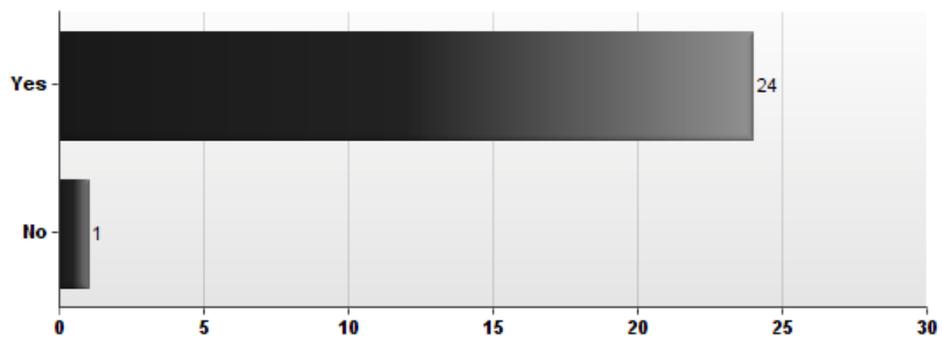
3. Which of the following best describes your highest level of education?



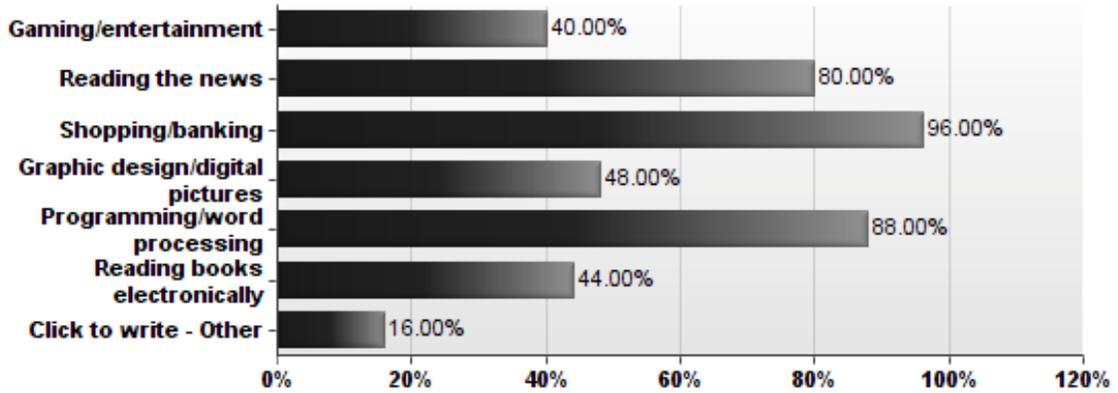
4. Do you use a computer?



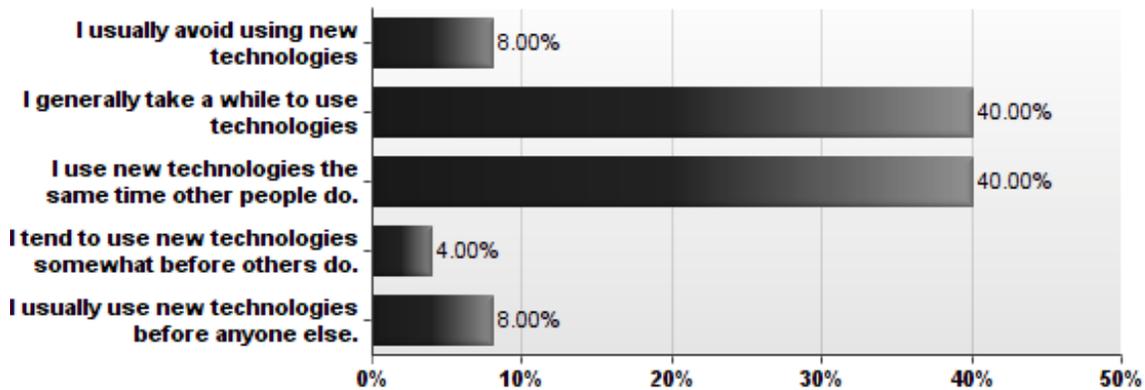
5. Do you use a mobile device?



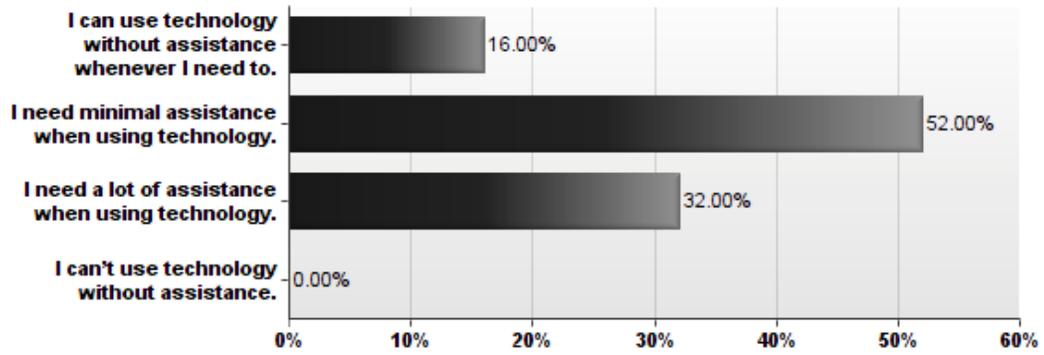
6. Besides reading email, what typical activities do you do on a computer or mobile device?



7. Which of the following best describes you?



8. How would rate your overall ability to use technology?



Coding (Environment)

ENVIRONMENT (LIGHTING, LOCATION, AND VOLUME/NOISE)		
Coding	Concepts	Category
Usually I like light and I like candescent light versus the fluorescent.	Incandescent	Lighting
I like a lot of lighting.	Bright	
It's too bright, yes. I don't like it at all. In fact, I have lamps in my office. They don't give enough light, so I have to get more. Overhead lights give me a headache.	Sufficient	
The lighting is fine. It's fluorescent.	Fluorescent	
Lighting is kind of the bane of my existence. I do use fluorescents; I don't love them.	Do not like	
I would prefer it darker than it is, but I think if I really thought about it and designed my space ... (laughter) Which I will never do, I would probably go incandescent lighting and not the overhead fluorescent route.	Dim - prefer incandescent lighting	
I prefer lights that are dim.	Dim	
Lighting conditions, I hate fluorescents.	Dislike Fluorescent	
I have a lamp in my office; I turn those off the minute I walk in the office. So I like decent light, but not super bright fluorescenty, it drives me crazy.	Dislike Fluorescent	
When it's too bright I get headaches.	Too bright - get headaches	
I spent a lot of time with my light off in my room. I have a window, that's what I like for the natural light. I'm not a fan of fluorescence.	Dim prefer natural light	
Yeah, I like the lower light environment. I'm staring at the screen all the time. I'm always looking at a screen so I'm having light blasted in my face.	Dim - Lower light environment	
Usually, in lower light really, especially when I'm working here. I don't like fluorescent lights	Dim - Lower light environment, Do not like fluorescent	
Well, I do not like bright light.	Do not like bright light	
... I will say the lighting where I am, we get a large amount of natural light even though there is fluorescent at the desk. It's kind of nice to be able to look outside a lot.	Natural	
Not really bright. These lights kind of bothered me for a while, but not too bright, but not dark.	Sufficient	
Good lighting, those kinds of things, but I don't like anything that confines me physically. I like to move around.	Sufficient	
I do have windows, which I like very much. Actually the lightning, I can do something about	Natural	
I spent a lot of time with my light off in my room. I have a window, that's what I like for the natural light. I'm not a fan of fluorescence.	Natural - do not like fluorescence	
I like natural light; I try to keep the florescent lights off because I get migraines.	Natural - do not like fluorescence	
Natural Lighting - I brought in my own lamp, which is just a dimmer light. Sometimes I'll put the overhead lights on if it's too dark, but I like as much natural light as possible.	Natural	
I'll use my home office because that's where I do the majority of it. It's kind of a backlit office. There's no overhead lights. There's no direct light on me. They're around me but not on my head. I have a huge picture window. That's my light source.	Natural	
Yeah, it did. It did have an overhead light, but in a way, it just wasn't enough. It wasn't natural, so I was always sleepy. Now, I have a window (Laughs) in addition to, I can do [inaudible 00:19:47] the lights, whatever.	Natural	
Lighting? It's never too bright. For me, the brighter, the better.	Consider amount of	
It was bright, adequately bright, yeah.	Bright	
I actually probably prefer bright lights	Bright	
When it's too bright I get headaches.	Dim - get headaches if too bright	
They went and they replaced the bulbs. When they replaced them they were so bright I jokingly say, it feels like a tanning salon.	Too bright - feels like a tanning salon	
I have a bright light. My preference would be bright light.	Bright	
Yes. It's just like the light	Bright	
like a lot of lighting.	Bright	
If I'm working here, I have an office like this with this kind of lighting	Bright	
Well, I do not like bright light.	Bright	
The lights are, it's pretty bright down there.	Bright	
No, to me this is like, "Whew!" but I like table lamps, the yellow light. It also helps me with the glare from the computer.	Bright	
Good lighting, those kinds of things, but I don't like anything that confines me physically. I like to move around.	Bright	
Lighting is a big issue for me, and I'm working on that.	Preference of Lighting	
Lighting isn't a problem at all for me.	No Preference	

Coding	Concepts	Category
A lot of what I do would be in, like, training rooms around the state. Global departments of social services, everybody has a training room, so a lot of it is in a training room. Then the one-on-one stuff I'm in someone's office. I wouldn't be otherwise I might be in the study where a student might be doing a home visit. That's not one of the teachings. You know what I mean, you think it would be after that, then coming back to some place that's private. I would say ...	Training Rooms, someone's office	Location
So I find I'm working at home a lot. So I will teach on Mondays, work at home on Tuesdays until I teach at UMBC, meetings on Wednesday, and Thursdays I work at home.	Work from home, Teach at School and UMBC	
Well, I don't like to be tied down to a particular locations, so making sure that it's portable in some way. That's important	Portability	
Right. Well, okay, it depends on where I'm working, because I kind of split my time between working here and working at home.	Work from home and school	
I don't write here.	Don't write at the school	
I can't do it. I have to be home. I mean I can do committee work, meeting minutes, like busy work, and that's what I try to schedule is meetings and busy work when I'm on campus	Write at home, committee work, meeting minutes at work.	
I don't work here in terms of writing.	Don't write at the school	
When I am in my office, as you can see, I have dum-da-da-dum! ... My favorite color on the wall, so I have a ... and I always have background music for some reason. I want to be very, very clear. When I am in my office here on campus, I'm emailing, I'm returning phone calls, I may be making changes to my syllabus.	Daily work occurs at School	
I'm usually not in my office writing.	Don't write at the school	
I don't like a lot of noise. I don't like noise at all, because it distracts me—my ADHD. I like a large screen. I like quiet. Like an office at home. I didn't tell you that. I have an office at home; I work there a lot.	Prefer quiet atmosphere	
It's very quiet. I mean I can shut the door and my wife doesn't come in there if she's home. She's a nurse, but she's off sometimes and she's home, and I'll stay on the computer sometimes all day, just doing stuff, writing. I write a lot.	Prefer quiet atmosphere	
My work environment is all over the place. I can work quietly in an office with no noise; I could be in a coffee shop with music and people walking around.	Noise Level doesn't matter	
There's a lot of noise just in the office. I have my door open all the time. I almost never close my door so I'm pretty tolerant of noise.	Tolerant of noise	
Yeah, well, at home, I typically put on music and tried really relaxing, kind of background music.	Need Background Noise	
Workspace here at work, I haven't had any music or anything on in the background, mostly because I don't know if I'm going to disturb other people. If I'm working at home, I actually usually have some type of noise. Either the TV's on in the background and I'm not really paying attention to it or I have music playing, and I think that's just from growing up in a noisy household. I like noise around me. A couple times in my office, I just put headphones on and listen to the Democratic National Convention speeches while I'm doing something else. I do like some level of noise	Need Background Noise	
Yes, I don't like noise.	Prefer quiet atmosphere	
Oh, it has to be quiet if I'm really focusing. I am a wreck trying to write something for sure.	Prefer quiet atmosphere	
No, I do not have audio when I'm working. All quiet, at least when I'm writing.	Prefer quiet atmosphere	
No, not at all. If I'm grading papers or even if I'm reading, I can have noise in the background. Not writing, because I can't concentrate and put things together. Reading is not that easy for me.	Background music is grading papers but need quiet for writing.	
I just work in, like, an office much like this. I'm kind of a semi clean office ... some people would say my office is super clean. Some people would say it's messy. I'm kind of on the cleaner side and I'm not a noise person by nature but it's not like I'll die if there's any noise in the hallway. It's just, I get distracted.	Prefer quiet atmosphere	
That will be hard for me to answer because they're so different where I am. Like in Swcos where I sit, it's generally pretty quiet.	Prefer quiet atmosphere	
I'm a little ADD, attention, I can't have noise outside. I close my door, not trying to be smart, but, sometimes I get distracted so I need, not total quiet, but just a little	Prefer quiet atmosphere	
a little quietness that when it happened enabled me to be more focused on what I had to work with	Prefer quiet atmosphere	
When I have too many things going around me or too many people, I find myself; I call it "eye jockey," "ear jockey." A lot of times, and I think some of this stuff isn't me, that I need to stop, focus more in on me than other things around me. I find myself getting distracted that way. If it's a one-on-one situation, I'm good, or even two-on-one I'm good. When it's more, there's distractions there. Sometimes I'm in my office, I have the door closed, because I'm too busy and need to focus.	Prefer quiet atmosphere	

Coding (Individual Characteristics)

INDIVIDUAL CHARACTERISTICS (ADOPTION OF TECHNOLOGY, CHALLENGES, BELIEFS, PACE, INTERRUPTIONS)		
Coding	Concepts	Category
I would adopt new technology if it advanced the profession, if it made my day-to-day work easier, more efficient, more predictable, more reliable.	Does it make my day to day work easier more efficient, more predictable, more reliable?	Adoption of Technology
I would be one of the people that would be sort of slow to embrace it. Like the iPad, the iPhone, all that	Slow to embrace it	
It has an intuitive interface.	Intuitive interface	
I think often times, people like "Oh, technology! Let's use it" without ... That's the wrong way to think about it. The technology should not drive the application. Your application should drive the technology.	Your application should drive technology.	
I think for me in terms of research, it has to do with how it increases my productivity and makes me more effective. I think thinking about why social workers might find that ... use technology for the same reasons. Effectiveness, efficiency and probably yeah, those are the two things	Effectiveness and efficiency	
I think portability is a huge advantage, and I think that's true of practitioners in the field and students as well as faculty. I remember going to the library to find information and looking through dusty piles of cards. I was in Nashville for three days this week at a forum, and my ability to work remotely from there was really important to me. It was the way that I could get work done.	Portability	
I think that the greater ease of access we have and the more similar things look, whether you're here on campus or somewhere else, the better off we will be. I feel like that's the biggest advantage of using technology, is portability.	Portability	
Well, in teaching, the advantages are bringing resources to the students and to myself to prep for work with the students that I couldn't otherwise bring to learn or to be able to teach more in ways that the younger students, in particular, are used to learning.	Bringing resources to students that couldn't otherwise be provided.	
There's some exceptions, but for the most part it's not a save time. What it is it has brought for me, at least, affording to the quality of what I do. Like today, if I have time, I'm going to queue in a few questions using the Clickers in the classroom today. That just adds a spark of interest. It poles the students about ... all of them get to participate without actually revealing their inner workings and gives us fodder for discussion. It improves the quality of the presentation.	Improving quality of presentation	
While I'm talking to my son, we're in a car, I'm making a salad, he's ... but to me, I think that it's more real when there's more of a fluid activity. I think that all of the disclosures I've gotten around, date rape, and child abuse, and that have been when I've been driving in the car. Or there's a flood in the basement; I'm helping someone clean up and they find an object and they start crying with that object and tell me about it. They've been the most meaningful interviews I've ever had. I think that having artwork coloring, those things. The iPad just has, where I believe is a technology allows you to be anywhere. You're not limited anymore as to what you can carry or what they can see. It's just completely unlimited and I think that that is the power of it because we're really trying to help people, I think, to ... you're thinking about changing behavior. It's not something that's easy, so even like reports could be built into the technology in some way.	Technology allows you to be anywhere. You are not limited to what you can carry or what you can see. It completely unlimited.	
Next year when you do this, this might have been a more effective example than that one. They didn't seem to get this and opened up too much conversation, incur your one hour. So I write myself a little jot down, so then next there's only some of the stuff is the only do in once a year. So I think part of it is anything that's going to make me improve what I'm doing, so if I can a lot of stuff I do is experiential, but it's physically experiential, and if I can do it visually, and because that's how people learn. I don't think people learn by you talking to them.	Anything that is going to make me improve what I am doing.	

Coding	Concepts	Category
For example, if there is a shortcut to doing something in Word, it will take me forever to figure out there's a shortcut and I will be doing it the long way. I think part of that comes from the fact that I try to figure out things by myself instead of asking and somebody would say, "Oh, you could do it this way in five minutes instead of this way in 15 minutes." I think that's one of my big challenges.	Knowing the shortcuts to do things	Challenges
That's the thing you have to be very, very conscious these days. It requires us all to be very conscious about our boundaries and our boundaries in different settings and with different people, for our time management stuff because it is all pervasive. It can invade every waking moment, and unless you think it's really fun. We were having this conversation this summer at a gathering we had and people were asking each other, well, how long do you go without checking email? How long could you go? Some people were like, "Oh, I could easily go for, whatever..." it was a day or a week and people were like, "You're out of your mind you can't go that long without checking email" and then my husband saying, he's just like, "It's not burdensome to me." So it depends on sort of how burdensome it feels to be checking this and how strict you have to be with your boundaries, but what is doing is requiring everybody to be fairly conscious or they're going to feel out of control.	Need to conscious of boundaries - example checking email.	
That would be helpful to me. I think the challenge for me is not being overwhelmed by information so it think it's probably the opposite probably in people a hundred years ago in terms of being able to access information, almost like, I have nowhere to put it in my head.	Information Overload	
It comes and goes depending on where we are, how much of a signal we can pick up. At the Catholic center where I am, I don't know how their Internet comes and goes. Some days you have it.	Unfounded information on the Internet	
For me one of the challenging things is, I feel like I have so many different research ... organization, I think, of all the different files. I'm not on top of it as I should be. That's challenging for me	Being able to find and locate files.	
Just because, if I'm looking for the latest version of, let's say, a report or analysis, I've got ... and this is probably me, it's not necessarily ... I don't know if this is something technology can assist me with. I don't know I'm not as knowledgeable in that area. There are 50 different versions that I have on me. I have to find the current version and I just almost need a reminder or a personal assistant that's a technology thing to help me sort all of that stuff out. I know that's a big challenge for me.	Versioning control of technology	
The how and the resources for non-profits is a huge barrier. Huge.	Technology resources for non-profits	
A weakness would be, I know how to use Access and I built good databases using Access, but sometimes it's hard for me to wrap my mind around how to organize stuff because it's so multi-dimensional.	Not being able to organize multi-dimensional data.	
I'm not a big fan of using my mobile device for any work with any documents, just because of size issues. I'm not quite sure how to fix that problem.	Do not favor using a mobile device with any documents.	
As I said, the PDF thing, I'm like, oh my god, I went to that thing where Kellen McMillan talked about that and I hadn't done that. I haven't had time yet to go and figure out. Maybe I will share that with my doc student and maybe she can help create that so we can have an easier way to look at PDF. I was thinking, that would be a great teaching tool and we can learn it together. I am mentally filing that. Maybe that will be a shortcut. I feel like I don't have enough, I am not utilizing shortcuts.	Do not have time to figure out the inner workings but looking for teaching tools.	
Well, my one weakness is my poor typing ability.	Poor typing ability.	
but there's so much that I think that I don't know, and that's probably a weakness that I don't know what I don't know because I learn things as, like you originally tell us about them, or I find them on my own if I'm trying to problem solve something and figuring out.	I don't know what I don't know.	
I'll start with my weaknesses, because that's one of the reasons why I'm here. Because, I think when you're doing social work practice, a lot of us don't have the strength technologically, because we don't always have to use a lot of technology for what we do most of the time. Unless you're in an environment where you're encouraged to push, challenged—forced to use it—it's the minimum that you actually have to use it.	We don't have to use a lot of technology for what we do.	
The one disadvantage of technology is if people don't understand it, then they always think it's screwing up. If they don't understand it then it can waste a lot of time because they don't know how to do something. If people can get on board and they're adequately trained, which I believe everyone can	Lack of training	
I think disadvantages include there can be glitchy stuff. You can control it only to a certain degree. While I was in Nashville I was trying to access a journal's website and get an article I was looking for, and the website was down. That's one of those ... Then it was back up the next day, but that's one of those things that it...	Unreliable when it fails.	
The disadvantages are, and those outweigh the disadvantages, but the disadvantage like yesterday when I couldn't get something working, it happened again in the afternoon. That's exactly the same thing. It's just like error message and several us just randomly fooled with and finally we got it to work, as happened in the morning, and I have no sense of why that is. I had tested it before class both times. That is very frustrating and you lose, during the class, you lose that thread of things instead of sort of seamlessly being able to...you know when it happened I was showing Ainsworth's Strange Situation experiments on attachment which is just actual footage and was just perfect for our discussion and what we were just ready for. There was mention of it in the text and there we were to look at it and error message, error message. That's the disadvantage and I'm sure that disadvantages are largely, me, that it's also a problem with technology. Sometimes things, there are a lot of things that go together to make me be able to show an online video in the classroom and if any one of those isn't working and I don't know how to make it work, then it's just not there but if it's in the book buddy, it's in the book. We've got the book, we open it.	Unreliable when it fails.	
Would you say the disadvantages would be more that it can be impersonal and that it can take away from the goal?	Can be impersonal and that can take away from the goal.	
Well, the disadvantages, as I said, it's complicated. It's not clear how to use it, and they assume you know something and you really don't.	It can be complicated, not clear how to use it, they assume you know something and you really don't.	
Of using technology? I think sometimes if you struggle and you ... Like, for example, I want to show something in my class and then I can't find it or I can't download it or I'm having trouble using the technology, then it becomes a disadvantage because the class gets frustrated and I get frustrated. So I think that's a disadvantage, and sometimes it just rules our life. You feel like you always have to be out there searching for something and on top of something, because there might be something out there you need that you don't know. I think I feel pressured sometimes to always know what's out there and be on top of it, and sometimes it's just overwhelming and it's too much.	I feel pressured sometimes to always know what's out there and be on top of it. Sometimes - it's just overwhelming and it's too much.	
To a small extent, access. In the sense that if I'm not at school, or I'm not at home, I have to rely on being able to get a 3G or something, which means that I have to be working off of an iPad or an iPhone or something like that. That's disadvantageous to me.	Having to rely on 3G network access.	

I don't know. The only thing that I can think of is when there's always those situations where you're trying to use stuff and it doesn't work right. It ends up making things take longer if you do, and it's just like, "No." (Laughs) Other than that, that's the only disadvantage I can think of, because I feel like if it's there and it works, and makes things better ...	Using stuff and it doesn't work right.	
And I just haven't, but I think because I'm hesitant to try new technology, because I would feel like I would want to master it, and then the time it would take to really, first of all, learn it and then I really wouldn't have many opportunities to practice it. So then it sort of gets put on the back burner.	Feeling of having to master the new technology so gets put on back burner	
I think strengths for me, in terms of technology, is that I'm always willing to try something new. I'm typically somebody who is not the first person to get onto the new app, but I usually at least have it or will be in the next wave of people to try it. I'm typically one of the earlier adopters of new things in terms of when I compare my generation, not necessarily the younger generation.	Willingness to try new things	Beliefs
I think it's just so impersonal and that we have really lost the art of communication because we've become over reliant on these gadgets.	Impersonal utilizing cellular technology	
I used to think because it would save time and effort, but now I'm finding that the adoption process, the aging process, which means it ages quickly and then you have to adopt again or upgrade, then gets slowed down the ones you knew to get back up to speed. Again, the issue of it not doing trainings, even the training itself sounds laborious. I've concluded that technology does not save time. It actually in the long run increases.	I've concluded that technology does not save time - it actually in the long run increases.	
My weaknesses are anything that goes beyond what I've already experienced and worked with. I feel like I'm kind of a slow adopter of new things. It just takes me a little time to become more comfortable. I feel like my weakness is I tend to stay in my comfort zone and my strength is I'm pretty good when I'm in my comfort zone.	Want to stay in my comfort zone	
It just feels overwhelming because it feels like you're out of control, you don't have it together.	It feels out of control	
I don't know, I guess just coming off as not really knowing enough of what you're doing to be doing it in the first place (laughs). After the first time I emailed, she was very helpful and I continued to do that. I think for me, that's a challenge.	Feeling of having to come across you know what you are doing when you don't.	
I feel like nowadays, everything about retrieving information is doing it online.	Retrieving information online	
As a general rule to just video tape a lecture and put, it on YouTube actually is worse education and in no way uses the technology to help facilitate learning. I think we have the same problem with databases in social work. In medicine in general, we don't really think ... We want to just take what was and convert it sort of wholesale to this digital format without taking the opportunity to rethink how information is presented. How information is collected I think is a huge piece of the collection of information. A lot of information can be collected automatically without any need for users, so we can get a lot more information and that information we put to some use but there's very little work being done on this.	As a general rule videotapes and on YouTube doesn't use technology to help facilitate learning. We need to rethink how information is presented.	
Well, my technology skills are pretty sub-par, you know,	My technology skills are sub-par	
I would say my technology skills are very moderate.	Skills are moderate	
I would say my technology skills are quite limited.	Skills are quite limited	
****I think people are afraid and I think that anybody who is going to disseminate technology or teach technology or technological skills has to understand that we are very diverse, age, expertise, comfort level, and so how you ... I think the real question is how do you speak to all those differences?	I think people are afraid.	
For doing online research that's one of my strengths. This has the tech person who used to come behind us and fix things you might not consider a strength but I am willing to try things. I figured that people like you build things to protect the system from people like me, so when I try to figure something out I figure if pushing this button would cause real trouble they won't allow me to push this button so I always push the button. I'm always willing to try and figure things out.	Willingness to try new things	

I think that I am pretty darn good at finding current information. I think I've built that through experience though, and not through technological skills. I know where there are some pretty well regarded sites that I can use, I know how to use the library databases quite well, and that I've developed that over experience.	Expert in finding and retrieving information
Well, because the stuff-looking at websites and stuff or trying to find information, that's pretty easy to do	Expert in finding and retrieving information
A strength is I'm willing to try new things and I'm interested in new things. I make time to learn how to use...you know take time away from doing work to learn how to use something.	Willingness to try new things
I think my biggest strength is I am open and excited about potential. Even though I don't really understand what potential is. So that part of it is a strength.	Open and excited about the potential.
I think I'm pretty good at finding and retrieving information electronically and I think I'm pretty good at learning the ropes quickly.	Expert in finding and retrieving information
I think that my strength is I'm not afraid to use technology and learn find out new things. I think that my level is a little but higher than most because my doctoral program was focused on technology and integration and social work, so that was part of what I've been learning at that time. I think that makes it easier for me	Willingness to try new things and not afraid to use technology.
I guess I was thinking my strengths as once I get something, I feel like I can do it.	Confident in doing something after learning the process.
This is going to sound very lame, I think and very basic but, I think one of my strengths are I'm open to it.	Willingness to try new things
I am easily frustrated with not being able to get to what I want to get.	Difficult to navigate the interface
I would say they're good in the sense that I have good facility with all the basic stuff. Statistic software, writing code, using Powerpoint, all that kind of stuff. That's a piece of cake. I can pick up new technology pretty quickly if I want to. I tend to be less invested in learning something new. I tend to be less invested in learning a new way of doing something that already works for me, if that makes sense. I like learning new things, but it's hard to sell me that something that I need to replace something that's fine.	Able to pick up new technology, less invested in new ways of doing things.
The person-they had some staff there and one person, she was really terrific and very knowledgeable, very, very capable but I would frequently run into problems and have to have her come over and help me and what she would do-and probably to a great degree I was glad that this happened, but what she would do, she would sit down and fix the problem or, like, if I had everything all screwed up, she would fix it and I could just kind of sit there and watch her do it, and she was terrific. She did a terrific job but she didn't show me or have me stop it there and figure out, oh, this is how you straighten it up.	When asking for help, they fix the problem but do not show how to fix the problem in the future.
Oh, my God. It's a necessity. It really is. It's become a necessity. You just can't ... if we think about our students, and how they're actually receiving information, how they're interpreting information, everything is really, really, really quick. It's no more ... now my students are like, "I have to go to the library to get this?" It literally, they are freaked out if they have to go to the library, the physical library, open a book, and Xerox the page. They really feel inconvenienced. They feel like if it's not on Blackboard, if it's not on the database, and I'm like, "Okay, come on, people," and I'm not that old, but I do remember looking up stuff in the card catalog and taking out books and stuff like that. I think that you should have to do both, but I think that if we really want to be a pinnacle social work University, school of social work, then we really need to stay on top of technology, and we need to make sure that everybody is trained with the latest stuff because it's just, it's moving so fast. It really is; I just bought the iPhone, now their iPhone 5 is coming out. It's just crazy, it's imperative.	It's a necessity.
I think if it made my life easier, if it made work easier, efficient. We have a lot to do and not that much time, so I think anything that makes it easier in the long run. I think sometimes people, especially me and with the learning curve, understanding that initially it's going to take some time to learn something new, but in the long run if it's going to make it easier.	It if makes my life easier.
I'd say none. I've had to figure it out myself and rely on my teenaged daughter to help me. I don't come to work looking for technological support, let's just say that.	No support
I just got tired because I was working with their tech people.	Tired of working with tech people
And when I talk to people, they'll say, "Well, you know, you show know how to do that." I'm like, "They didn't tell me to do that. They didn't say to do that."	Tech people assume you should know how to do it.
I find IT very frustrating.	IT is frustrating
Because they have sort of a ... As you said at the beginning, they have a format you're supposed to ... or an agenda they're trying to put on you. And you're like, "Ah, I don't want that agenda. I don't want ... I only want to do my thing. You're here to help me. You're here to assist me." And I'm not putting IT people down.	You don't want their agenda - "I only want to do my thing"
I'm just saying you're here to help me out, and you're telling me I have to do it this way, and I don't want to do it that way.	Support is telling me to do this way but I don't want to do it that way.
There's also the assumption they think you know more than you actually know. They're almost just like ... They almost think you're an idiot, and that can be frustrating.	Support assumes more than you actually know.
Well, I guess I just don't want to have to ask as much, so I'd like to be able to know how to do more than basic, and then the things I don't really know how to do I can ask.	You want to know more and ask less
I feel like I drive people around me crazy, because I'm like, "How do I do this on my iPad or how do I get this?" I don't like doing that, and so I would like to be able to not have to ask as much.	Don't want to ask for help
I'm comfortable with it now and more comfortable with asking for help.	I am more comfortable asking for help
Yes, I try to figure it out myself first and then I will use the IT as the last resort.	Asking IT for help is my last resort.
I think it's just a control thing. Just I would prefer if I learned it on my own, if I came to that conclusion on my own.	I would prefer to learn on my own.
It's really a time issue because you have to...and a support issue. You have to have time to even begin to think of developing the new skills or checking out what apps you want or whatever and then you have to talk it through with somebody, it's also a resources issue, but without the time, that is basically the main reason I find that I didn't do anything for years	You have to have time to develop new skills.
That's the problem, is that you're admitting defeat. When I call on you .	You're admitting defeat when asking for help.
I think as I've been able to, again, the hands-on, as I've been able to have access to you or have you filter questions or walk me through it visually, I've begun to feel more comfortable with, "Oh, okay, let me go that help button and figure it out by myself." I wasn't like that before	Will explore more if help is available
would call and say, "My screen, something's going on with my screen, I just need you to fix it." Now I'm a little bit more open to exploring or trying to problem-solve myself. it's less likely that I'll take the time to venture out on my own and do it. If you just say, "Oh, here, use this app," then I won't. If you show me all the things, that it can do and I can play with it too. I'm in. I'm in.	Knowing there is support, provides a comfort in trying to problem solve on my own

To me, there's no reason that as social workers we can't be savvy in technology. I also think we are going to lose a huge opportunity with generations to come if we do not get with it. I mean if you look at our website compared to the other schools, it's pathetic. I know that's being worked on, thank God, but if I'm a young person that's looking to get into a career and I'm comparing urban planning to macro social work, I would want to see like what are the technology advances. How can I use technology in community-based practice?	There is no reason social workers can't be savvy in technology.
Yes, and that's where I fall in the debate. I like consistency. I like it—	Consistency
I'm not sure. I mean, for me, I'm not sure if it's really a disadvantage, would be if a person just is really kind of inept with technology, if it just doesn't—you know, and just can quickly become impatient or frustrated. That happens to me a lot. If I just hit a brick wall fairly soon, I just kind of, you know, just kind of give up, throw my hands up and give up and you're frustrated. So that's probably—that's a disadvantage. If you can't—either within yourself and within, say, the technology itself, if you just can't make headway to figure something out, then it just is useless, and then you end up feeling really frustrated and stuff like that and then, you know	Not understanding technology can lead to frustration
Yes, and I will tell you, to some extent you're preaching to the choir here in terms of, I'm a big proponent of things like EMR, which is probably about as close to this as you can get which is this idea that, how can we find a better way of using big data [inaudible 00:26:06]. I think that's the key thing, is helping people not have to remember everything, and having the computers be smart, kind of. I don't know how that relates to teaching students how to practice. It's tricky because it's kind of like ... How do you help them to have the computer not be something, something about technology, that doesn't get between them and the client?	How do you help students not have the computer that gets between them and the client.
It does and I know that I've stopped beating myself up and that I'm way under utilizing it.	Stopped beating myself up because I am under utilizing it
I don't necessarily care how something works, I just want it to work.	I don't care how it works - I just want it to work.
I don't want to understand the infrastructure of it in order to use something	I don't want to understand the infrastructure in order to use something
I would not say I'm an early adopter. I don't think that's a strength or a weakness but I'm earlier than a lot of people. I like going to a couple different PC World and Mac and I'll mark things but I usually like to find someone I know whose actually used that first before I...unless it's just a new version or similar to, like the software thing I'm already using and then I'm like, That might be interesting, let me see if somebody is using that already.	Like to see if someone else is using it already before I adopt
Everybody's used to paper. It's been around forever.	Paper has been around forever
Those things and also having less ... when my friend showed me her iPhone four years ago. She came to visit and she showed me all the million things it could do, and I was like, "Oh, my gosh. I can get rid of my cookbook. I can get rid of my exercise thing. I can get rid of this and that," so that made me happy to have less stuff. For me, if it will simplify my life in some way then that's a motivation.	Simplifying my life-getting rid of an cookbook or exercise thing for an app on the iPhone
I think the biggest motivation is the change in times, the change in what we're doing today, in terms of more access to cell phones. Because I have a cell phone, I use every day, as well as the students, having them, understanding what they're doing. Their Twitter, I look at it. Or things like the social work lab, I've come across that in class here. Just being on the same, or at least have the same understanding of the students I'm working with and even my clients. My clients have stuff or technology, you go, "Wow." To at least have the knowledge of it, even if I don't know it exactly, but be familiar with it.	Being knowledgeable about what is out there
Realizing that if you don't jump on board you'll be left behind (laughter).	If you don't jump aboard you will get left behind
Oh, and then I have to keep up with my students!	Keep up with students
My students are coming in and they've got, they're tweeting and the Twitter account and they've got all of this stuff and I'm like, "Okay." Just to keep up with the students, and, I think, being able to speak the language that they are currently speaking in order to deliver the social work information that we have to deliver to them is important. I have a responsibility to do that as faculty.	Being able to speak the language they are current speaking in order to deliver social work information.
And there might be variations kind of within any group of people about their willingness. Some people would say, great, would be excited about it but I don't want to say I'm younger on the faculty but the faculty that's been around longer will probably use technology less than someone.	Faculty that have been around longer probably use less technology.
I think that's probably one of the reasons why I'm not tethered to an iPad or an iPhone or those kinds of devices. To me, once you get hooked on them that's it. In my opinion it's that I've had a need to always be in touch with the device, which takes me outside of myself. I choose not to live like that, so I schedule in times during my day when I will check email. Then I schedule in times when I will respond to email and in use of that light. I don't walk around with a device that's connected to my email so I know every time that somebody's trying to reach me. That's just too distracting.	Do not want to tethered to devices.
I just think with social work, the basis of the work we do is all relational. That is really connecting with people on a very humane level. I see technology and electronic devices as an impediment to doing that in a lot of ways.	Social work is relational and is about connecting with people on a very humane level. Technology and devices are viewed as an impediment to doing that in a lot of ways.
I find it hard to imagine how you can have a real conversation and really connect with a client when you are responding to a text message or an email that has just come across your BlackBerry that you feel the need to respond to right then. I just think it takes you away from the presence of the moment with that individual.	Technology can impede having a real conversation and really connect with a client when responding to text message or email.
Yes, so I have graphics and text. I would like, but it's a little sometimes the technology just doesn't work, I would like to imbed some video clips within my PowerPoint and I know you can do that, but I'm always leery that will it really work?	Want to know how to incorporate media in presentations.
Then at some point you say, is this really worth it? Should I just go back to the overhead projector and have my transparencies one after another rather than use PowerPoint? It's ... I don't know.	Is technology really worth it?
I would think an inquisitive mind was a strength and being willing to at least hear more about technology within social work practice. I mean, I understand that it's a phenomenon that's here to stay, and it may prove a challenge to my adaptability but I think I would be more willing to adapt than some other people at my age and a lot less willing to adapt than others. I mean I think I'm somewhere in the Bell curve.	Technology has been a challenge to my adaptability.
I have a very low threshold, tolerance, for unpredictability. I have a very low threshold for technology failing, and part of that is my own perhaps user error ... whatever. For whatever reason, when it doesn't work, I have less patience than the average person. Or be responsible for but me, but if I put the paper here and tomorrow it's still here, I know it's here. I expect it to be here. I put something on the screen today and tomorrow I walk in, turn it on, go through the same steps, and it's not there. I don't expect it to be there. I have a very low threshold or tolerance for that.	Low tolerance for unpredictability

I do believe that social work, by its very nature because of it being about people, interrelationships, we have probably lagged behind. Because it's hard to perceive hardware and software as replacing face-to-face interactions, which is the core of what we do and what we're trained to do	Social work is about people. Perception that technology could replace face-to-face interactions.
The bus has pulled off the curb, and if we don't get on the bus, I don't know where our profession will come to be. We can only hang onto our historical roots so long in the face of what's happening all around us.	Our profession needs to embrace technology.
I may not use blackboard, probably not to the degree that you could. I'm not comfortable with the iPad, but I want to be.	Want to be more comfortable with technology.
Just so you know, I'm very low-tech.	I'm very low-tech
We, as a profession, don't have very good systems set up or storing information or retrieving it. I think more importantly is there's really very little to no thought going beyond just taking the paper file system and converting it to a digital file system. While I think it's the large improvement, I think it misses the whole value of technology.	Need good systems
Technology is not something in and of itself. Technology is a means to an end.	Technology is not something in and of itself. Technology is a means to an end.
What it takes is somebody who has both domains well understood. They understand the application of what they want to do with the technology or what the problems in some particular area are and they have an understanding of what technological solutions can be applied to that.	It take someone who knows both domains. Must under the applications and problems and solutions that it can be applied to.
To give you a concrete example, I have an idea of how to use databases to improve case management. It's just not about; I was talking before about taking your system and fine packing and digitizing the old system. What I want to do is have a platform for case managers that can ... The platform itself can function, can do case management function, so it can send text messages to people, it can recognize where they are in space by their phone and send messages if they're in an area where they've historically bought drugs. If they're by their pharmacy say, "Hey, you should go pick up your meds right now because your meds are due to be picked up and you're right here, so pick it up."	Example of application and problem solving
That takes an understanding of what the problems are and how the technology can solve the problem. It's not, "Oh, there's this technology. Let's apply it." There are these problems, how can we address these problems of clients not picking up their medications or for contact or people who are chronically in crisis that we're having a hard time getting in contact with them because we don't know where they are. These are problem driven technological solutions as opposed to technology driven problems or finding problems. The problems should drive the technology.	Problem driven technological solutions opposed to technology driven problems. The problems should drive the technology.
However within those limits, I'm skillful enough to accomplish my job and keep productive.	I'm skillful enough
Technology can be fun. There's a fun component of it and that's you and I have. As I've been railing against this, I think both you and I have the opposite problem many of the times where we have a love of technology and the coolness factor and we want to put this technology to use and I think this enthusiasm is something that is often difficult.	Enthusiasm of technology can hinder the goal.
I don't know what all the environmental data says and everything, but technology isn't environmentally neutral, it's just like if we're building all these things in the factory in china and everyone is getting an iPad, but I'm sure it saves a ton of paper.	Technology isn't environmentally neutral
Maybe you'll get to this in your questions, but to me, there's something so satisfying about seeing my book on the bookshelf. Picking it up and flipping through it. You know that. I'm paper-based.	There is something satisfying about seeing book on bookshelf. Picking it up and flipping through it.
Here's another thing, maybe paper people are like this too. The idea of having this body of knowledge or body of things that exists differently than this body of things, the connection between it is lost, the ability to look at this in value at the same way at that with value, digital archives, it's very different.	Having this body of knowledge exists different than this body of things
I would think I'm a very, what is it, long curve? It takes me a while to pick up on it. once I get it, I usually get it. I'm not very good at new stuff. I'm very hesitant. I always feel like if I try something for the first time and I screw it up, it will be like I will be the one who pushes the button and the whole thing is dead. "What did you do?" "Oh, I kind of sneaked around and did some little thing." I always feel like I'm the one that if there's going to be a wrong button, I'll push the wrong button. It'll have consequences. I'm kind of nervous about new stuff. Once I learn it and use it, I'm comfortable using it.	Nervous about new stuff but once I learn it and use it, I am comfortable using it.
I guess I'm a little skeptical of using technology completely in social work. I don't see how interacting with people can be replaced by technology as the separation	Skeptical using technology completely in social work.
sometimes I do let it affect me because I think that I should know this stuff.	I think I should know this stuff
Some people are really not open to learning new stuff. I was like that. For a time I was like, if I press this button, everything's going to disappear and I'm going to die because I've been working on this for the last 15 hours.	Some people are not open to learning new stuff.
Yes, I feel like, again, if I can sit with you or watch, you do something the first time, I may not remember how to do it. I know it's going to be okay for me to try to figure it out and I'm not actually going to lose it or I can get back to where I started. Whereas before, I used to have a very big fear of losing a document or messing something up and not being able to work my way out of it if that makes sense. I feel like my advancement has increased	Comfortable using technology if supported
I think that that's a huge ... it's an awesome thing, actually, we are so diverse, but it's an awesome challenge when you talk about technology because I think some people are just, you know. I think here we are pretty, compared to even 2007 when I first got here to now, to see some of the people that are using iPads and are using technology, is unheard of. I think that they are getting the message that we've got to do better. We've got to do better.	People are using iPads and technology.
Fear motivates you and I think, on a personal level, I've made that shift a little bit, and then also as I became more familiar with,	Fear motivates you
"Oh, I can actually set this so that I have national security block on my Facebook so that no one can access my personal information." Knowing that you have that protection and knowing how to navigate that, I think, made me feel empowered. I think empowerment, making someone feel like the technology is not controlling them but they are controlling the technology, is really important.	Knowing you have that protection and know how to navigate that.
Just I wish I had better skills, knowledge in particular, systems that I need to use, I'd like to put together better presentations and stuff but I don't do them often enough and I have no patience. I can't go to those classes and sit.	Wish had better skills in developing presentations

Coding	Concepts	Category
I would say my pace is frantic.	Frantic Pace	Pace
I work at a very relaxed and comfortable pace.	Relaxed and comfortable pace	
For me that means a pace in which I can breathe and know that I'm breathing, rather than in a harried environment where I'm breathing almost with the pace of what's going on, like almost shallow breaths. I don't feel like I can concentrate, I can focus, I can stay on task. I spend a lot of time with myself working internally on that, because that's the rhythm that works for me	A Pace where I can breathe rather than harried.	
My pace is usually quick.	Quick Pace	
The pace is very constant.	Constant Pace	
Yes, pace in terms of work flow, I can sit in front of a computer sometimes for three hours straight or sometimes I'm doing work for 10 minutes and then I'm up having a break and then 10 minutes at work and then its break. (Laughing) I'm all over the place.	Pace fluctuates.	
Pace is something I have a problem with. My pace tends to be, I waste a lot of time and then I'm pressured, so my pace is sort of ad hoc, depending on the circumstances and noise level experience.	Pace dependent on circumstance and noise level	
I guess I work at a fast pace, yes.	Fast Pace	
Okay. In my office, I feel like the pace is pretty quick. I think I type fairly quickly; the internet pretty much seems to work pretty quickly (laughs). Haven't had any crash problems yet.	Quick Pace	
Right. The pace flows with what I'm doing. I'm not sitting there for a ridiculous amount of time for things to upload or download.	Pace needs to flow with task	
Pace depends on deadlines. The pace depends on whether I am in class teaching or whether I am home writing, or whatever. Typically it feels fairly fast paced, like trying to answer a million emails, hit a deadline, whether it's prepping for class or hitting an article deadline, or whatever. It feels for the most part, most of the time, except for possibly summer sometimes, but it's always like planning the next deadline.	Pace is dependent on deadlines	
Pace at work is very fast. Pace at home is slower and less consistent, actually. I work in chunks. I'll say between now and such and such time, I need to accomplish this. I need to write three pages about this topic. Then I may get up and go and do stuff. Walk the dog, go for a run, whatever. Come back and say, okay. In the next hour, I'm going to do this. I'll do that chunk, and then I'll go do laundry.	Work pace is fast and home pace is slower. Work in chunks based on tasks.	
The pace on the well mobile varies from either really busy to really slow. The pace at the community center is like you feel like you're hyperactive.	Pace dependent on workload	
Yes, it's good. I like it. I like that some places is slow, some places is fast. I've got that rhythm down. And in SWCOS generally, it's pretty slow. The place is slow. When I procrastinate, then it's like I get slammed. Suddenly, I need everything right now.	SWCOS pace is slower.	
I have a certain ... in my [Inaudible 00:28:29] describe an auditorium sensitivity. In my office, when the phone rings, it rings in every office. You can't turn it off, and I have ...	Lot of noise	Interruptions
Although I've adopted to it, but ever since I can't turn it off because we have a hotline also that have a different ring tone, and sometimes if nobody answers that, I have to make sure I do, but it's very disruptive. Some of it is just the nature of my work, it's constant interruptions, there's something important that has to be attended to or somebody has a question or a victim's on the phone or so. It's very hard to focus on the things that I do, sometimes just go home and work if I have something I have to ... deadline and I have to get done. You have the offices open door, building, a lot of distractions, I think.	phone calls, lots of noise, questions to be attended to, open door building	
I'm not one to close my door very much, because it makes me feel a little too claustrophobic and closed off. So I typically will be working with my door open, which then means there are a lot of interruptions.	Door is open so causes for lots of disruptions	
I think interruptions are standard because even if you're working at home and you don't have students knocking on your door or colleagues knocking on your door or whatever you still have email, constantly, so you're constantly checking your email and its almost an interruption because someone needs some answer to something and you have to answer it, so it's rare for people to actually call and interrupt you [inaudible 00:15:45]. It's all about your own personal boundaries. You could set your boundaries and say I am not answering email today, but very few people do that, anymore.	students and colleagues knocking on your door, emails to be answered	
I don't write well in terms of writing for publication or writing a grant or writing a report. If I do those kinds of things I can't be here, because of interruptions and because I'm a social butterfly and it's just very ... I feel like I'm here for students and I'm here for faculty.	Writing doesn't happen here - office is for talking to students and faculty	
Likewise, the screen: I think glare on the screen is also disturbing.	Glare	
It's not the right word, but maybe I'll get at it. It's kind of boring here, in the sense that if the door's open, everybody bothers me. The door's closed, I'm isolated. I don't know what's going on. There's a different mentality about being in the office versus being outside of the office. I know people who would go to a coffee shop and write for hours	Door is open everyone visits, if closed feel isolated.	

Coding (Interface)

INTERFACE (DISORIENTATION, INFORMATION PREFERENCE, PRESENTATION OF INFORMATION, FUTURE POSSIBILITIES)		
Coding	Concepts	Category
For five years I worked from a Mac, and now I'm oriented to a PC. It's been a challenge just in terms of the visual, like what I've been more comfortable with versus what now I'm required to use.	Computer Operating System Positioning	Disorientation
I really like the iGoogle page, where you can sort of lay out what you go to most often, but that's actually not even as for me ... Like the iPad and the iPhone, where it's all sort of laid out, that to me is like heaven. And then to be able to group your information into what you would go to for like health information and stuff. I like that ability to re-organize it based on what I'm using that for. And then pictures are great. I mean, to just have the portal not be a word, but like a picture of that—colorful, sort of bright, but not like sharp. I like softer shapes.	Ability to group information	
I'll press something, and that's not what I wanted. Then getting on a computer getting to go backspace, backspace ... it's like not that, it's this and that. I'm learning. It's actually a different skillset, and structurally I haven't quite figured it out, like how to get it to that. Like especially going back.	Difficult to navigate the interface	
Everything has sort of its own appearance because it's... (laughter) As I said, we're not super coordinated. That is well outside of our control. Blackboard seems to be sort of its own beast and the electronic field notebook is somewhat its own beast too.	Every application has its own appearance	
. I think what I wish is that we had a more streamlined kind of repository for information. I realize the website's being redesigned, maybe that's part of an answer, but I feel like information is here, there and everywhere. I have a lot of things on the share drive, but I have a lot of things in shared dropbox folders, I have some things in central desktop. It gets a little crazy-making sometimes to figure out what's where and to keep that all in my head. I'm thinking like, "Okay, I need the third down ... I'm remembering this as being the third one down in that folder and now that's not what that looks like and the title's different." There's an odd interface that you sometimes run into when you go in.	More streamlined kind of repository of information, crazy-making to figure out what's where	
That's how I work with other authors through the email. I'll have copies of manuscripts, and I try to be organized by coding and saving, but I wished there was a more user-friendly way of archiving email, but not only in our system here, archiving in a way that I can have full easy access to it anywhere I'm at.	Difficult to archive mail	
Yes. The problem is not that the syncing is bad. It's that you have to initiate the sync and my papers file is sorted drop box and the IOS application has the capacity to import from drop box but not the library's drop box. What I want is to have my drop box library be the library that it uses across. If I change, so if I add something, it populates all of them.	Lack of flexibility - Syncing that goes across all devices.	
That's not always true. For example, all the camera's I'm going to buy from now on are going to have geo-coding capabilities because that's another way of ... Because photos are a perfect of example of something I don't organize. It's got the dates and the events and that's an okay way of organizing information but I'm not going to label all of them. I'm not going to; I will go through and create albums that I post on Facebook or something like that. That's like digital photography; I have thousands of photos that I'm culling down to 50.	Images do not need labeling - cameras now have geo-coding capabilities able to organize by date and events.	
There are some types of information I don't want to organize and store in a particular way but my work information for example, it's a very idiosyncratic approach. In my Google RSS feed, there, I have to periodically go through and combine things but I have very specific terms because I have, it's a project based storage system so it's really about my head.	Need flexible way of organizing	
There are deaf staff and clients and people with visual impairments so figuring out how to do things like introduce evidence when normally when you want to introduce a document you hand it to the person and say can you tell me what this is? With a blind person you can't do that. Figuring that kind of stuff out has been really interesting. I see all kinds of different ...	Supporting people with visual impairments	
I think about colors and I think about my colleagues who are color blind, and automatically start thinking, right now [inaudible 00:12:23] them colors to me, choose better.	Think about colors in regards to colleagues who are color blind	

Coding	Concepts	Category
The same with Googling and whatever. I could go look in the library, but I'd rather just access the library through my computer to get the articles.	Prefer access library with computer	Information Preference
I love diagrams. That's something in writer groups I am always suggesting, what about a diagram, ERAs, flow charts, Venn diagrams, whatever. It does and they do. If I am clicking through, looking at several different things I know I'm more likely to stop and read something that has some diagrams in it. Not even pictures so much but like graphs or drawings. If I'm looking to understand I know that the picture doesn't necessarily... I know that it might be an interesting illustration but I don't necessarily see that and think, Oh, that's giving me information.	Diagrams	
I also know from my experience that people hear things differently sometimes when they're reading them than when they hear them, so it's always helpful to write them down and send them.	Written communication to confirm verbal communication	
For five years I worked from a Mac, and now I'm oriented to a PC. It's been a challenge just in terms of the visual, like what I've been more comfortable with versus what now I'm required to use. So that's been hard in terms of font. It just feels real sharp and very menu-based, like a lot of layers and stuff to dig through.	Prefer Mac over PC in terms of visual interface, font, menu system	
Likewise with PowerPoint presentations, I'm annoyed when people put in animation, just for animation sake, just because, you know, the just flipped to the next slide. You're showing me text. Flip to the next slide. You got this slide. The text will twirl in or fade in or any of that crap. I don't want that. I feel like design has to be intuitive and has to serve as a function so there could be an animation that works well but on my Apple computer on the dock, I turn off the...	Do not like animation in presentations, design needs to be intuitive	
Either by, say, if I'm looking for a journal article or trying to find something quickly, organized by date clearly. That's very helpful. Say, a resource, if things are broken down, like, say, on the left-hand margin or tabs with a listing of what that resource is all about, of the services and resources that they provide, a search bar there so if you don't find what you need quickly, you can at least try to search for another website through that mechanism.	Having search mechanism to find things quickly	
It's treatable and it's things that I have to sort of constantly keep abreast of. The other thing that I do for my 12-year-old class, which is an advanced clinical skills and serious mental illness, I actually use the New York Times a lot and I love the science section. But even more so, I find that the New York Times is really [inaudible 00:08:50] other sites I go to. It's pretty steady on evaluating mental health issues. For example, they did the reading response last week that was due on the shooter, the Aurora, Colorado shooter, so I tell them day one, I say, "I don't know what's going to happen in terms of our mental health understanding or the way the public is perceiving it." Media actually does play a big role for me because I have to go to these sources and I don't want to ignore these issues. This whole idea about how do you evaluate someone when they haven't made a direct threat and they are kind of sub-threshold. They look weird, they're acting odd. The New York Times piece, they did a very in-depth profile on James Holmes as the shooter.	New York Times articles and science section helpful for providing relevant teaching examples.	
I'll also say I like to triangulate my sources so I don't just go to one source.	Like to triangulate resources	

For example, when I'm doing my course prep, when I'm working on my PowerPoints, I like to add a lot of pictures and visual representations so I'll spend an hour Googling Ericson's stages images, and then I'll look through all the images online. If there is a term that I want to explain better, I'll Google it and then see what pops up and see how other people have it, maybe have better explanations. A lot of my information finding is online.	Pictures and visual representations from the web	
Despite what you might think having viewed me in my office, actually, most of my knowledge retrieval is online. It's internet-based. What I end up doing, searching for articles, things like that. I'll set up some type of database for myself for any given project, for any given topic I'm working on, and then sort of save articles into a matrix where I want things to be. That gives me my resource center for whatever. Depending on the degree to which I might use any given article, I either will leave it in a digital format. That will be articles that I'm only going to use a little bit, marginally. Articles that are pieces of information that I'm going to use substantially, I print them out and work on them by hand. Not that I need a printed article to retrieve information, but I need a printed article to interact with the information.	Need to print the article out to interact with the information.	
For myself, the database would simply be setting up an Excel spreadsheet. I may have columns that are topics for construct, and then I'll just list articles under there that I think refer back to those. In terms of internet-based, just using search engines, the library, Google scholar, things like that.	List articles in excel spreadsheet	
I keep extensive notes on what I think. I go back and I flip through them.	Keep extensive notes and have the ability to flip back and forth	
I like everything I would need on one sort of laid-out screen and then sort of like portals that are visual. Then you click into one portal and that becomes another visual of like buckets of information, and then a search that you're trying to find something that sort of pulls up all different kinds of ways to find what you're looking for.	Like to see portals and laid out screen	
I like my slides to be cleaner, and I also try to get people to not take a copy of the PowerPoint. I would say I like things more professional looking, clean, like open spaced. I use a lot of cartoons for different things and visuals.	Do not want others to copy ppt, slide need be professional	
Well, for example, like when I train on confidentiality law it is very, very, like it's dryer, and I'm shifting from going through different laws quickly. For example, I'm going from education to mental health, to child abuse and neglect, so I might have a cartoon that sort of introduces the section. I can get visually let the people now. Oh, she's not talking about the school anymore, she's talking about medical studies. So I don't have to pick medical, like pictures throughout every slide, considered to break sections I have ... like I have one cartoon that's like an adolescent talking to his parents [inaudible 00:10:46] when you're interviewing an adolescent, that would be my opening slide, so the topic would be on their with that cartoon, and then it's the content.	Use of cartoons	
It really irritates me when people put visual, pretty things in there, and to me, there's no function for it. I'm much more purposeful when I'm selecting a visual.	Purposeful when selecting visuals	
If it's functional it's fine. It can't just be, like, I don't like busy PowerPoints. I don't like PowerPoints that have, like, a hand grasping behind the words.	Need to be functional and not busy	
I am responsible right now for putting together a policy and procedures manual for the sexual assault response team for the City that we've been working on for a couple for years, and we were committed to doing that in an electronic format rather than a paper document.	Using electronic format rather than paper document	
Well, when I design PowerPoints, I use graphics. I like my PowerPoints to draw some interest.	Input graphics in PPT	

Coding	Concepts	Category
It's all text. It's all small.	Text and small	Presentation of Information
And then the manual is completely text-based.	Text-based	
Largely text based.	Text-based	
. But yes, I do almost everything text based or using language in the way I would in a conversation or in previous eras, in letters or notes	Text-based	
I'm absolutely fine with text-based work	Text-based	
Most of it is narrative text, not a lot pictures which is not that fun to me	Text-based	
Yes, I guess it would be a mix of text and diagrams and I'm thinking the types of students that might come in, increasingly coming in with more an e-book kind of format which is what they are more interested in. I'm increasingly doing that as much as I love books, this is instead of buying six books and having the means of having them with me all the time on the iPad, it's just terrific versus carrying them around	Mixed of text and diagrams	
The articles, there are a lot of things that I am grabbing that are PDF's and then the newsletters, so that's going to look different. Whatever videos or press releases right now because some of this is really new.	PDF's, newsletters, videos, press releases	
Yeah, it comes to me a lot in e-mail.	e-mail	
But let me help you understand why. I'm still the person who does a lot of homework in longhand and then I type it in a Word document and then I print it out and take it with me, because it's my process for integrating that information and who I am. I'm very dependent on paper and pencil.	Dependent on paper and pencil	
Yes, it does. Things that come through email are generally in smaller fonts than I would like. Usually it's in 10-font, and rarely can I read my email without my glasses. Generally, it's, I don't know what font it is, but it's just not...	10-point font email	
Times Romans seems to be a nice font because it's big enough to see, but condensed enough not to take as much space than some of the others.	Times Roman Font	
Well, the first thing that comes to my mind is because of this project with this. I have to take documents that a lot of other people write, and so nothing is in the same format. Rather than having to reformat everything, it would be nice to have a template or something that people started with, or an easier way to do that because you want to end up with an end product that looks like it goes together and ...	Have to take other peoples documents and put in the same format	
Correct. It's a lot of policies and procedures. Police, there are standard operating procedures, and the lab, and nobody is writing the same way.	Nobody writes the same way	
Right. What I'm trying to do is to establish standards that apply to all of that, and that they think about writing their policies and practices in accordance with those. They haven't had that policy or policies and practices, the ones that pertains to the work that we do collaborately. It's sort of a different way of thinking.	Establish policies to work collaboratively	

I guess it's 12-point font. I mean it's the text in newsletters and websites and things like that.	12 point font
For me, if I do something paper-based, I want it to look good because I think that reflects the work and the time that I've put into it. I tend to use Arial 11-point font. I like half-inch margins, not one-inch margins. I...	Arial - 11 point font
Because it's so, with the technology that we have now, it's so easy to read. You don't, you don't need to use double-space anymore. You don't need to use fat margins because most of the stuff isn't going to end up being bound, and really we use those margins for marginal notes for binding and it's just a waste of space to me.	Don't need double space anymore
Well, I think I have different learning styles. I am a visual person, and so I like graphics, and pictures and charts. Also, colors that don't detract from the types of the information that's being presented.	Colors detract from the types of information being presented
It just depends. I think blue always has a calming effect and so I go with lighter blues. Let's see. If it's electronic, I like hyperlinks so that if I'm interested in a particular topic, although be it somewhere else...	Blues are calming effect.
Probably doesn't matter so much. I also prefer, I think this is me, I prefer numerical citations probably in text, parenthetical citations. It's a, I think that parenthetical citations disrupt the flow	Prefer numerical citations rather than parenthetical citations.
I'm all about space and efficiency and when you're writing text that takes up a lot of space. You could end up using a whole extra page just using parenthetical citations on a 15-page manuscript, so, it's...	Space and efficiency
Very sparse. There's a list of tags on my RSS feed. That's my design essentially. Periodically, from my point a view, it's more of a library system. I'm a little bit annoyed with people that want to take that from me. I know that I'm an atypical used in this regard. I like my file structures. I often have a very specific file structure that I want to do and when somebody takes the power from me, I get annoyed with that.	Have a more like a library system and have a very specific file structure
There's probably 100 things in there right now. I look at almost everything but that means that I scroll through things quickly. Those pictures take time and they're distracting. I just want to see like it's got to cross the consciousness threshold like; it's another article about a poll taken. Well, I don't want to read another freaking poll. I want to, if somebody has, if I run across something where someone is talking about a lot of recent political polls, that might cross my threshold but I've got ten of those that I go through and I got to go through them quickly, so I want text. I don't want images.	Don't want images
I have a very strong opinion in that debate that one area or Helvetica or some other non-serif font. I find them cleaner and easier to look at. I know that's probably a minority opinion.	Helvetica or non-serif font
Yeah, most of it is text-based except for the materials that I pull together for teaching, and then I try to have a lot of visual type things for the students and their warning.	Mostly text with a lot of visual type things

No, it's simple. When I'm talking about the anatomy of the brain, I'm just not having the text laid out there for them. I have actual features of the brain, but wherein you kind of, real pictures that they can look at and study the structures as well as the graphic pictures that you can find, like the cartoon-type pictures on the Internet and use those for it. That's what, so they can see it, because the graphic type ones are easier for them to see and then apply it to the real pictures, especially of the brain. There is that piece, the visual.	Real pictures, graphics, cartoons
With my cases that I use, for example I have a case study that involved a young nine-year old who is a Somali refugee, and he was on a bus, in Minnesota when a bridge collapsed, had 35 victims, that's what it is. So, I not only have them reading about them but I have clips, video clips of the actual collapse. I have a similar case of domestic violence situation, family, and I've heard a 911 call where audio coming in, there's no visuals with that.	Audio clips
Whenever I can do that, then I integrate that in. With my online courses, the Power Point lecture, the video that they're watching, and then web-based materials that I can find for them that are hopefully interactive, creating my modules that I teach. They can click on different parts of the page to get more information, more in-depth. I'm a visual learner so that very engaging, and not a lot of text. There's text but it ... woven in, integrated in the visuals that they seeing	Interactive PPTS - click on different parts of page - visual learner
Probably a mix. I mean if I'm teaching, it's PowerPoint, which has a mix of text and images and charts and things like that. If it's a research project or a report that I'm writing, then it's going to have a mix of text and tables and figures and stuff like that. If it's a proposal or something I'm writing, it's probably going to have the same thing—a mix of text, a mix of charts, tables, stuff like that.	Mix of text, tables, figures, charts
Well, it depends on what it is and what the audience is. If it's a proposal that's going to be submitted to a funder, it's pretty much got to be in the format they want, so I don't have much choice. It's kind of what they want	Information geared towards the audience
Yeah, because I think most of what we have in social work is just kind of text.	Social workers want text
It's mostly text, it's textbooks. It's reports that are just full of text. It's research that's got a lot of text. It's like everything is just sort of somewhat boring. My husband is a master of presentations. He does very, very cool stuff in all his presentations, and he thinks our stuff is so boring. When he looks at what I'm working on or what I'm looking at or viewing, it's so dull.	Reports are full of text
Yes, I think for the most part a lot of the information that I receive is text-based.	Text-based
A picture says a thousand words (laughs).	A picture says a thousand words
Yes, I highlight and I took my notes online, so all my articles for the most part. Every once in a while, I'll print out, but...	Highlight and my notes online, print seldom
Well, yes, it is very text based, typically.	Text-based
Yes, sometimes it's a link to a video, that's even rarer, it's mostly text, and depending on where it's coming from the font can change	Most text, with a link to video
it looks more like a magazine or a newsletter, there is a lot of news lettering type styles links or emails	More like a magazine or newsletter
Just for a class prep I'm looking at PDFs of articles, standard articles, nothing creative.	PDF's, stand articles
my lecture notes that I will be reading during the class it is like 14 point Times Roman.	14 point - Times Roman
It totally works for me because in a sense for me it's a script and I'm making sure that I get in there...having the PowerPoint helps, because I have condensed my scripts down to key points and information that I can get across to students and then sometimes I have visuals.	Key points and some visuals
For myself, when I access information, who knows what the format is going to come into me. I feel like I have very little control over that.	Little control over the format coming to me
It's a lot like nine percent PDFs and then I'm reading student work which is in Word, so essentially Word, PDFs, Excel files for budgets and .	PDF's, Word Documents, Excel
When I see those papers, it overwhelms me. Paper means I need to read all of this stuff. On a computer, all the stuff is there, but it's not looking at you	On a computer the readings do not overwhelm me.
One page may come up or two pages may come up and you can easily highlight things. In some programs, if there's something you don't understand, you can always click on it. It gives you definitions or explanations, additional explanations. Like some books I'm reading, some e-books I'm reading, it may be wording I don't understand, so I get definitions. Works for me, books. I'm a little bit technology, it is my problem is. You know what my problem is, I get overwhelmed and then all of a sudden ch-choo.	Having definitions, being able to highlight
It's very text-based.	Text-based
Very text-based. Not a whole lot of images. Nothing that would draw your eye to look at something different. It's just all words.	Text-based not a whole lot of images

Coding	Concepts	Category
I think that I would love to use a lot more innovative platforms or formats for presenting, because I am terrified of public speaking, but I don't feel like those methods are necessarily respected in this kind of organization.	Want to use more innovative platforms or formats for presenting	Future Possibilities
I think in terms of laptop and tablet use, the closer it can look to what you'd see if you were sitting at your desk and using your desktop the better off ... The easier it is to understand how to use things, for me.	Easier to understand	
Something that is more interactive and I don't know exactly what that would be. I know, for instance, yesterday when I was teaching, I just put up a list of strategies and had the students work in small groups, actually in pairs, doing role plays and there were some specific strategies I wanted them to try and use and demonstrate. I also put some prompts up there for them, so that was on the front board. They raised hands as I asked them to if they wanted me to come sit in and they were stuck and they didn't know what to say. Quite often the question one guy would have, others would have. That would have been helpful information maybe as a resource but I didn't want to interrupt everybody and say, Hey, if your client says x, you need to call 911. They were doing screenings for suicidal ideation. I thought, You know if I could have just gone up and I guess typed it in the document up on the screen, but that still seemed like that would...I just wanted a way to say, thinking in terms of...and also because I couldn't get in that even more. You know, it's pretty interactive, not with technology but with doing role plays and skills class. We do a lot of those but I can't get around to everybody so I probably to get around to almost of the Dyad's in the time that we have but I'm only getting a little sampling of it	Interactive	
I just would really like to go beyond PowerPoint. I read, although I just read a study about Powerpoint and they were saying, it was a whole big survey study and everything and they weren't really saying to ditch it because I thought that was going to be the findings and they weren't, on both the student side and the faculty side. Because two years ago, I was like, "Maybe I should learn Presy." Then we went and got a Presy. I went with some of the doctoral students and we went to the library and they did a demo and I didn't use it after that. I keep thinking for years I have thought about there must be some way. There has got to be something. I am sure there is something out there. Even in my research, the qualitative, I kept having this idea, like a greeting card. If you are doing a poster, can't I bring voice to the poster? I think you can now, but back then I think like greeting card technology where on a single thing people could come up and they could press it and then they could hear an excerpt or something from the participant.	Bringing voice to a poster like a greeting card, presentation software other than PPT	
I always wanted to make things more interactive but I think when it comes right down to it, I would need a consultation how to do it. I can think about it, I conceptualize it, but I can't always go do the next step. Having partnership with somebody who knew the next step would be really, really cool.	Support to create more interactivity	

<p>It might even be good to think about are there even templates that we could create for, even to embed in PowerPoint or something, that would be more qualitative. For example, was it this morning or yesterday? I forget what the company was called but free academic downloadable templates to use in your PowerPoint presentation, so I download it and they were interesting but they were medical. There were 16 of them and there's really nothing I can use but I thought, well how cool for them because they have an outline of a body and a heart and they can make something. I'm thinking that would be so cool if we could think of things like that and then you bring them in, maybe like some Preswell things and you bring it in and we can populate. Or Maxwells, last week I just drew it really fast, his five point things. It would be cool to have that be a template and then that way, when we got to somebody's actual research thing we could be like, "Okay let's throw in your goals. Let's throw in your stuff." Maybe you and I can work on that too. Even simple things like that. Instead I draw on the post it thing and I think old school because I think if I draw this, what if I can put clear plastic stuff on it and then we can just write on it. But that's like...</p>	<p>Place where I could populate my information and throw in your stuff like goals.</p>
<p>All right. Because that would be nice if I'm showing if I have instead of switching back and forth to the CD and queuing, I wish I could just...</p>	<p>Instead of switching back and forth to CD and queuing</p>
<p>I'm thinking about our orientations, that we are in the middle of right now. People come and they're in the auditorium, etc., etc. We constantly have attendees complaining about having to be here: it's too long, it's too short, it's inconvenient to be here. I look forward to a time when there's a more efficient way of getting the information to them in a way that's understandable, and that is somehow interactive. This ... they are in the room but they're not in the room. They don't have to take a day off of work or a half a day off of work. They are under time constraints, and they feel stressed. We throw so much at them. If there were a way they could be in their own office but tied into ... or a few instructors in their offices getting the same information and somehow those of us presenting it, be available to them without them being in the same place. So I mean, I'm thinking some kind of webinar or use of perhaps Skype or something such that we may be in different places but...</p>	<p>Changing field training to webinars</p>
<p>Because I'm finding at these orientations, when we get the feedback, it's all over the map. Some people love them the way they currently are, and some people don't.</p>	<p>Feedback on orientations are all over the map</p>
<p>Like if you could ... if there was some way that if the topic was, and we know this topic, we know what we're trying to teach them, then they could click on if they want to see someone demonstrating it. Then they could click on, where would be the link to the law, like what's the cite of the law, and I could click on that and see, oh, well that's ... then again, because the law changes, I don't want to give, like a dry, it can't be, like I type it in; it has to be the link to the law. It will take you to that ...</p>	<p>We could click on it and see someone demonstrating it</p>
<p>Exactly. I think that if there was some way – I'm really big on don't tell me what you would do, let's do it. If we're talking about a client or whatever, don't think, well I would first take the child into the room, no. I'm the child, let's do it. So I think that the more we can get them doing it, so if we could have some interactive, you know, like, I don't know, like could there be a child on the screen, and that as you're talking, they're ... I mean, we could probably anticipate, put in statements of his design. If the students said this, but to give them experiences where if I see the ...</p>	<p>To create interactive experiences</p>

<p>Yes. I think there's so much that we could do that was more interactive and I like to use a lot of movies. Let's talk about risk and say, let's watch this movie with Robert Deniro beating the crap out of Leonardo Dicaprio in that film, then we're going to turn the film off, and then I'm going to say, okay, this is your family, let's do a safety plan. What did that safety plan look like? So I think the more that we could give them ...</p>	<p>Interactive with videos and incorporate things such as a safety plan</p>	
<p>Even like reinforcing behavior, so like if we have, especially like with youth or teens, if they're doing things like reinforcers, sort of like that whole thing could really be helpful. Helping kids in foster care where you're talking about life book, and very often like they don't know ... they don't have pictures. But, hey, you were born in Dundalk? Well let's get a picture of Dundalk. I get that might be where you were born, but ... If they had their life books somewhere, in some entity, like it wouldn't matter that the case record didn't follow them. This would be a real life book anyway. Yes. Then each worker can add to that book with them, but then it really belongs to them, and so I guess the capability for these things that are more limited by ... like even being able to get court orders quicker. Not very often, the worker has to be in the hearing because by the time you actually get the order that's signed, it's two months went by, and the things that you had to do, so they are writing down as the judge is talking. To me that's crazy that you couldn't electronically write up the court order and that gets sent to all the people that have to have that copy of that order, and I think ... it empowers them to be able to have that information and there's lots of ways I think that could really assist workers to be able to do that.</p>	<p>Life book that incorporates their history who are in foster care and each case worker could add to that book.</p>	
<p>Yes. I think, and I would love to do that. I think ... I work a lot with rape victims and I think victims telling their story is so powerful. We have to be really careful about how we do that, and it's not always comfortable situation to people, and I've always wanted to put together some type of video like that about victims that it's so powerful. It's so powerful, much more powerful than anything that I could say or do. I would have the ...</p>	<p>Using video to tell your story</p>	
<p>Well, it would be nice to come in everyday and just I turn on the computer and I just have updates—the Washington Post I have an update or the New York Times I have an update or the Wall Street Journal I have an update on certain things of interest. That would be great That's one of the major things, basically, so that everyday I have these updates I can incorporate into my teaching or my scholarship. It's like, say, I'm writing an article now on ADHD, and I can ... The AP said, "Well, this is new about ADHD," or whatever. That would be great. That would be very helpful.</p>	<p>Update already pushed to you</p>	
<p>Well, I'd like it to be something that's very interactive and something that's very visual. As much as I learn better with visuals, I'm not as good at putting together visuals as I would like to be, but that's how I would actually like to frame it, because that's how I know I learn, by seeing things. I like the idea of charts and graphs and things like that. That's what makes the most sense to me, as opposed to just seeing something in text.</p>	<p>Support developing visuals</p>	
<p>Well, interactive for me is probably very different than what interactive for you is. Interactive for me is more like having things in charts and graphs and stuff like that, that people can really comment on and talk about and discuss or whatever, as opposed to just having them read something.</p>	<p>Interactive to me is charts and graphs that people can comment on and discuss.</p>	
<p>Well, I know it's social work. It would be fun to have a whole conversation about what are the ways in which...but I don't even feel like I have a scan of the technology environment to even be able to think about all the cool applications. The only thing coming to mind in community work is yes, using the iPad for all kinds of stuff...interviewing, surveying, showing people... getting people access to certain kinds of information, GIS mapping stuff would be really cool...what was your original question?</p>	<p>Interviewing and and surveying people using the iPad.</p>	
<p>I'm reading something and it generates ideas for me. I want to write them in the article so that they correspond to the sections I'm looking at.</p>	<p>To read, generate and input my ideas.</p>	
<p>This would be great. This one, I don't have. This is fantasy stuff. If I could take a digital object and literally put it into the physical world, work on it, and put it back without having there to be these intermediary stuff, that would be fantastic. I really value the ability to store and organize and things like that digitally. To work on the documents in digital format isn't satisfying. In fact, I think it sort of impedes what I'm trying to do.</p>	<p>If I could take an digital object and literally put it in the physical world and put it take in the digital world.</p>	
<p>Yes, and then it was interacted with ... this sounds weird but, like, if the textbook interacted with blackboard in some way so that they could do ... they could watch a video, read something, watch a video and then respond to it and have it come on the blackboard.</p>	<p>If the textbook interacted with Blackboard</p>	
<p>If I could have a way that all of the applications that we do were online. I know a lot of them are through Maryland sail but it's not really online. It's there, but it really requires something else. Yes. If it was something that people were just sitting and click click click click. And then we just fax the additional attachments, send the initial attachments, that would be really nice.</p>	<p>If all the applications were truly online.</p>	
<p>One of the things that you and Tom that was really cool is I saw, it was something simple about walking into your classroom. As an instructor and turning your computer on and turning your ... That was very, it might seem very juvenile and basic to people, but I think, I know how to do that, but those kinds of things on things I don't know how to do, I like because you are literally saying, "Here is the button. Here is a picture of the button. This is what you are going to push." I think that because you have such a diverse array of faculty that are at all different stages in terms of technology, that those kinds of things are really helpful. You could have something, someone if they needed it, could go there and then you could have something more advanced, or this is ten steps down the line or whatever. I really like that, and what I noticed too is that I've been using a little bit more searching for instructions on YouTube that are exactly that simplistic. That was helpful.</p>	<p>Example of classroom video</p>	

TASKS (COMMUNICATING, EDUCATING, and SKILLS)		
Coding	Concepts	Category
Okay, typical workday is I start off with looking at my email, and figuring out what's there that I absolutely have to deal with and what I can get rid of right away and what I can let sit for a while	Reviewing e-mail	Communicating
For most people it hadn't even dawned on them that they were distracting from what it was that we were doing initially. They just feel like it's such a part of who they are that they don't even think about it. They just have their phone on. I think that that does a harmful service in us providing quality to the people that we serve, that you can communicate the message of devaluation.	Not realizing the impact of their behavior while utilizing technology	
In terms of giving access to people. It's just the idea of people needing to interface with people.	The need to interface with people	
If it's not a teaching day, then typically, after I check email and stuff like that and walk the dog, then I am kind of settling into my priorities for the day, so whatever those might be. Usually, it's a mix of things—people I need to contact and then it's a project I need to work on. So I'm typically at my computer most of the day.	Checking e-mail, Contacting people, Working on the computer	
That's pretty much a typical day, so I'm kind of doing what I need to do, and then I'm checking in and out of email during the course of the day.	Checking e-mail	
My typical day...one of the first things I do is check email, depending, I had class this morning so I did not get up...did I get up this morning and check it? I sometimes check it first thing. Sometimes I don't if I'm working at home. I am basically on the computer by 8:30-9:00, depending if I have class or not and then it's email for easily an hour if not more. Email takes a lot of time, then depending on what I'm doing, if I'm writing or if I'm working on some project or doing class prep or whatever, I'm drawing just from my files or from the internet or...that kind of stuff.	Checking e-mail	
As a director, a typical day was coming in, checking emails, checking voicemails, checking in with staff to get a feel for what was going on, either what happened the night before, and then what was on the docket for the day as far as issues with residents and stuff that I needed to know about	Checking e-mails, voicemails checking in the staff and reviewing schedule for the day	
field as a director, I also did counseling with the residents. I would have sessions scheduled, and then I would have a lot of meetings, and then I would also do supervision with the staff. Most days were filled with meetings. Then, the meetings were either therapeutic, supervisory or programmatic. Then, the end of the day, was usually check you email	Counseling residents, and supervision for staff and e-mail	
Then, when I'm actually out in the community with other community folks, it's more, again, PowerPoint presentations, and probably showing them a little bit like graphs and charts and sorts of things.	Presenting	
In terms of my interactions with technology, I walk in, I open up my Outlook, I will read my e-mail, then I go and usually access PDF files and Word files and use the phone to collaborate with people on research projects and collect data	Use Outlook to read e-mail, open PDF and Word files and phone to collaborate with others.	

Coding	Concepts	Category
Well, I have teaching days and I have research days.	Teaching and research.	Educating
I have my writing and research days that I am retrieving information via the Internet or through the databases at student services, library, or I'm going to different national centers to get information, so doing a lot of web-base. I am using that information since I've discovered to do the writing of my article. That's one way.	Searching for information through the Internet, National centers and web-based websites.	
I have three typical work days. I have one where I just sit around in meetings all day, I don't accomplish anything. I have a work day where I teach. I have a more frequent work day where I'm actually working on projects. I may be writing statistics, I may be writing up journal articles, I may be researching for LIT reviews, those sort if things	Meetings, Teaching, and Projects	
Check your email, check your voicemail after you check your email. Then, on some other days, it would be program planning like designing training, designing workshops, thinking about supervisory sessions or whatever. It would be doing administrative stuff. I did a lot of editing, proofreading grants or policies and procedures, typing up housing procedures. That was pretty much the bulk of my days so full like that.	Checking e-mail, checking voice mail, Designing training, Designing workshops, administrative duties, Editing, Proofreading grants and policies and procedures	
I don't know if it's actually a weakness, but I definitely know that I'm a visual, hands-on learner and other people are saying, "Oh, I just go to that app, and I do ..." I'm like, "No, no, no, no, no. I need to see you go to that app and I need to see you do it so that I can understand how it might be applicable."	I am visual and hands-on learner so I need to understand how it might be applicable.	
What they want to do is do the same thing they've always been doing but do it with this new technology, so the video lecture is on YouTube as opposed to the lecture in person. What I would think we would want to do is really rethink our goals. I think one of the problems that we have; I think this is true across the board in education. I think it's particularly galling in a place like social work where we talk a lot, we're teaching all of these students to use evidence-based practice, and yet we don't take any consideration of evidence in our practice of teaching.	We need to figure out our goals and we're teaching students to use evidence-based practice it we don't consider any evidence in our practices of teaching.	
What actually is working because we don't intuitively know it. We know that because we teach them that, they can't do it in their lives but sometimes we think we're immune from the same set of human characteristics in our practice and I think we need to ... First of all, I don't think you can know what works and what doesn't work. You can't just figure out, because you invest energy and time in preparing a class. You want to believe it's going to work.	You don't know what works or doesn't work until you do it	
You're too close to it. That's what science is about, right? Ways we can test. We can say these are the learning objectives that we want to get, have some reasonable way of measuring those learning objectives and then as you go through and process and change the way the course is delivered and information is delivered, look at what works.	Need to be able to test and say these of the learning objectives and do the ways in which firm measuring the learning objectives and through this change in the course delivered we know it works.	
One model I'm thinking about is short taking, taking lectures and thinking of lectures not as ... Think of lectures as another type of book, so you have a set of readings and then you would have me as a professor synthesizing those readings in some way and that's the lecture piece that would then happen in the small video clips. Then, the class time takes that information that the student needs to acquire beforehand. The lecture is just one piece of it but attending the lecture is not any more important than the reading.	The lecturer is just one piece but attending a lecture is not any more important than reading.	
Lecture and reading doesn't have some ability to convey information that's valuable but that's their job to acquire that. It's my job in the classroom to help them process that information, synthesize it and put it to work and that's how, I think there's a lot of evidence that adult learners do better with using information like that. In that sense, this is a hybrid online class but in a way, it's the least online thing possible. My proponent is taking this removing the old system, rather than just substituting for the old system.	Lecture in reading do not have the same ability to convey information that's valuable. It is the job of the instructor to make the information available to students so that they can process the information. The obstacle is removing the old system rather than substituting the old system.	
When I get down to the actual, the weekly crap work is, that means slicing the materials that I've [inaudible 00:04:52] over time into Power Point presentations for my online classes. In my classes that I teach that are in the classroom, I use a lot of case-based methodology and case-based learning. For the students in my classroom, if we're stuck on a different form of concept because I come at it from that perspective, we're looking at that information together even though I might have answer for them. They might be on their laptops looking up things or, we may take a break and I assign people to go to the library to find out information from the journals and the databases, and then go back to class.	Utilizing case based methodology and case-based learning. They may use her laptop to look up things or we can take a break and assign people to get a library to put information from journals and databases and go back to class.	
I think sometimes we tend to overuse PowerPoint and things like that, and so I think sometimes there can be a good combination. I know for myself as a teacher, and conveying information, I just find it easier. Now whether that translates on the other end, is it easier for people to learn, I don't know, because sometimes there is something, something to be said for just sitting down in front of the class and talking. I think sometimes there could be a better combination, but I wouldn't go to the extreme of not ever doing PowerPoint (laughs).	People tend to overuse PowerPoint. There's something to be said for sitting down in the front of the classroom and talking.	

<p>You're too close to it. That's what science is about, right? Ways we can test. We can say these are the learning objectives that we want to get, have some reasonable way of measuring those learning objectives and then as you go through and process and change the way the course is delivered and information is delivered, look at what works.</p>	<p>Need to be able to test and say these of the learning objectives and do the ways in which firm measuring the learning objectives and through this change in the course delivered we know it works.</p>
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<p>Lecture and reading doesn't have some ability to convey information that's valuable but that's their job to acquire that. It's my job in the classroom to help them process that information, synthesize it and put it to work and that's how, I think there's a lot of evidence that adult learners do better with using information like that. In that sense, this is a hybrid online class but in a way, it's the least online thing possible. My proponent is taking this removing the old system, rather than just substituting for the old system.</p>	<p>Lecture in reading do not have the same ability to convey information that's valuable. It is the job of the instructor to make the information available to students so that they can process the information. The obstacle is removing the old system rather than substituting the old system.</p>
<p>When I get down to the actual, the weekly crap work is, that means slicing the materials that I've [inaudible 00:04:52] over time into Power Point presentations for my online classes. In my classes that I teach that are in the classroom, I use a lot of case-based methodology and case-based learning. For the students in my classroom, if we're stuck on a different form of concept because I come at it from that perspective, we're looking at that information together even though I might have answer for them. They might be on their laptops looking up things or, we may take a break and I assign people to go to the library to find out information from the journals and the databases, and then go back to class.</p>	<p>Utilizing case based methodology and case-based learning. They may use her laptop to look up things or we can take a break and assign people to get a library to put information from journals and databases and go back to class.</p>
<p>I think sometimes we tend to overuse PowerPoint and things like that, and so I think sometimes there can be a good combination. I know for myself as a teacher, and conveying information, I just find it easier. Now whether that translates on the other end, is it easier for people to learn, I don't know, because sometimes there is something, something to be said for just sitting down in front of the class and talking. I think sometimes there could be a better combination, but I wouldn't go to the extreme of not ever doing PowerPoint (laughs).</p>	<p>People tend to overuse PowerPoint. There's something to be said for sitting down in the front of the classroom and talking.</p>
<p>I use my hands for expression. I wouldn't want anything in my hands.</p>	<p>Or utilize my hands for expression.</p>
<p>When I teach though, it's somewhat different in the sense that some people use Power Points. I don't use Power Points at all. I do a lot of my teaching either verbal, but the verbal is almost backed up with something visual. I write on the board a lot. Up until this year in the Stats program, I create tons and tons and tons of statistical examples. What alpha looks like, and what each piece means. I used to print those out for every student, every class. This year, I have twelve students. I could potentially be printing out a ream or two of paper every class. I said I'm not going to do that anymore. I print out my copy for me and I post it for them, and they can either print it out or they can use it online, which is what most of them do.</p>	<p>A lot of my teachers verbal and I use the chalkboard.</p>
<p>In class, I make them highlight passages and write notes in the margin.</p>	<p>I make students highlight passages and write notes in margins</p>
<p>Oh, okay. When I present information to students, I'm trying to get away from presenting with text. I think the challenge for us is that, ironically, students are also interested in it. Like, I don't like ... one of my problems is that students always want me to post my PowerPoints online so then I post them online. Then the students stare down or they always want to take notes on the bottom but then I feel like, if they wanted that, they could stay home. Do you know what I'm saying? It doesn't necessarily facilitate a kind of communication. Of course every year ... it's like my New Year's resolution, I'm going to have more ... if I do slides, it's going to be more about images and data visualization and stuff like that, fewer slides. I think there's a lot of interest, not necessarily specific to social work but I think in methodological fields like on site and stuff like, how do you do a better job of visualizing data in such a way so that people understand what the hell we're talking ... so it's not misleading but also informative.</p>	<p>By making the PowerPoint available to students they become more focused on adding notes to their slides and being part of the discussion itself.</p>
<p>Then, from my teaching perspective, gosh, I will say, one of the things I love, this is a piece of technology that I absolutely love, the clicker.</p>	<p>Love Flickr technology.</p>
<p>I hate when faculty, or not faculty, I hate standing behind a podium all day in a lecture. I like to move around the room and get students really, let's keep it really interactive</p>	<p>Just like when faculty stands behind the podium all day lecture. I prefer to move around the room and get students interactive and engaged.</p>

<p>When I'm teaching, I try not to use PowerPoint a whole lot, because that can be boring, because then, students aren't feeling like they have to write everything down that's on the PowerPoint. Really, that's not actually the point. The point is for that to be a launching pad for the discussion, so that they can have a visual to see it. I try not to use PowerPoint a whole lot, but sometimes it helps when I need to list things off.</p>	<p>PowerPoint is used as a way to launch the discussion.</p>	
<p>He was a doctoral student. We probably had a 30-40 minute discussion about that and students fell out on feeling afraid or how would they be able to assess someone who isn't making a direct threat. I do use a lot of media. I really feel that at my core I involve critical thinking as much as possible and I feel like the best examples are the ones that are going to engage students are the ones that are the most topical. I have done Brittany Spears and Lindsey Lohan and depending if that came up that semester, then I would bring that in. I would try to source out the most reliable. Sometimes even bring in things that aren't so reliable that might be in people's faces, like Entertainment Tonight or maybe bring in that too to weigh that against other things.</p>	<p>Utilizing relevant resources</p>	
<p>During the year it's teaching and research and service.</p>	<p>Teaching, research, and service</p>	

Coding	Concepts	Category
No. PowerPoint isn't really ... I'd like to use something else. I haven't really; I just use PowerPoint because that's what we know.	PowerPoint	Skills
I have three typical work days. I have one where I just sit around in meetings all day, I don't accomplish anything. I have a work day where I teach. I have a more frequent work day where I'm actually working on projects. I may be writing statistics, I may be writing up journal articles, I may be researching for LIT reviews, those sort of things	Meetings, Teaching and Projects	
Like I got Photoshop, and just dove in it and taught myself. There was one little thing that was holding me up and I finally broke down and asked somebody in Photoshop. Once they answered that one question, I was able to ... and so now I can pretty decently use Photoshop.	Photoshop	
Email, internet.	Email, Internet	
Well, I'm serious, I'd like the minimum to get by, I like Word Processing, I can do Excel, I'm very proud of myself to Power Point and things like that. There's a lot that computers can do that I don't know how to do it.	Word Processing, Excel	
Well, I am very proud of myself for having a semi-master blackboard this past year, after we listing it for what has been a copyright. I pretend once ... I find it once ... I sort of have some initial research but once I get on board and things were very good, and very insistent, and then I like it. I felt there was a lot of support here at the school configuring that out. The other thing was a couple of years ago, the electronic field books. Tremendously more efficient than ,, students have the fax, their mail, their process record.	Blackboard, Electronic Field Notebook	
Well, I mean I use it for Word a lot. I've got to do a lot of Word. You know I write a lot, so I do a lot of Word. I love the old Word, not so much the new Word, but the old Word, because it's easy to write with Word.	Word Processing	
I would say ... Well, I have basic technology skills, and of course, I'd like to have a lot more, but I have basic skills. I know how to go to the internet and I know how to retrieve information and I know how to get a video and I know how to do things like that. I certainly know how to do research and get information and put it in a PowerPoint or whatever, and I know how to look for articles and look for data and stuff like that and analyze data and all that kind of stuff. I can do all the basics, but beyond that, I would say I'm not very sophisticated about my technology use and I would like to be much more sophisticated.	Basic Technology Skills - Internet, retrieval of information , PowerPoint	
Well, for the most part, all of my experiences are on the computer. Right now, I've had some challenges because I'm used to working with Macs and my computer in the office right now is a desktop. Generally I go back and forth between my Mac, mainly because I have some information on my Mac that I haven't put on my desktop, but mainly because I'm more comfortable with my Mac. If I can't do something on my desktop,	Macintosh and Windows	

Yes. If I needed content related to social work like process reporting content, I'd Google. I Google all the time. You'll go get the big ones.	Google
I would go to the library online and look for an article on a topic. I would go to my file drawer if I knew I had an article in there that I'd already read, that I remembered that would remind me of the information.	Online library resource
I mean usually it would just be talking it through in some depth, but for me, because I'm not one of those people that retain 20 years of data, I go to the Internet, typically, and look up some recent information for them or direct them to a resource I may know about online.	Look up information online
I think a lot of information I would get from the internet or I would go back into my office and Google a question or go to a resource, say, that I had already used before. A lot of people had incredible financial difficulty, so it was going to resources to try to figure out how to get people money or how to ease some sort of financial stress, even if it's for the short-term. So I would—and I was constantly on the go, running all over the hospital, like always like a constant circular motion.	Internet, Google
I think usually all the websites and stuff that I would investigate were very helpful and accessible, easy to use.	Websites
What that means to me is nicely going into a search engine of some kind, although I still define that pretty broadly because that might mean by that I also include going into our library system and going into searching databases or Google Scholar or more broadly if I'm looking for a video on Asperger's I might both go to a National Asperger's Association. One of the books is about Asperger's. I might go to and I did go to YouTube as well just because it happens.	Search engine, Google Scholar
In terms of resources and research, I most often use the Internet. I will Google everything, anything, and then I will do a phone call and introduce myself and ask questions to learn more about the service or organization	Internet, Google, phone
If I'm working with a student who needs to know what resources may be available to help their client. I might Google whatever the issue is, to see what resources there may be available to connect them. I access the EFN to check their progress in terms of their learning contracts, also for evaluation purposes, and kind of have a conversation with them around that. It's not done [00:07:24 inaudible] it's not done in remotely together, and I don't even know that we can. I typically do my homework before going into the site, so I go with hard copies of the homework that I've done and have a conversation with them that way. In terms of reports and things like that, I gather whatever the information is that I need from the students by way of a monthly report and compile an overall student report. Then I will send that to the coordinator who does that information.	Google, EFN

Well, when I do Bible work, which is not just personal Bible work, but sometimes I write religious-oriented publications. I'll use something like Bible Gateway, which is a search engine, which will search different translations, and so but mostly I'll use Google to get information. Maybe I know a quote and I don't remember the author, so I'll type the quote in and I'll get the author.	Bible Gateway, search engine
I'll use Google primarily to augment my reading and my writing. I might need a quick fact like, in fact, I was just writing something, and I needed a quick fact about how many people were affiliated with the Christian religions. I type in census track data and Google religion, and then before I know it, I have the exact page I have reference resource. I'm a pretty good user of Google by using quotes and saying the right words and trying to eliminate some things. Usually I'm able to call up very quickly on the front end rather than page eight.	Google
If you're talking about information in terms of preparing to do a presentation or something, I will oftentimes Google, Wikipedia (laughs), or I will look and see what has been done in the past. As an example, the orientation we're doing now for students, what was done for students last year, and that may be already on PowerPoint or some other way that I can pull up what was done. I modify it based on my understanding of what student needs are.	Google, Wikipedia
I think two major organizations, whose websites I rely on a lot, are the <i>Council on Social Work Education CSWE</i> , and <i>NASW</i> . I do retrieve information from them for general and social work education, and various other professional, either articles or entire books, from those websites. It would be important and continue to be important for me to be able to retrieve that information, so that I can keep up with what I need to know in order to try to do this.	<i>Council on Social Work Education CSWE</i> , and <i>NASW</i> .
I depend a lot on electronic eliminations and on internet and being able to access studies and that kind of thing for my work.	Internet
I just use Google.	Google
A lot of my work is in Criminal Justice deal, so there are some really good websites where there are a lot of studies compiled for my file against women grants, justice grants, [Inaudible 00:09:47] justice.	Criminal Justice Websites
I search a lot on the web, so ...	Search a lot on the Web
And I also buy a lot of books and read the books, scholarly books, and I look at the websites and things like that.	Books, Scholarly Books, websites
Well, it depends on what information I'm looking for. If it seems to be technical and it's something that might be a lot of people might have issues with, then I'd probably go online. If it's very nuance and particular, maybe even institution-specific or something like that, then I would probably going to either send out an email or get on the phone with somebody	Depends on the information, send out an email,
Yes. I might just Google search. I might try to get some answer support depending on, again, what the question is.	Google

I go to Google RSS feed and I curate that constantly. I take things off, put things on. Basically, that RSS feed spans all the domains of my life. I have a number of journals that I go through so whenever the journal releases new information or a new edition, I go through all the articles of those journals. Then, I either file things or something. If I really want the article, I'll go get the article and I'll store it in an application that stores the PDFs.	Google RSS Feed
There's a lot of news and politics and various blogs that I follow. When I wake up in the morning, I check my email. If there's anything that I need to address, I do that and then I go to my RSS feed and I spend hours a day on that. I'd say that's probably the number one place where I get retrieval information. I don't go to web sites. I don't go to the New York Times or Washington Post or any blog sites. I generally just read things in there. Sometimes I clip through the link but that's rare.	Spend hours on RSS Feed
My RSS feed looks at, so I follow a number of bloggers and their blogs have RSS components so I grab their information. I tend to be focused on economics, health policy stuff. I do general news feed. There's various journals like psychiatric services or statistics in medicine or whatever, a range of stuff that I follow that are RSS feeds although they drop off all the time. That annoys me but they change their RSS feed policies and then the link is dead, they don't tell me. Then, I figure it out a bit later when I haven't seen anything for months on end on a journal.	RSS Feeds follow bloggers and blogs grab their information. Psychiatric services, statistics in medicine
Then, for the academics, if there's an academic article or something I want to use for a class, I store it in papers and then I have that all organized and that's where all my journal articles live.	Store academic articles in Papers
I use different applications for different reasons. In part, that's because that's what works. Evernote to me is a global retrieval place where if I find in Safeway, I want to cook something, I can go to Evernote and get my recipes, and I know all my recipes are there.	Evernote - global retrieval place.
Papers is a little bit more heavy handed and specialized, so Papers allows me to really organize my academic journals. I can export the format to Endnote, which is what I use to cite things in my papers. Papers have a number of very specific components. It poorly syncs with iDevices at this point	Papers - heavy handed and specialized and for citations
There's a whole bunch of problems that inhibit the ability of social work practitioners to both store the information because you got to physically write it down and there's no automatic information retrieval. There's no automatic information collection. That's changing a little bit but it's still very antiquated.	There is no automatic retrieval of information
When it comes to data that I need for research grant from the writing, and I need like information on epidemiology ... trauma and rape in the United States, then I'm going to the government level databases or community level databases to retrieve it from there, and then what I need. Sometimes I have to send emails directly to whoever's in-charge to be able to get that information that I need for my grant.	Need research grant from writing like information on epidemiology, trauma, rape - go to gov. level databases.
Well, if it's a student say I'm advising and they want to know something about am I taking the right course, or should I be doing this or should I be doing that, and I don't know the answer, I will go to our website and I'll go into either the student manual or I'll go into some place on our website where I think I can find the answer. If I can find the answer there, then that's fine. If I can't, then I call somebody.	Student manual, website - if for advising or call someone

Yeah. Well, for my class, for example, that I'm teaching this semester, a lot of stuff is, I'm just constantly searching for stuff on the internet that I can bring into class, because I'm trying to keep it really current and relevant.	Class - searching on the Internet to keep current and relevant.
So I have a few websites that I really like that are sort of management-focused, focused on program management, and so I'll go to those websites and I'll look and see what's new on there. There's also a website I love called Creative Leadership, the Creative Leadership Center, and I'll go there and I'll see what's there and I might be able to use, whether it's a new case or something I can bring into class. The Harvard Business Review, I'll go there because they have video clips, and sometimes I can pull those in to use them in class. I'll use it a lot for things like that, the new stuff I'm looking at for class. Then I go on the SSWR board, so I'm constantly going in and doing stuff on their site, and then just kind of looking for things that I need to look for in terms of research and things like that.	Creative Leadership, Harvard Business Review, SSWR board.
It means go to a website. I need an article, so I go and search on the library website, I don't know, or I have a cold or some kind of medical problem and I go to WebMD and try to figure out (laughter) what's wrong. As opposed to calling urgent care or calling and nurse and saying, "Hey, I have fever, what should I do?" Just try to find the solution myself before going anywhere else.	Websites, WebMD
Efforts to Outcomes is a software that was developed in Baltimore, and hundreds and thousands of non-profits are using it across the country. It's very heavy in Baltimore, because it started in Baltimore, so they gave out a ton of free licenses. But so many non-profits don't know how to use it, and so the School of Social Work has invested in learning more about the system and figuring out how it works and then taking a look at the opportunity and how the non-profits see the opportunity.	Efforts to Outcomes software
If I am curious about the topic social enterprise I would literally go to Google first and just look at it and see what's there or the next thing I might do is go to Amazon and look at books, like the latest books on the topic and I typically do that before even going to our library	Google, Amazon
I usually go on the internet.	Internet
Well, I use Maryland.gov a lot because all the stuff is on there for the benefits and stuff. Otherwise, I look for links. I look up something. I put something in and see where it takes me. It's pretty much hit or miss.	maryland.gov
I'm always like, either it's an email or I am conducting research, in terms of looking through different articles to make sure they fit or coincide with the research that I'm conducting or doing internet searches for more information about my research	Internet
I use a number of, I guess, search engines. I probably would use Google Search and then go to Google Scholar, but then I also definitely use the University of Maryland university database website because we have access to the articles right away, they can be printed out so forth and on. I really use those two sources in particular when I'm looking for articles and research.	Google Search, Google Scholar
Yes. If I needed content related to social work like process reporting content, I'd Google. I Google all the time. You'll go get the big ones.	Google
A typical day there is that I'm seeing people who come in who need health insurance. The social work component of it is people are coming in, they're uninsured, are they eligible for any insurance programs. We've also branched out to food stamp and all the insurance, any kind of benefits that we can find. That's pretty much paper driven because it's filling out all the forms. I have people at DSS and Health Department work that I've scanned the applications to. That's kind of my technology piece of it. I keep a database of my people that I see and how I see them, what I see them for. That's the typical work with that.	Filling out forms, entering information in the database.

Coding	Concepts	Category
Yes. I was by some people, but it was also dark because I didn't have a window and I couldn't hear anything. It was quiet because I couldn't hear anything going on. Where I am now, it's brighter. I can hear all the office stuff. That's, for me, that's helpful. If I'm really engaged in what I'm doing, I tune it out sometimes, but usually I have half an ear there and then doing it, and that's good for me, like when you're in class and you doodle and you listen to the lecture. That keeps me focused and not bored.	Prefer Noise	Volume, Noise
Well, for me, I am not a type of person that will read something with music on. Actually, I find it very distracting to work in an office environment that's all cubicles, but that's what I have. So it's very distracting for me to have my job that I have, which is responding to a lot of students, a lot of staff sort of check-ins and conversation without being able to close the door when I need to. So it's loud. I also sit right next to the secretary, so that my phone also rings with the main line, so there's always this phone ringing that I have to just check. Wait, is that my line or is it the main line? So it's very distracting in that way. I would never consider my office where I spend the day-to-day to be a place where I can think clearly or ... For instance, if I have to write a lengthy report that takes eight hours, I would never do it in the office.	It's loud - difficult to focus	
The noise level, I generally have some form of background noise happening. Either I've got music playing or I've got the fan running in the background or something. That's intentional.	Need Background Noise	
Well, if you're out in public and, like, the hospital that I worked with, there was always large public spaces and usually—and they were very big on either having maybe little concerts or different entertainment things to entertain the patients and families. So there's a high noise level so I think if I weren't in my office and I were out and about and invariably I would be if I were trying—invariably I would be so then I would need to either have it with no sound or to have ear buds or something because I want to be able to hear it.	High Noise Level need no sound	
It doesn't matter. If I really had my choice it would be probably at a pretty cleared up desk with the technology available and all the resources available, snacks and quiet. If I'm going to work for an extended period of time, that's probably what I would, if I had the time to work four, five or six hours straight without doing anything else, I would pick that but I could sit and write near a drum and it's not an issue.	Noise Level doesn't matter	
People can be talking, the radio can be on, television could be on and I can just tune it out.	Able to screen out noise	
I am very, very good at screening out noise. Some of my colleagues, I used to play music, they don't ... the space is too tight here so I can't play music at all. People complain because the walls are too thin.	Able to screen out noise	
I prefer a quiet atmosphere	Prefer quiet atmosphere	
Yes. I'm fortunate that way, I can find nice, quiet places to work. It's hard where if it is noisy, I'll turn on a fan, and the fan just ... white noise, drowns it out and I actually hyper-focus it still. In fact, I did a fair bit of my dissertation at the University of Richmond cafeteria. I didn't go to the University of Richmond, but they have a nice cafeteria that sat on a lake and it was half the distance to VCU, so I stopped there and I could screen all that out and sit there and write.	Able to screen out noise	
Yes. Our current environment up on the fifth floor, for the most part is very quiet. Our offices are somewhat removed from the hubbub of classrooms, and there's not a lot of foot traffic around. Any noise that's created is among our own staff basically. If we don't like that or want that, we can close our door. I think all of us work in a fairly quiet environment, in test environment	Environment is mostly quiet	
Yes, I would say we're in a pretty quiet environment basically. In order to retrieve information or change information, I need to have quiet.	Prefer quiet atmosphere	
As you have learned in working with me, I'm not a multitask kind of person. I want it quiet, and I want the information presented to me in such a way that I don't have to switch back and forth between various platforms or setups if I wanted to get it. I want one thing at a time. That's just the way my brain works.	Prefer quiet atmosphere	