

A Systematic Review of Instructional Practices Used in Online
and Blended Social Work Practice Courses

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Abstract

The purpose of this study was to examine the underlying factors supporting acquisition of knowledge, skills and awareness (KSA) in online/blended social work practice courses. Reports of KSA development in online/blended social work practice courses continue to be published in the professional literature. However, the broad scope of the reported instructional methods has resisted in-depth systematic reviews. Emerging instructional practices related to digital education, and the mechanisms and contexts that provide the foundation for these practices, were explored using a realist synthesis design. Systematic use of discussion board activities was the pattern that most consistently contributed to learner development of KSAs. A combination of networked learning, social constructivism, and scaffolding provided the theoretical perspective used in this analysis.

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‘This is dedicated to the one I love’ (Pauling and Bass, 1958).

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Introduction

Advancements in digital technologies have significantly shaped the landscape of higher education over the past 25 years. In many colleges and universities in the United States (U.S.) and the United Kingdom (U.K.) these technologies are embedded in the fabric of the institution. Learning management systems such as Blackboard and Moodle are as ubiquitous as the brick and mortar structures they purportedly replace.

Along with these digital advancements have come new and revised educational pedagogies. Some are specific to emerging technologies, while others predate the introduction of Web 2.0 and the shift to mobile technologies (Goodyear, 2005; McConnell, Hodgson and Dirckinck-Holmfeld, 2012). Although these pedagogical shifts have been shown to enhance deeper learning amongst students (Jones, 2015) they have not been evenly adopted across higher education (HE) for a plethora of reasons. These include the marketized and consumerist approach to HE that pervades colleges and universities in the U.S. and the U.K. (Jones, 2015), the perpetuation of the false binary of digital natives and migrants (Bayne and Ross, 2011), and the challenges presented by those who view learning technologies as lacking in social presence and not equal to face-to-face learning, despite significant evidence to the contrary (McConnell, Hodgson and Dirckinck-Holmfeld, 2012). These barriers to consistent application and analysis lead to online/blended courses and programmes offering the convenience of distance education, but without a critical review of how students build knowledge in these digitally mediated spaces.

This study has been developed as the result of my interest in how my own profession, social work, has adopted newer pedagogical approaches as it has responded to the call for increased availability for online courses and programmes, particularly in post-graduate studies. To date there has been little exploration or critique of these methods of course delivery beyond exploring their equivalency with similarly enrolled face-to-face (F2F) classes. Moreover, the focus of most social work literature on this topic has been on course delivery systems rather than on the pedagogy of teaching and learning in an online/blended environment. This has resulted in few pedagogical discussions of digital learning in social work education literature, and a long list of detractors stating that social work learners cannot possibly acquire the necessary knowledge, skills and awareness (KSAs) in online/blended

courses (Groshong *et al.*, 2013; Levin, Fulginiti and Moore, 2018).

The United States Department of Education defines fully online learning as occurring in instructional environments supported by the Internet, and blended (or hybrid) learning as allowing students to receive some portion of instruction in face-to-face environments, with the remainder occurring on the Internet (Bakia *et al.*, 2012). While there is no tracking of individual offerings of online/blended social work courses, the accrediting body for social work education in the U.S., the Council on Social Work Education (CSWE), currently lists 79 post graduate programmes that offer fully online or hybrid degree programmes (Council on Social Work Education, 2019). This represents over 29% of all accredited social work degree programmes in the U.S. Given the rapid growth of these programmes (a 300% increase since 2014) there is significant need to explore and assess how learners develop the KSAs required for professional social work practice (Smith, 2015).

Social work practice courses require learners to develop and practice skills related to interviewing, building a working relationship with the service user, goal setting and service planning, providing some sort of intervention to assist the service user in reaching these goals, and assessment of the outcome of the intervention (Council on Social Work Education, 2015; Miley, O'Melia and DuBois, 2013). A realist synthesis design was chosen to assess the discourse in current social work literature regarding how learners develop these skills in online/blended social work practice courses. This methodology was chosen as it allowed for deep analysis of the contexts and mechanisms that supported learning and led to specific outcomes. The analysis was initially informed by networked learning and social constructivism, two pedagogies actively used in studies of digital courses and programmes.

Research Question

The purpose of this exploratory study was to examine and determine the underlying factors that support development of learner KSAs in online and hybrid social work practice courses in the U.S. This study was guided by the following research question: What contexts and mechanisms provide support for which students in developing knowledge, skills and awareness (KSAs) in online/blended social work practice courses?

The rapid expansion of online and blended social work programmes in the U.S. has occurred in a context in which technological advances in course delivery has outpaced the profession's research regarding pedagogical practices and faculty development in these instructional methods (Smith, 2015). Exploring this topic in a systematic manner begins to bridge this gap and provides guidance in future curriculum and instructional design. A focus on social work practice courses holds the potential to inform other professions that deliver similar instruction, such as counselling and psychology, and will expand the research base for digital pedagogies in related disciplines.

Review of the Literature

Social work education programmes are accredited in the U.S. by the Council on Social Work Education (Council on Social Work Education, 2019). This body establishes the knowledge, skills and awareness that social work learners must develop in order to engage in professional practice. Since the advent of the first online social work degree offered in the U.S. at Florida State University in 2002 (Siebert and Spaulding-Givens, 2006), multiple studies have been developed to explore the best practices in this type of programme delivery (Forgey and Ortega-Williams, 2016). These studies have been useful in demonstrating that learners in online/blended courses have similar outcomes to those in face-to-face courses (Gates and Dauerhauer, 2016). However, they have not provided significant discussion of educational pedagogies. Inclusion of digital education literature, particularly networked learning, might assist in providing more robust evaluation methods for online/blended social work courses and establish better guidance in course pedagogy and design.

Social Work Education

The Council on Social Work Education (CSWE) requires that graduate and post-graduate social work education programmes focus on the following areas of knowledge: (a) human behaviour, (b) social work practice, (c) research, (d) policy, and (e) field education (internships) (Council on Social Work Education, 2015). Development of competence in each of these areas is considered necessary for professional social work practice, and is articulated through a series of competencies that define each knowledge area (Council on Social Work Education, 2015). Social work practice courses focus on the development of specific skills related to engagement, assessment, intervention and evaluation of interactions with individuals, families and groups (Council on Social Work Education, 2015). The development of these skills presumes significant interpersonal interaction between learners, peers and instructors, as well as interaction with social work service users, as learners complete 950 hours of supervised internship in the community (Council on Social Work Education, 2015; Moore, 2005).

An emerging body of research attempts to address online/blended pedagogical methods for social work practice courses. These range from peer reviewed articles describing instructional techniques (MacKenzie and Bjornson, 2005), to descriptive

articles exploring learners' subjective experiences of online courses (Okech *et al.*, 2012), to the use of specific learning management systems for achieving best results (Aguirre and Mitschke, 2011). One of the resulting challenges of this wide variety of articles is the ability to conduct a systematic or comprehensive review of the instructional methods used, or comparison to determine which methods will be most effective in assisting learnings to develop competency. Although a few attempts have been made to do so, they acknowledge the challenges in developing actionable conclusions (Dennison, Gruber and Vrbsky, 2010; Farrel *et al.*, 2018) Additionally, while scholars and educators engage in a wide variety of instructional practices, there is little guidance on how to translate these practices to one's local context or programmatic needs.

Multiple databases were searched for articles related to online/blended social work education. The search terms included various combinations of *hybrid, blended, online, instruction* and *social work education*. Additionally, the contents of three professional journals dedicated to exploration of social work curriculum were searched for the years 1997-2019. These journals were the *Journal of Teaching in Social Work, Social Work Education, and Journal of Social Work Education*. The earliest search year was determined by the opening date of the earliest online social work programme in an English-speaking country, which was the Open University in the U.K. in 1997.

Websites for professional organizations dedicated to training or professional development of social workers were also searched for white papers or opinion pieces regarding blended or online education. These included various professional and governmental associations related to social work in the U.S., Canada, the U.K., and Australia.

Social Work Education and Technology

Late 20th and early 21st century use of technology in social work education focused on developing digital and Internet resources to enhance face-to-face instruction. There are multiple early studies of using technology (analogue and digital) to enhance traditional classroom teaching of various social work subjects. These include social work history (Faux and Hughes, 2000), diversity (Hylton, 2006; MacFadden, Maiter and Dumbrill, 2002; Van Soest, Cannon and Grant, 2000), administration (Freddolino and Knaggs, 2005), human behaviour (Hash and Tower,

2010), and statistics (Harrington, 1999; Petracchi and Patchner, 2000). The types of digital activities used to enhance these courses included discussion boards and forums (Barnett-Queen, Blair and Merrick, 2005; Lee, Brown and Bertera, 2010), journals (Johannsen, 2005), video conferencing (Berger, Stein and Mullin, 2009), PowerPoint-based lectures (Roberts-DeGennaro and Clapp, 2005), hyperlinks (Royse, 2000), use of ITV (Coe and Elliott, 1999; Forte, and Root, 2011), and utilization of Learning Management Systems (LMS) such as WebCT and Blackboard (Aguirre and Mitschke, 2011; Hash and Tower, 2010).

Additional early use of these technologies includes support for field education, wherein learners complete an extended internship at a social service agency. Internships tend to occur close to a learner's residence even if the learner travels long distances to attend face-to-face classes. While completing an internship, most learners attend a *field seminar* that assists with integration of theoretical knowledge and practical internship experiences. Innovative use of technology includes utilizing video and telephonic resources to conduct the field seminar and sustain contact between the learner and instructor (Bushfield, 2005; Leyva, 2012). Wolfson, Manuson and Marson (2005) explore the use of WebCT to conduct field seminars with geographically distant learners. Field education additionally used many techniques pioneered for enhanced classroom instruction. Maidment (2006) explored the use of a discussion board to support student learning and integration during internships. Oterholm (2009) developed the use of small group reflection regarding critical incidents, also using a discussion board format.

Graduate and post-graduate social work education has thus adopted multiple methods for utilizing technology across the curriculum to enhance face-to-face instruction and to mitigate distance in geographically remote locations. As access to these technologies increased, more social work programmes offered courses on the Internet. Specific to the focus of this study is the emergence of social work practice courses that are delivered via the Internet, typically defined in social work literature as blended or fully online. Blended courses combine F2F instruction with online activities. Online courses are completed on the Internet, and may include synchronous or asynchronous activities (Bakia *et al.*, 2012).

There currently exists significant variety in the types of instructional practices and pedagogy used to guide the teaching and learning that occurs in online/blended

social work courses. These range in scope from synchronous video conferencing that mimics traditional classroom instruction, to innovative asynchronous methods capitalizing on emerging technological and pedagogical developments (Dennison, Gruber and Vrbsky, 2010). Debates regarding the efficacy of online instructional practices in social work education have been highlighted since the beginning of such course offerings (de Boer, Campbell, and Hovey, 2011). Particular concern has been articulated about the adequacy of online instructional methods used in social work practice courses, as these types of courses focus on development of engagement and intervention skills used with individuals and families, and are core to the delivery of social work services (Regehr, Bogo and Regehr, 2011). Despite the persistence of perceptions within the profession that online/blended social work practice courses cannot sufficiently prepare learners for professional social work practice (Groshong *et al.*, 2013), this position is not supported in the literature (Cummings, Foels and Chaffin, 2013; Gates and Dauerhauer, 2016; Pardisani *et al.*, 2012).

Digital Education

To date, however, there has been little discussion of the pedagogical practices of either blended or online social work practice courses, and little integration of digital educational research. Two pedagogical models were used in this study to help bridge the gap in this literature, and lay a foundation for understanding the contexts and mechanisms that lead to increased KSAs amongst social work learners. These include networked learning and, a pedagogical theory long used in social work education, social constructivism.

Networked learning

Networked learning is an educational paradigm that is informed by multiple learning theories. It is defined by Goodyear *et al.* (2004) as ‘learning in which ICT [information and communication technologies] is used to promote connections; between one learner and other learners; between learners and [instructors]...between a learning community and its learning resources’ (p. 83). Networked learning is further defined as being rooted in social and relational interactions, with an aim to integrate ICT and Web 2.0 in a context supported by administrative and educational openness (McConnell, Hodgson and Dirckinck-Holmfeld, 2012). Although networked learning principles were developed during the emergence of digital technologies, the presence of these alone is not sufficient to define networked learning interactions, which can be

‘synchronous or asynchronous, text, voice, graphics, video, shared workspaces or combinations of these forms’ (Networked Learning in Higher Education, 2019, para 3). Networked learning is further informed by a number of theories of teaching, particularly the humanistic values and pedagogies of Carl Rogers, Malcolm Knowles and Paolo Friere (McConnell, Hodgson and Dirckinck, 2012).

Goodyear (2005) defines specific elements that support knowledge building within a networked learning paradigm. These include (a) connectedness, (b) collaboration, (c) well-designed learning tasks, (d) good access to robust and appropriate technology, and (e) a convivial learning culture. Jones (2015) emphasizes that networked learning values the co-creation of knowledge among the networked group as primary to the development of knowledge.

Social constructivism

Conceptualized by Dewey (1933) and developed further by Vygotsky (1978), social constructivism is a theory of knowledge which posits that individuals develop and contextualize knowledge through social interactions with others. Used as a post-positivist approach to social work practice, social constructivism places emphasis on the co-construction of knowledge between the social worker and the service user (Lee and Greene, 1999). Similarly, in a social constructivist learning environment, there is not one essential or natural reality that learners must develop in order to develop knowledge within the profession. Rather, the learner and instructor collaboratively build knowledge together as they develop shared meanings around ideas and artifacts (Lyddon, 1995; Moreillon, 2015). This perspective affords the social work learner the opportunity to develop locally useful knowledge that will be necessary for contextually relevant social work practice within a particular community. It also affords the social work instructor the opportunity to be influenced by and co-construct knowledge with the learner. With this focus on the collaborative nature of learning and the importance of context, social constructivism has long been used in social work education (Dean, 1993; Lee, 1996).

Social constructivism, along with behaviourism and cognitivism, is one of the three foundational theories used in online learning (Seimens, 2005). As such, social constructivism has influenced the development of networked learning, particularly in the view that learning is a social process (Jones, 2015). Jones further indicates that Dewey’s social constructivist foundation leads to networked learning relying on

experience (both the experience, and the process of – and reflection on - experiencing) as a key component of the process of learning. Furthermore, Lave comments on the social phenomena of learning, in which the learner (and the learner's subjective experience) cannot be separated from the social context of learning (Lave, 1991, as cited in Jones, 2015). Synthesizing these observations leads to the phenomenological perspective that learning is an amalgam of both internal processes and the social context in which these processes are experienced.

Taken together, networked learning and social constructivism have a place of importance in developing and implementing online pedagogies in social work practice courses. One example might include exploring the relationship between subjective experience and social context in the spaces that social work learners inhabit, particularly geographical. While there are no existing studies or statistics of where learners reside in relationship to the location of online social work programmes, it is fair to assume that many do not. Nardi and O'Day (as cited in Jones, 2015) indicate that individuals in specific locations have a unique perspective and voice on what is needed in that particular community. This highlights the issue of space/place when co-constructing knowledge, which is a robust area of inquiry in networked learning (Carvalho, Goodyear and de Laat, 2016). Al-Mahmood (2008) examines the interconnection between space/place, the learner, the instructor and digital technologies. Al-Mahmood finds that the enactment and interaction of these factors results in a constant process of (re)making and (re)assembly of identity and knowledge. Further, Massey (2005) indicates that one's identity and spatiality are co-constitutive, so that one does not exist without the other. In an age of mobile technologies, digital devices are further erasing the boundaries of learning spaces and contexts. At the same time, they enhance the connections between learners, instructors, ideas, information and experience (Carvalho, Goodyear and de Laat, 2016).

Combining these perspectives with social constructivism results in the need to develop online social work programmes with structure, opportunities, and encouragement for the learner to interact with others in their local geographic context, as well as online. Without these opportunities the learner might not develop critical elements of the knowledge operating in local spaces/places, nor fully understand what is necessary in that local context for authentic engagement with service users (which

is a precursor to co-constructing knowledge with service users). Taking Massey's ideas to the next level, without interaction within local spaces/places, the social work learner will not become a part of the local community and will be ineffective in co-constructing knowledge or interventions with service users situated there (2005).

With these constructs in mind, online social work degree programmes should include pedagogies that incorporate local spaces/places, and facilitate learner knowledge co-construction with and in their local communities. An example of this might include role-playing interviews with and obtaining feedback from family, friends and colleagues in the learner's local community and reflecting on this experience with geographically dispersed classmates. This affords an opportunity for the learner to co-construct knowledge regarding interviewing practices that will engage the local community. Reflecting on these experiences and sharing these reflections with online classmates affords all learners in the course an opportunity to co-construct knowledge about multiple communities and enhance their social work practice skills (Alexander and Boud, 2001). Evaluation of the mechanisms and contexts for facilitating these affordances will potentially reveal the elements of successful pedagogies for online teaching and learning in this field.

Research Design and Methodology

A realist synthesis methodology was used to operationalize this study. The research question guiding this study was: What contexts and mechanisms provide support for which students in developing knowledge, skills and awareness (KSAs) in online/blended social work practice courses?

Realism, Realist Philosophy and Realist Synthesis

It is important to develop a research design that is consistent with a particular epistemological position (Coe, 2017). Establishing the researcher's stance regarding the philosophy of knowledge upon which the study is based is an essential first step in creating coherence for the research process. For this study, a focus on realism and the possibilities of developing and testing mid-ranges theories guided the selection of realist synthesis for the methodology.

Realism is essentially concerned with what exists and what can be known about it (Bhaskar, 1997). Realist philosophy establishes epistemological and ontological positions from which statements about particular contexts and mechanisms can be developed (Wong *et al.*, 2013b). Realist synthesis (RS) is derived from realist philosophy and is an appropriate and useful methodology for exploring what works best and for whom in online/blended social work practice courses (Wong *et al.*, 2013b). Realist synthesis provides a robust structure for analysing the differences in contexts and mechanisms of these courses and testing theories about these relationships (Pawson and Tilly, 1997). It also provides opportunities to move beyond comparative studies of online/blended and face-to face (F2F) courses that often result in *no significant difference* outcomes and little useful information about course design and delivery.

Realist philosophy assumptions: Mechanisms & contexts

Realist philosophy has two basic assumptions about reality and how it can be studied. First is the idea of *generative causation*. This is the notion that a causal force or power triggers a desired goal (Pawson and Tilly, 1997; Wong *et al.*, 2013b). In RS

these generative causes are called *mechanisms* (Pawson and Tilly, 1997). Mechanisms are the actions that generate particular outcomes in a given context (Wong *et al.*, 2013b). Figure 1 is a visual representation of this process. RS mechanisms are defined as behaviours enacted by people in particular contexts (Pawson and Tilly, 1997). As behaviours, these mechanisms are not necessarily visible or apparent. They can include specific features such as *entities* (norms or belief systems), *processes* (the sequencing of events or activities), or *social structures* (gender, class, cultural patterns). An example of an entity might include formal and informal patterns of communication in an online course. An example of a process might include the timing of when certain course materials are made available to learners on the learning management system (LMS). A social structure example might include the differences in how men and women interact on a discussion board.

Figure 1: Structure of a realist synthesis design

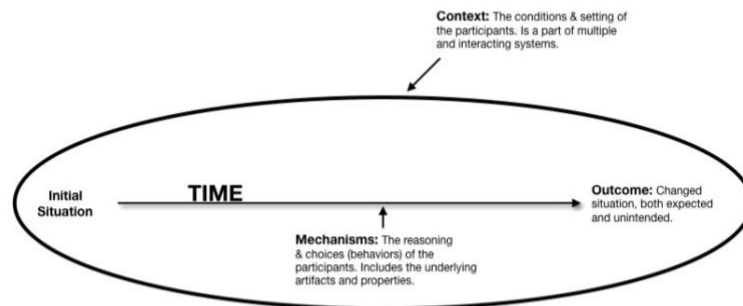


Figure 1: Structure of realist synthesis design (adapted from Mukumbang *et al.*, 2018)

Foundational to the RS understanding of mechanisms is the assumption that educational courses function as social systems and can be understood from a systems perspective (Pawson and Tilly, 1997). Realist philosophy and RS posit that multiple mechanisms exist and operate at all levels of reality (Bhaskar, 1997). Using this perspective, people are viewed as inhabiting multiple, open, embedded and interactive systems. All these systems have subsystems, and all are embedded in larger systems.

Pawson and Tilly (1997) further indicate that mechanisms are influenced by resources, opportunities and constraints. For example, high enrolment in an online course might be an example of either an opportunity (multiple learners can enrich a discussion through their varied points of view) or a constraint (too many learners in one course might overtax the time an instructor can spend on providing feedback). In addition, mechanisms should be viewed as both micro (intra-personal) and macro (inter-personal) elements of RS.

A challenging aspect of using realist synthesis is the easy conflation of mechanisms (which are defined as behaviours) with the artifacts or properties of the mechanism. For example, a Learning Management System (LMS) is an *artifact* of the mechanism; how learners interact on the LMS (a behaviour) *is* the mechanism. Furthermore, Pawson and Tilly (1997) caution researchers to resist the idea that mechanisms are descriptions of correlations between resources and participants. He posits, rather, that ‘mechanisms are about people’s choices and the capacities they derive’ from interacting within a particular context (p. 66). In this manner, mechanisms bind reasoning (choices) and resources (capacities) together.

The second assumption of realist philosophy is that mechanisms are context sensitive. This is known as *contingency of causation*. Contexts are defined as ‘...conditions that trigger or modify the behaviour of a mechanism’ (Wong *et al.*, 2013b, p. 13). The relationship between a ‘causal mechanism and the outcome of a given programme is contingent on the context’ (Pawson and Tilly, 1997, p. 69). The context is comprised of the conditions, rules, norms, values and inter-relationships that set limits and constraints on participants’ reasoning, behaviour and choices. A context is as important in determining outcomes as a mechanism. While mechanisms comprise the reasoning and actions of participants, RS posits that participants will only act on resources and choices in a conducive context (Pawson and Tilly, 1997).

Contexts can be separated into (a) broad conditions - those features embedded in an intervention, such as the historical context of the community in which the programme is located, and (b) participant conditions, such as the social demographics, health status or some other feature of the participants in the programme under study (Wong *et al.*, 2013b). However, contexts are not merely a listing of the elements

inherent in these conditions. In an RS analysis it is essential to explore how the interactions of these conditions produce a particular context, and how this ‘...context acts on a specific programme mechanism to produce outcomes’ or change (Wong *et al.*, 2013b, p. 9). It is in this manner that contexts can have significant influence on the mechanism and demonstrates the power that contexts have in modifying the outcome (Wong *et al.*, 2013b).

Contexts and mechanisms together are necessary for understanding how a particular intervention is affected. The resources and reasoning embedded in a mechanism work within the specific conditions of a context to generate outcomes. These elements of realist philosophy are the epistemological basis for RS.

Method for Extracting and Analysing the Data

Given this philosophical foundation, realist synthesis (RS) was chosen for this study as the method for understanding the relationships between contexts and mechanisms in generating the change necessary for learners to develop KSAs in online/blended social work practice courses. As indicated earlier, most research exploring online/blended social work practice courses are comparative in nature, and primarily determine if online/blended courses achieve the same learning outcomes as a traditional F2F course, hence the *no significant difference* phenomenon. Comparative analysis as a mode of inquiry is useful for exploring differences and similarities in phenomena and processes, particularly when comparing a small number of cases. However, it is a limited model for exploring cases with significantly different contexts or generating deeper understandings of mechanisms of change (Azarian, 2011). It all too frequently results in the *Dodo Bird verdict* first introduced by Smith and Glass in their 1977 critique of comparative methods used to examine the efficacy of different psychological therapies. They quoted the Dodo Bird from Lewis Carroll’s *Alice in Wonderland*, asking ‘whether the conclusion to be drawn was that everyone has won and all must have prizes’ (as cited in Budd and Hughes, 2009, p. 511).

Because comparative methodologies result in little actionable information regarding what learning activities work for whom and in what circumstances, using a more complex method of analysis allowed exploration of the salient question for this

study (Reeves, 2015). In using an RS methodology, contexts and mechanisms were explored to provide a framework for understanding how these outcomes were achieved (Littell, Corcoran, and Pillai, 2008; Rycroft-Malone *et al.*, 2012). Figure 2 represents how RS was used to explore these relationships in this study.

Figure 2: Structure of this study's realist synthesis design

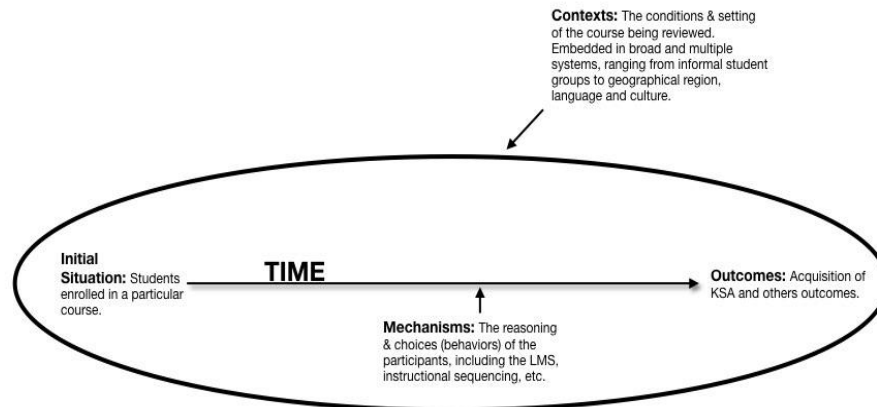


Figure 2: Structure of this study's realist synthesis design

While the goal of online/blended social work courses is to develop a particular set of KSAs, in RS the possibility exists that unexpected outcomes might be achieved. For example, Murphy's 2014 study of online vs. F2F social work practice courses resulted in the unexpected outcome that both groups of students felt unprepared for social work practice. An RS methodology would provide the opportunity to explore the mechanisms and contexts that resulted in this result. Similarly, Wilke *et al.*, (2016) ponder how different instructors teaching the same course might influence the outcomes of their comparison of online vs. F2F social work practice courses. The generation of multiple Context-Mechanism-Outcome (CMO) configurations in RS provides these opportunities for more in depth analysis.

RS analysis is composed of four steps: theory-building, focusing on the salient issues, searching for data, and analysing the data. This is followed by discussion and further articulation of the various CMO pattern configurations.

Theory

One of the key elements in the implementation of RS is the exploration of theory. RS includes consideration of four types of theory (1) realist philosophy, which has been described above, (2) methodological theory, which leads to implications for research and evaluation activities, (3) programme theory, which is used to describe what a programme or intervention is expected to do and how it works (mechanism, context, outcome configurations), and (4) formal theory, which includes discipline based theories ultimately used to make sense of the CMO patterns (Wong *et al.*, 2013b).

Theory is the basic unit of evaluation in RS. RS relies on middle range theories explaining commonalities of patterns that can be reasonably replicated in similar circumstances. An early step in working toward these middle range theories is to establish an *initial rough theory* for the phenomenon the research question seeks to investigate and how it is expected to work. The initial rough theory may include some aspect of programme theory, but is crafted to support the exploration of what is supposed to happen and how it is supposed to work. In this study, the initial rough theory is informed by several programme theories that are commonly used in educational research (Franklin, 2004). These include networked learning and social constructivism.

Focusing

RS is frequently used to explore complex, heterogeneous programmes, as was the case in this study. One of the challenges was striking a useful balance between open, broad questions that allowed full consideration of all possible contexts and mechanisms, and focusing on particular aspects that might preclude exploring certain avenues. However, given the breadth of RS methodology, focusing is a relevant and iterative activity that was used at multiple points in the study. Given that the scope of

an RS study frequently widens in the early stages to allow for an informed choice about when and how to narrow it, focusing was used early and at multiple points in this study.

For example, RS typically employs a stakeholder group to identify and refine key elements of the study. The use of a stakeholder group was not possible in this study. While this can be a limitation, there are several RS studies that used extended focusing in lieu of a stakeholder group (Wong *et al.*, 2013b). Additionally, I have 35 years' experience as a social work practitioner, 25 years' experience as a social work educator, and am one of the authors of my social work department's programme evaluation and accreditation reports. The knowledge gained through these professional activities was useful in focusing throughout the course of this study. Informal conversations with colleagues also informed the focusing process and resulted in useful pathways for exploration.

Focusing was initially used to identify published articles regarding online/blended social work practice courses. Two seminal articles were identified and used to guide the development of the research question for this study (Forgey and Ortega-Williams, 2016; Wilke *et al.*, 2016). In addition, the results, conclusions, and questions for additional research across this body of literature were explored for common themes. In lieu of a stakeholder group, this initial focusing activity and literature review was used to focus this study on the issues most important to current research on online/blended social work practice courses.

Focusing was also used at several additional stages of this study. Focusing occurred during the process of writing this research protocol as it became clear how much evidence was available for review, and when the evidence was explored for possible CMO pattern pathways. Using focusing at these particular points allowed for a brief pause to re-examine adherence to the research question and to determine if all possible sources of evidence were fully examined.

Searching

Searching for evidence to support, disprove or amend the initial rough theory is quite broad in RS. Unlike many other systematic research methodologies, RS is not

limited to review of randomized controlled trials or peer reviewed research. In RS the search for evidence is guided primarily by the research question, the initial rough theory, can include whole documents or only relevant parts of documents, and should lead to increased information regarding CMO patterns (Wong *et al.*, 2016). It is related directly to the focus of the study and is revised iteratively as new evidence emerges.

The search for this study took place in several waves. During the initial piloting of a search it was determined that there was sufficient access to evidence about what works, how, and for whom in online/blended social work practice courses to support an examination of these phenomena. The main phase of searching for evidence included exploring the following sources of information for relevant publications, published in English:

- Databases that included articles and publications regarding social work education, general educational theory, distance learning, counsellor education, and community psychology education. These last two were included because of their close similarity to the content and process of developing social work practice skills.
- Online journals, educational websites, grey literature, blogs, professional magazines regarding the topic, and other known websites that addressed this topic.
- Programme websites that are known to house online/blended social work programmes.
- Multiple online search engines (being mindful of website algorithms and the *filter bubble* phenomenon).
- Consultation with reference librarians at two academic libraries.
- Professional and governmental organizations, and research foundations concerned with this topic.

Search terms were developed from the existing literature on this topic, RS literature, and the reference lists included in these studies. An iterative process was

used to develop a search that was both relevant to the proposed programme theory and that included rigorous methods of analysis. Inclusion/exclusion of the evidence was guided by the focus of the review. RS allowed for selection and appraisal of the pertinent documents concurrent with their analysis, as each document must be initially analysed to determine its relevance to the study focus.

Analysis

The analysis of the evidence occurred in three phases. These are analysis, summary and synthesis. The evidence was used to affirm, disprove or amend the initial rough theory. This was achieved through identification of CMO patterns. A summary of these patterns was compared to the initial rough theory, which was revised as these patterns were identified and refined into a working programme theory. Synthesis occurred when the CMO patterns made sense relevant to the research question, and were compared to existing formal theory in the discipline or field of study.

Within RS analysis, several steps occurred. Each document was reviewed to determine the purpose of the study, and to make decisions about how the programme being reviewed achieved its intended outcomes, in what contexts, and how this possible CMO pattern contributed to the programme theory. Each document included had a clear explanatory structure that evidenced generative causation (mechanisms). It demonstrated as clearly as possible how an outcome was generated by a mechanism being triggered in a particular context. A data analysis matrix was constructed to organize these structures into defined terms, evaluation levels and possible CMO patterns (Wong *et al.*, 2013a). This was accomplished to maintain fidelity to the research question and maintain clarity regarding the eventual synthesis process (Wong *et al.*, 2013a).

The analytical task at this point was to *find and align* the evidence in relation to the programme theory (Wong *et al.*, 2013b; Wong *et al.*, 2016). RS stresses the imperative to demonstrate which aspects of context matter, and how they might trigger a mechanism. This is accomplished through identifying recurrent patterns of contexts and outcomes (demi-regularities) and constructing mechanism hypotheses that might explain these occurrences (Wong *et al.*, 2013a). Finally, in the synthesis

phase of analysis, multiple conceptual tools were used to make sense of the CMO patterns in relationship to existing formal theory. These tools included (a) juxtaposing – applying data from different studies to the final proposed CMO patterns to affirm their validity, (b) reconciling – identifying differences in studies to explain contradicting outcomes, (c) consolidating – building multi-faceted explanations for outcomes, and (d) situating – clarifying which mechanisms might work in which contexts.

Ethics

The data were collected and stored on the hard drive of my personal computer. A semi-weekly backup of the data was stored on a flash drive, which was kept at my university office. No personal or protected data was included in this study.

As the data analysis for this study was conducted through sampling existing research, it was within the limits of acceptable ethical guidelines. A University of Edinburgh ethics application was submitted and approved, and an application for *exempt status* was submitted to and approved by the California State University (Stanislaus) Institutional Review Board (as required by my employer).

Strengths and Weaknesses

The strengths of using an RS methodology included the breadth of studies and types of information that were included in the review. One of the challenges to this using this methodology, however, was determining not only how learners developed competency, but also identifying the underlying mechanisms of instruction that enabled them to do so. Comparing disparate types of data collected, particularly across 15 years of rapidly advancing educational technologies, resulted in a small number of studies considered for inclusion in this analysis. While this provided limitations to the generalizability of this analysis, exploring the mechanisms by which learners develop KSAs led to a provisional explanation of how a particular instructional method worked, as well as the context in which it worked (Rycroft-Malone *et al.*, 2012). This might provide the additional information necessary to engage in comparisons between studies that report quite different aims, objectives and methods, as currently exists in this body of literature. Engaging in a systematic review

provided a much-needed opportunity to establish a conceptual model to guide the replication, modification and refinement of these instructional methods, and inform social work programmes in the development of robust online/blended practice courses.

Conclusion

The development of social work practice skills is the heart of social work education. Although a significant portion of social work programmes in the U.S. report offering online/blended practice courses, there has been no systematic review of articles examining the results of these instructional methods. The use of a realist synthesis method was used to determine the underlying mechanisms and contexts that support online/blended instructional methods leading to successful achievement of CSWE competencies.

Data Analysis and Discussion of Findings

That learners in online/blended social work practice courses achieve similar knowledge, skills, and awareness (KSAs) to those in face-to-face (F2F) courses is in itself a good outcome. While perceptions persist that online/blended practice courses cannot result in equal development of social work KSAs (Groshong *et al.*, 2013), there exists no comprehensive study of outcomes that support this position, despite a nearly 17-year history of such courses (and whole programmes) offered online in the U.S. (Gates and Dauenhauer, 2016). The imperative at this point in the development of such programmes and courses is to determine how learners achieve KSAs, and how these courses and programmes can be improved. Of significant interest are the pedagogies employed in these courses, and the ways in which digital education principles can be adopted by social work educators.

Data Search

An extensive search was undertaken to find the existing research regarding the courses of interest. Libraries from two university systems were used (California State University and the University of Edinburgh), as well as multiple databases that might list such articles. These included Social Services Abstracts, PsychINFO, ERIC, CINHL, and others. Once relevant articles were discovered, the journals in which they were published were explored to uncover similar articles. The professional websites of article authors were explored to find presentation materials or research in progress. Websites of relevant professional organizations were reviewed, including the professional social work organizations in the U.S., Canada, Australia, and the UK. Government-sponsored licensing and oversight units were also explored in these countries. Grey literature and blogs were searched using search terms developed for the university-based literature review, and employing multiple search engines.

Despite this exhaustive search for information about outcomes for online/blended social work practice courses, there was little useful information for this study outside of published research articles. Accrediting bodies, such as the Council on Social Work Education in the U.S., did not provide lists of social work programmes that were offered online, even though this is a distinction the organization makes in its accrediting reviews (Council on Social Work Education,

(2019). Governmental bodies that license social workers in the countries listed above do not report (and perhaps do not collect) statistics regarding applicants graduating from online/blended social work programmes.

Thus, the primary information used in this study comes from the 272 published research articles that were reviewed for relevance to the topic of interest. This larger grouping of articles was organized into the following categories:

- Online/blended social work practice courses
- Critiques of developing social work practice KSAs in online courses
- Assessment methods used in online/blended social work courses
- Specific issues in online/blended social work courses, including:
 - Presence
 - Communities of practice
 - Student attitudes
 - Programme development
 - Faculty development

Of these articles, those that examined the context and outcomes of specific online/blended social work practice courses were included in the analysis section below. This process resulted in nine articles that provided specific information about context conditions and course outcomes that could be analysed for possible context, mechanism, outcome (CMO) patterns.

Data Analysis

Using the strategies articulated in the RAMSES training materials developed by Wong *et al.*, (2013b), a data extraction form was developed for recording information related to the CMO patterns that might be found in these articles (see Figure 3). All nine articles were reviewed using this form. This also enabled another round of focusing activities, ensuring that the documents selected for in-depth analysis would provide support for answering the research questions.

After this activity, it was determined that Jones (2014) did not include enough information about programme and participant conditions or generative causation to be useful in this analysis, and was eliminated from subsequent levels of review. Additionally, Gates and Dauenhauer (2016) and Lawrence and Abel (2013) were eliminated from subsequent levels of review because participants' perceptions or confidence of learning were the methods used for assessment, and they included no

measures of actual skills, assignments or course grades. The remaining six articles were subject to further analysis. Although this resulted in a small pool of studies from which to draw data and develop possible CMO patterns, it provided a first attempt to apply digital education principles to research in social work education.

Figure 3: Data extraction form

<ul style="list-style-type: none"> • Mechanisms (generate causation) <ul style="list-style-type: none"> ○ Actions (Behaviours) enacted by particular people (visible and invisible) <ul style="list-style-type: none"> ▪ Entities (norms/belief systems) ▪ Processes (sequencing of events/activities) ▪ Social structures (gender/class/cultural patterns) ○ Influenced by <ul style="list-style-type: none"> ▪ Resources ▪ Opportunities ▪ Constraints • Contexts (create the contingencies of causation) <ul style="list-style-type: none"> ○ Broad conditions (features embedded in the intervention) ○ Participant conditions (feature of the participant) <ul style="list-style-type: none"> ▪ Look for interactions between these conditions ▪ Look for how these interactions act on specific mechanisms to influence outcome • Possible outcome patterns

Intra-programme comparisons

The first level of analysis in realist synthesis or review is to examine intra-programme comparisons (Wong *et al.*, 2013a). In this study, this was accomplished by reviewing five articles that compared outcomes between F2F and online/blended social work practice courses, plus one article (Douville, 2013) that compared different learning activities in the same online social work practice course offered in consecutive terms. Table 1 presents the major findings of these articles.

Table 1: List of included studies

Authors	n	Course structure	Description of learning activities	Assessment of KSAs	Outcomes
Ouellette and Chang, 2004	Online n=37 Compared with F2F n=63	Fully online. All activities asynchronous. No live or F2F instruction or activities.	(a) asynchronous weekly interactive notes guiding the learner through specific skills (b) Self-tests, video clips and discussion boards.	In-vivo assignment: Conduct a 10-minute interview of a standardized client. Assignment was video recorded for assessment.	No Significant Difference (NSD) between online and F2F
Siebert, Siebert and Spaulding-Givens, 2006	Online/blended n=25 Compared with F2F n=78	Blended. Included synchronous, asynchronous, and F2F activities.	(a) asynchronous weekly lecture transcripts, readings, video clips and discussion boards. (b) telephonic or text-based dyadic role plays with classmates. (c) 1 F2F session for small group role plays to practice skills	Written assignment: Develop a summary, assessment and intervention plan for a standardized case role play video.	NSD between online and F2F

Authors	n	Course structure	Description of learning activities	Assessment of KSAs	Outcomes
Cummings, Foels and Chaffin, 2013	Online/blended n=37 Compared with F2F n=64	Blended. Included synchronous, asynchronous, and F2F activities.	(a) asynchronous weekly lecture slides, readings, video clips and discussion boards. (b) Five synchronous 90-minute web conferencing sessions to introduce the course and enable live student presentations (c) Three F2F sessions of 5 hours each (including breaks) for small group lab sessions (role plays) to practice skills	(a) 1 multiple choice final exam (b) 10 multiple choice quizzes (c) Written analysis of the small group lab sessions	(a) NSD between online and F2F (b) NSD between online and F2F (c) NSD between online and F2F
Fogey and Ortega-Williams, 2016	Online/blended n=12 Compared with F2F n=23	Blended. Included synchronous, and asynchronous activities. No F2F activities provided.	(a) asynchronous weekly lecture slides, readings, video clips & discussion boards and (b) synchronous telephonic role plays	3 written assignments demonstrating practice skills	NSD between online and F2F on each of the assignments

Authors	N	Course structure	Description of learning activities	Assessment of KSAs	Outcomes
<i>Wilke et al.</i> , 2016	Online n=78 Compared with F2F n=74	Fully online. All activities asynchronous. No live or F2F instruction or activities.	(a) asynchronous weekly lecture transcripts, readings & discussion boards.	(a) Written assignment: Develop an assessment and treatment plan for a standardized case role play video. (b) Video recorded role play with a peer (not clear if this was a classmate or a community member).	(a) NSD between online and F2F (b) NSD between online and F2F
Douville, 2013	Fall/Online n=23 Spring/Online n=18	Fully online. All activities asynchronous. No live or F2F instruction or activities.	The Fall course utilized small group learning communities (LC), while the Spring course did not.	3 written exams demonstrating knowledge of practice skills	(a) NSD between courses on Exam #1 (b) Learners in LC course scored significantly higher on Exam #2 (p=.050) (c) Learners in LC course scored significantly higher on Exam #3 (p=.010)

The outcome of interest in the five studies comparing F2F with online/blended courses is the *no significant differences* in learner KSAs between the two different modes of course delivery. Similarly, in the study that compared two consecutively taught online courses using different learning activities (Douville, 2013), the outcome of interest is the higher grades (KSAs) achieved by the class that utilized collaborative small group discussions. All six included studies were published after the advent of Web 2.0, and after widespread access to learning management systems for organizing and delivering course materials. They all focus on the development of social work practice skills for providing engagement, assessment or intervention to individuals, families or small groups.

These articles were reviewed to explore patterns related to the broad conditions of the course, i.e. those related to course structure that sets limits and constraints to participants' reasoning and behaviour. This was followed by a review of each study's participant conditions, i.e. factors related to participant characteristics.

Ouellette and Chang (2004) describe an online learning environment that is rich with learner/learner, and learner/instructor interaction. Of all the included studies, it provided the greatest number of opportunities for micro skill development and collaboration with peers and the instructor. Ouellette and Chang developed an interactive text-based and video system in which learners were able to respond to micro level interactions between the observed exemplar interviewer and the role-played service user. These activities were followed by reflection and self-assessment by each learner, and by collaborative activities in which learners discussed their interviewing strategies and what they learned in the micro-level interactions. They also received feedback and suggestions from other learners and the instructor. Ouellette and Chang developed three tiers to this method of learning, increasing the required critical thinking, analysis and discussion at each level, culminating in a live interview with a standardized role-played service user.

Ouellette and Chang are unique among all the included studies in assessing learner KSAs in a live interview, requiring in-the-moment demonstration of skill without the ability to edit out mistakes (as video recorded assignments might allow). The broad contextual patterns included (a) the self-reflection, learner to learner discussion, and collaborative knowledge building with peers and the instructor on the weekly discussion board, as well as (b) structured assignments provided by the

instructor in which learners also used the discussion board to review their interviewing strategies, their current learning, and culminating in feedback from peers and the instructor.

Similarly, Siebert, Siebert and Spaulding-Givens (2006) developed opportunities for learners to use small group discussions and activities to reflect on their learning and co-create knowledge regarding KSA development. Learners were provided opportunities to engage in dyadic role plays of interviews via the telephone (this study took place prior to availability of web conferencing programmes). They also engaged in live role plays conducted regionally with experienced interviewers, who provided live feedback on the KSAs demonstrated by the learners. The broad contextual patterns included (a) the self-reflection, learner to learner discussion, and collaborative knowledge building with peers and the instructor on the weekly discussion board, and (b) live feedback provided by peers and the experienced interviewer during the regional role play activities.

Studies conducted after 2012 described settings with more opportunities for live interactions between learners, and learners and instructor. Cummings, Foels and Chaffin (2012) utilized web conferencing programmes to facilitate synchronous interaction, co-construction of knowledge, and feedback. They also required three F2F experiential lab sessions during the course. These lab sessions each consisted of three, one hour simulated group therapy sessions in which the learners took turns enacting the KSAs of a group therapist. These were followed by verbal self-reflection and feedback at the end of each session, as well as a written reflection and analysis paper (written individually) completed after learners returned to their home communities. In addition to the synchronous and F2F activities, learners had multiple opportunities to engage in collaborative learning through the course blog and discussion boards. The broad contextual patterns included (a) the self-reflection, learner to learner discussion, and collaborative knowledge building with peers and the instructor on the weekly discussion board, as well as (b) collaborative knowledge building on the course blog, and (c) the verbal self-reflection and feedback at the end of each F2F experiential lab session.

Forgey and Ortega-Williams (2016) provided learners with similar small group activities as the studies cited above. In addition to small group discussion boards and telephonic role play activities and assignments, learners were provided

with video recorded exemplar interviewing examples, and engaged in multiple iterations of individual reflection and small group discussion and feedback. Other than the telephonic role plays, there were no live or F2F interactions. The broad contextual patterns included (a) the self-reflection, learner to learner discussion, and collaborative knowledge building with peers and the instructor on the weekly discussion board, as well as (b) the multiple iterations of individual reflection and small group discussion and feedback related to the exemplar video interviewing examples.

Wilke *et al.*, (2016) included threaded discussions as the primary method of learner to learner interaction. Additionally, learners video recorded a role play to demonstrate their level of KSA acquisition. It is not clear in the study if the role play partner was a classmate or a member of the learner's local community. A final collaborative activity used in this study was small group discussion of a case scenario, in which the group was required to develop consensus on the path forward in working with the service user, and post their consensus on the course wiki page. The broad contextual patterns included (a) the self-reflection, learner to learner discussion, and collaborative knowledge building with peers and the instructor on the weekly discussion board, as well as (b) the collaborative small group discussion and consensus building activities.

Douville's study (2013) was unique in the literature in that it compared pedagogies and learning activities between two consecutively taught examples of the same course. These courses were both fully online with no synchronous, live or F2F interactions between learners, or learners and instructor. The difference between the courses was the use of small group learning communities, in which learners not only collaborated on knowledge construction, but also provided mutual support. This took the form of additional discussion board prompts to provide advice for increasing success on examinations, including writing strategies, discussions of feedback on previous exams, and sharing of personal challenges in test taking and requests for feedback. This is the one study that yielded significant differences on outcomes. Those in the small group learning community course scored significantly higher on exams #2 and #3. The broad contextual patterns included (a) the self-reflection, learner to learner discussion, and collaborative knowledge building with peers and the

instructor on the weekly discussion board, as well as (b) learner facilitated small group discussion and mutual support regarding examinations.

An exploration of participant conditions in each of these studies revealed additional patterns regarding demographics and other factors related to prior work experience. The participant conditions found in Ouellette and Chang (2004) included a significantly higher percentage of students over 40 years of age in the online course. Seibert, Siebert and Spaulding-Givens (2006) found that online learners had 1.9 years more paid social work experience than the F2F learners, and that online learners engaged in 13.9 more hours per week in paid employment than the F2F learners. Cummings, Foels and Chaffin (2013) found that significantly more learners in the online course worked 30+ hours in paid employment per week than those in the F2F course (66.2% vs. 17.5%). Forgey and Ortega-Williams (2016) found that online learners had 3 years more social work practice experience than those in F2F courses. They also discovered that online learners spent more hours completing their coursework than F2F learners. Finally, Wilke *et al.* (2016) found a significant difference between the age of online and F2F learners, with online learners having a mean age four years older than those in the F2F course.

Douville's study (2013) provides an interesting set of participant conditions. Most learners in both online courses were female and African American, with a wide range in ages. This differs from the five other studies, in which participants were mostly Caucasian with ages ranging from the mid-20s through mid-30s.

These intra-programme comparisons resulted in several patterns among the various programme contexts included in this study. These are explored in more detail in the inter-context comparisons section below.

Inter-context comparisons

The next realist synthesis task is to explore common context patterns across programmes. The goal is to explore and begin to demonstrate which aspects of context might trigger a mechanism. This is accomplished through identifying recurrent patterns of contexts and outcomes (demi-regularities), culminating in an exploration of mechanism hypotheses that might explain these patterns.

An exploration of the contexts of the five F2F vs. online courses revealed a number of similarities in context broad conditions and participant conditions. The first of these is the learner to learner, and learner to instructor interactions through weekly

discussion board activities present in all six included studies. Added to this are similar learning activities focused on self-reflection, discussion board activities related to this reflection, and collaborative feedback and knowledge building resulting from these activities. This type of activity was present in Ouellette and Chang (2004), Forgey and Ortega-Williams (2016), Wilke *et al.* (2016), and Douville (2013). A second context found across most of these studies included learner participation in role-play activities and the small group and individual reflection activities that followed. A third common context pattern is that learners in the online courses either (a) engaged in significantly more paid hours of weekly employment than F2F learners, or (b) have significantly more reported years of social work practice experience than F2F learners, or (c) were significantly older than F2F learners. Although age is frequently used as a proxy for work experience in research regarding workforce development (Miller, 1993), this statistic may include considerable error if not controlled for gaps in employment.

It is important to recall that in realist synthesis, mechanisms are not the intervention itself (group discussions, for example) but the participant response to the intervention. It is a reasonable assumption that learners take a course expecting to improve their KSAs, and expecting that they will do so through some sort of interaction with the course materials, each other, and the instructor. These can be considered as part of the norms and belief systems of the course, and provide a foundation for the behaviours enacted by the learners in each course.

The next task in realist synthesis is to consider how the learner response to these reported activities generated the programme outcomes of acquiring KSAs as well as their F2F counterparts. These are the possible mechanisms that generate the reported outcomes.

Possible context-mechanism-outcome patterns

Summaries of four possible CMO patterns are listed below. They are listed in order of the strength of the evidence to support the reported outcome, and are presented in an outline format in order to clarify that each step in the CMO pattern leads to the subsequent step. They include citations for the articles in which the reported context is present, as well as citations for other research that supports the possible changes in behaviour that lead to the reported outcomes. In realist synthesis, mechanisms are not visible or necessarily obvious. They are my conjectures regarding

causation that are supported by research on likely behavioural changes in the contexts of the included studies (Wong *et al.*, 2013b).

CMO Pattern #1: Discussion board

- Asynchronous discussion board activities (context). All six included studies reported some version of this activity.
- Resources, opportunities and constraints that might affect participants' responses in each context included the following:
 - Discussion board activities were mostly asynchronous, allowing learners to work according to their own schedule (Ouellette and Chang, 2004; Siebert, Siebert and Spaulding-Givens, 2006).
 - Discussion board activities were a required and assessed element of each course (Cummings, Foels and Chaffin, 2013; Douville, 2013; Forgey and Ortega-Williams, 2016; Ouellette and Chang, 2004; Siebert, Siebert and Spaulding-Givens, 2006; Wilke *et al.*, 2016).
 - Discussion boards provided a written record of learner thoughts, reflections and comments, which might lead to further iterations of reflection and critical analysis (Cummings, Foels and Chaffin, 2013; Forgey and Ortega-Williams, 2016; Ouellette and Chang, 2004; Wilke *et al.*, 2016).
 - They also appear to have a greater amount of peer feedback when compared to verbal comments in F2F courses (Ouellette and Chang, 2004).
 - Dedicated instructor participation and rapid feedback might generate a sense of increased instructor presence in the course (Forgey and Ortega-Williams, 2016; Siebert, Siebert and Spaulding-Givens, 2006).
 - Small group learning communities (Douville, 2013) enabled smaller groups for discussion board activities, and possibly more focused and organized discussions (vs. long discussion threads in whole course discussion boards).
 - Douville (2013) reported increased engagement with learners in the small group learning community discussions, which may have biased her grading of these activities.
- Possible mechanisms

- Learners were able to engage in greater levels of reflection before sharing their thoughts and responses to reflection board prompts (vs. needing to generate in-the-moment thinking and verbal responses in F2F courses). This type of behaviour is evident in early and ongoing studies of asynchronous discussion boards (Majid *et al.*, 2014; Meyer, 2003).
- These observations might have included longer periods of reflection time (hours or days) before posting responses (vs. minutes in F2F in class discussions). This is also evident in early and ongoing studies of asynchronous discussion boards (Majid *et al.*, 2014; Meyer, 2003).
- Learners had increased opportunities to engage in an iterative process of reflection, posting these reflections, and obtaining feedback because discussion board results were a text-based artifact on the LMS (vs. unrecorded verbal responses in F2F courses). McConnell, Hodgson and Dirckinck-Holmfeld (2012) note that engaging in collaborative activities between learners and learners/instructor promotes critical thinking. Having a digital artifact, such as a discussion board, enables increased reflection and significantly enhances learning (Gregory and Bannister-Tyrrell, 2017).
- Learners who experienced instructor presence (as well as the social presence of other learners) in the discussion boards might have become more engaged with the course and subsequently increased their participation in learning activities. This concept is well supported in digital education literature (Kreijns *et al.*, 2014).
- Learners might have engaged in more learner to learner, and learner to instructor collaboration through reviewing comments on discussion boards (vs. live, unrecorded F2F discussions). Both networked learning and social constructivist principles align with this possible mechanism, as both theories support the notion that learning does not occur in the individual, but rather through the collaborative relationships between learners (Lee and Greene, 1999; Ryburg, Buus and Georgson, 2012).
- Possible decisions and choices (behaviours)
 - Learners perceived multiple opportunities for rich connectivity and collaboration between learners, and learners and instructor. This possibly resulted in the decision to engage in multiple opportunities for reflection,

dialogue and feedback with peers and instructor. This pattern of response is supported by multiple studies in networked learning (Jones, 2015).

- The asynchronous structure of discussion boards might have resulted in learners choosing to engage with the discussion board when they were prepared to do so (e.g. after they have reviewed the course materials, reflected upon them, and identified their thoughts and responses) vs. having to do so ‘on demand’ at a particular day and time in a F2F course. Aljerais *et al* (2015) note that well-structured online discussion board activities result in higher levels of learner satisfaction and engagement with learning.
- Learners might have chosen to review previous discussion threads to generate new ideas, reflect on previous thoughts, processes and feedback, and engage in further collaborative knowledge creation with fellow learners vs. relying on memories of previous class discussions in a F2F course. This pattern of response is also documented in networked learning literature (Jones, 2015).
- Learners might have experienced increased motivation and chosen to engage in course activities when they perceived that the instructor was responding to their particular comments and learning, which tends to be more systematic in a discussion board than in a F2F course. Allen, Will and Wheelless (2004) have studied this phenomenon in depth, and have demonstrated that this pattern increases cognitive learning outcomes.
- Reported programme outcomes
 - Learners in an online course achieved KSAs similarly to learners in a F2F course.
- Summary of this CMO pattern:
 - *Context:* Required asynchronous discussion board activities with active participation and collaboration among learners, and learners and instructor lead to:
 - *Mechanism:* Learners engaging in increased levels of self-reflection, and an iterative process of reflection, collaborative sharing of these reflections with learners and the instructor, and further reflection on the feedback received, resulting in:

- *Reported programme outcome:* Learners in an online course achieved KSAs similarly to learners in a F2F course.

CMO Pattern #2: Role Play

- Role play opportunities to practice interviewing skills (context). Four included studies reported some version of this type of activity. Douville (2013) and Seibert *et al.* (2006) did not.
- Resources, opportunities and constraints that might affect participants' responses included the following.
 - Learners were asked to role play with members of their local community, and not necessarily with online classmates (Ouellette and Chang, 2004).
 - Learners were asked to conduct these role plays with classmates in a synchronous environment (Cummings, Foels and Chaffin, 2013; Forgey and Ortega-Williams, 2016; Wilke *et al.*, 2016).
 - Debriefing of these role plays included collaboratively produced feedback with other learners and the instructor (Cummings, Foels and Chaffin, 2013; Forgey and Ortega-Williams, 2016; Ouellette and Chang, 2004; Wilke *et al.*, 2016).
- Possible mechanisms
 - Role plays conducted in technologically mediated environments require more preparation and planning than those conducted in F2F contexts. This might result in online learners being better prepared to demonstrate their KSAs. This phenomenon is noted in research in online role-play simulations in nursing and medical education (Saunders, 2016).
 - Role plays in the online courses occurred less frequently than in the F2F courses. This might result in increased pressure to demonstrate KSAs, and to obtain clear and actionable feedback from fellow learners and the instructor. This possible mechanism might be contra-indicated, however, if the learner perceives the role play activity as a high-stakes assessment activity (Molsbee and Benton, 2015).
- Possible decisions and choices (behaviours)

- Learners might have reviewed the role play activity instructions in more depth than F2F learners because the role play activities occurred less frequently than F2F courses with fewer opportunities to demonstrate skills and obtain feedback. Veronin, Daniels and Demps (2012) explored the use of the virtual world Second Life ® as a medium for conducting synchronous clinical role plays for pharmacy learners. They note the need for additional preparation for using this medium for role plays, although they did not measure KSA outcomes for their learners.
- Learners might have engaged in increased practice of their interview KSAs prior to the live role plays because the role play activities occurred less frequently than F2F courses with fewer opportunities to demonstrate skills and obtain feedback. Veronin, Daniels and Demps (2012) also discuss this in their use of Second Life ®. However, other studies indicate that ‘high stakes’ assessment methods result in poorer KSA outcomes, as well as reduced mental health and well-being among learners (Patel *et al.*, 2015).
- Reported programme outcome
 - Learners in an online course achieved KSAs similarly to learners in a F2F course.
- Summary of this CMO pattern:
 - *Context*: Role play opportunities to practice interviewing skills, particularly in technologically mediated environments, leads to:
 - *Mechanism*: Increased focus on role play instructions and prior preparation of KSAs, resulting in:
 - *Reported program outcome*: Learners in an online course achieved KSAs similarly to learners in a F2F course.

CMO Pattern #3: Age/Employment/Experience

- Learners in online courses have more practice experience than those in F2F courses (context). This results from self-selection of learners with more social work practice experience (or more paid hours worked per week, or older age) into online courses or programmes. This factor was cited in all of the included studies.
- Resources, opportunities and constraints that might affect participants’ responses include the following.

- Learners with more social work practice experience have a higher baseline of skills than F2F learners, who have less social work practice experience.
- Learners who work more paid hours per week have less time to engage in course activities than F2F learners who have fewer hours of work commitments.
- Possible mechanisms
 - Adult (non-traditional) learners with more work experience are better at organizing their study time vs. younger students in F2F courses. Although this is affirmed in studies of adult learners, this factor can be negatively affected by poor self-confidence within this population (Ross-Gordon, 2011).
 - Online social work practice courses might be a better pedagogical fit for learners with prior practice experience, vs. learners with less practice experience in F2F courses, because online social work courses tend to be designed for learners with prior experience who cannot attend a daytime programme. Lawrence and Abel (2013) considered factors related to learner age and work experience in similar online courses. Contrary to the findings of Ross-Gordon (2011), they hypothesize that among the population of online social work learners, older learners with greater work experience in the field may bring more confidence to their learning activities.
 - Older learners, and those with more prior work experience, have increased experience and skill in using online technologies. This phenomenon is supported in studies of adult learners in continuing professional education (Curran *et al.*, 2019).
 - Older learners have increased motivation to succeed in online courses and programmes, as completion of such degree programmes are frequently tied to job promotions and increased salaries. This is noted in several studies of post-graduate social work programs (Forgey and Ortega-Williams, 2016; Salzberg *et al.*, 2018).
- Possible decisions and choices (behaviours)
 - Learners who work more paid hours per week might engage in increased organization of their learning activities. This hypothesized mechanism is

supported by some research and contradicted by others, as studies of these differences indicate that that this phenomenon may have a time limited effect, i.e. younger learners develop these skills quickly and match the organizational skills of older learners (Brändle and Lengfeld, 2017).

- Learners who are completing an online programme for job promotion and increased salary might sustain increased motivation to achieve the course KSAs. (Forgey and Ortega-Williams, 2016; Salzberg *et al.*, 2018).
- Reported programme outcomes
 - Learners in an online course achieved KSAs similarly to learners in a F2F course.
- Summary of this CMO pattern:
 - *Context*: Older learners in online courses have more practice experience than those in F2F courses, leading to:
 - *Mechanism*: Increased organization of study time and learning activities, increased experience with online technologies, and higher motivation to increase their KSAs, resulting in
 - *Reported programme outcome*: Learners in online courses achieve KSAs similarly to learners in F2F courses

CMO Pattern #4: Small Group Learning Communities

- Small group learning communities (context). As Douville (2013) is the only study to explore this phenomenon is it questionable if this can be considered a full CMO pattern. It is included here because of its importance as the only study of social work practice courses to compare different pedagogical methods in consecutive offerings of the same online course.
- Resources, opportunities and constraints that might affect participants' responses include the following.
 - Learners engaged in providing suggestions and feedback on how to achieve greater success on course exams.
 - Learners spent less time reviewing discussion board posts (in small groups) vs. reading through the entire discussion board and deciding whom to respond to.
 - Learners were clustered in small groups with the same fellow learners for the entire course.

- Possible mechanisms
 - Assignment of learners to the same small group discussion board might increase trust and mutual support within the group, leading to greater willingness to share more challenging learning issues, vs. those in a whole class discussion board. Small group learning has been shown to increase trust and learning outcomes in numerous professional settings (Stelter and Marangoni, 2011).
 - Responding to posts in a small group discussion board was possibly a more organized and efficient activity vs. a whole class discussion board. This is supported by educational literature in both F2F and online course environments (Hamann, Pollock and Wilson, 2012).
 - Engaging in mutual aid in developing strategies for successful exams might result in higher grades vs. those learners who do not have the opportunity to do so. Wilke, Randolph and Vinton (2009) explore mutual aid in online education and discuss the ways in which mutual aid can increase connection between learners in online courses. Increased connection and collaboration are essential elements of networked learning and social constructivism, and lead to a richer learning experience in online settings (Jones, 2015).
- Possible decisions and choices (behaviours)
 - Positive small group dynamics might result in increased investment of time and efforts in learning. Conversely, negative small group dynamics might result in decreased commitment to learning and to that of fellow learners. A balance between cooperation and assertiveness, along with clear assignment instructions, results in better small group outcomes (Lambertz-Berndt and Blight, 2016).
 - Learners might have more time to engage in providing more in-depth posts and feedback when responding to less complex (smaller) discussion boards (McCarthy, Smith and DeLuca, 2010).
 - Receiving mutual aid in developing strategies for successful exams might motivate learners to engage in increased reflection on and modification of their skills in crafting exam responses (Douville, 2013).
- Reported program outcome

- Learners in the small group learning community course scored significantly higher on exams #2 and #3
- Summary of this CMO pattern:
 - *Context*: Placing learners in small mutual aid learning groups, leads to:
 - *Mechanism*: Increased trust and a more efficient model for engaging in discussion board activities, resulting in
 - *Reported program outcome*: Learners in small group learning communities score higher on exams.

Comparison with the initial rough theory

Summarizing the data in realist synthesis first requires a comparison the CMO patterns with the initial rough theory. At this stage, amendments were made to the initial rough theory and to the CMO patterns as needed. This resulted in a formal theory of how these patterns were shaped and the pathways to achieving the best possible explanatory fit between the theory and CMO patterns.

The Discussion Board CMO is the strongest and most robust CMO pattern. The learner activities in this pattern included multiple opportunities for engaging in self-reflection, testing of learner responses to course materials and learning activities, and obtaining feedback from peers and the instructor. These discussion board activities appeared to generate possible learner responses (mechanisms) that resulted in a level of connectedness and collaborative engagement that not only enabled them to perform as well as F2F learners on course outcomes, but also demonstrated how these responses reflect networked learning and social constructivist principles.

The engagement of learners with other learners and the instructor is consistent with the guiding elements of networked learning, particularly connectedness, collaboration, and well-designed learning tasks. This is supported by additional data collected in several of the included studies. Seibert, Seibert and Spaulding-Givens (2006) noted that learners in the online course provided qualitative feedback indicating that they enjoyed and wished to engage in more small group discussions and processes. Douville (2013) noted her bias when reading the discussion boards in the small group learning community course section, indicating that it was more enjoyable for her than reading the whole class discussion boards. This attitude might be evidence of a convivial learning culture in these discussion boards. Forgey and Ortega-Williams (2016) indicate that online learners had more time to reflect on the

discussion board activities than their F2F peers. Further, because discussion boards created artifacts that could be reviewed multiple times, they engaged in a greater level of collaborative learning than their F2F peers. This is reminiscent of Lave and Wenger's phenomenological perspective of learning as a blending of internal processes and social context (1991), and further supports the use of networked learning as an explanatory theory for this CMO pattern.

The possible learner responses to the Discussion Board CMO were also reflective of a social constructivist approach to learning. The learners in all six included studies were required to engage in the co-creation of knowledge in the discussion board activities. Cummings, Foels and Chaffin (2013) and Seibert, Seibert and Spaulding-Givens (2006) note that this type of knowledge building was useful to learners across a wide geographical region. The combination of social constructivism's co-construction of knowledge with networked learning's consideration of spatialities provides a useful theoretical construct for considering how collaborating on KSA acquisition in different locations might afford learners an opportunity to co-construct knowledge about multiple communities and enhance their social work practice skills (Alexander and Boud, 2001).

The Role Play CMO and the Age/Employment/Experience CMO do not fit as well with the initial rough theory developed for this study. The Role Play CMO focused on interactive learning activities provided in four of the included studies. While this type of activity (role play) is collaborative in nature, the possible mechanisms and behaviours generated in these patterns (preparation and practice) appear to be focused on individual learner activities. Although the role play learning activities did require coordination, they did not appear to generate the broad connectedness, collaboration and co-construction of knowledge that was apparent in the discussion board activities.

The Age/Employment/Experience CMO is related to learner characteristics of age, current employment and previous social work practice experience. While these are important context related factors to consider, there are several problems with data collection. Although this factor was measured in all studies, and three studies found significant differences in this factor between the online/blended and F2F courses, there were significant differences in how these data were reported and interpreted. Ouellette and Chang (2004) measured the number of learners over 40 years old while

Wilke *et al.* (2016) measured the differences in mean age between online/blended and F2F learners. Seibert, Seibert and Spaulding-Givens (2006) and Forgey and Ortega-Williams (2016) measured the number of years of social work practice experience of the learners in their studies, while Cummings, Foels and Chaffin (2013) and Seibert, Seibert and Spaulding-Givens (2006) measured the number of hours of weekly paid employment of theirs. While these differing measures seem to be an attempt to measure social work practice experience, they may also be an attempt to measure factors related to how older learners differ from younger, and how employment hours affect participation in online/blended courses.

In addition to this lack of clarity in what this data is actually measuring, the possible mechanisms and behaviours generated in this pattern are not well-related to the initial rough theory. As in the Role Play Activities CMO, they are more individual in nature and did not seem to require connectedness, collaboration, or co-creation of knowledge.

The Small Group Learning Communities CMO pattern was not a good fit with the requirements of realist synthesis analysis because it contained only a single context. Because of this, inter-context analysis was not able to be achieved, and within this methodological context, further levels of analysis could not be explored.

Given the limitations of the Role Play CMO, the Age/Employment/Experience CMO, and the Small Group Learning Communities CMO patterns, they should be excluded from the final discussion of what has been learned from exploring the included studies. The initial rough theory of networked learning and social constructivism appear to be an adequate theoretical perspective for supporting the Discussion Board CMO and its generation of mechanisms for achieving KSAs in social work practice courses. However, the initial rough theory might be improved by the inclusion of scaffolding and self-regulated learning as additional explanatory theoretical perspectives to support the mechanisms that are evident in the discussion board activities, such as the iterative self-reflection.

Scaffolding is the term developed to describe the interaction and relationship between the learner and the external, more knowledgeable source (Delen *et al.*, 2014). Jerome Bruner built on earlier concepts of scaffolding in his examination of child development and early childhood language acquisition (Bruner, 2006). Scaffolding is a reciprocal and interactive process that requires active participation of the learner for

success. (Delen *et al.*, 2014). Rosenshine and Meister (1992) present a comprehensive picture of instructional scaffolding to achieve higher level cognitive strategies for learning. They provide a six-step model of this practice that includes (a) presenting the new strategy, (b) regulating difficulty during guided practice, (c) providing varying contexts for practice, (d) providing feedback, (e) increasing learner responsibility, and (f) providing independent practice opportunities. To increase learner success, Azevedo and Hadwin (2005) propose that the learner have some capacity for self-regulated learning, which is defined as the capacity to engage in the scaffolding process combined with timely reflection and learning activities.

Several of the included studies, (Cummings, Foels and Chaffin, 2013; Forgey and Ortega-Williams, 2016; Ouellette and Chang, 2004; Wilke *et al.*, 2016) note the scaffolded nature of the discussion board activities and the ways in which it provided the context for learners to engage in iterative reflection and learning. Providing this type of scaffolding seemed to afford learners the opportunity to explore KSA development within a supported digital environment with interaction and reciprocity resulting in connection and collaboration. This level of structure might be especially useful to learners more accustomed to instructor-directed courses and activities, especially as they transition to a collaborative learning environment (Cutajar, 2017).

In conclusion, the formal theory that supports this realist synthesis is a combination of networked learning, social constructivism, and scaffolding. This is the explanatory structure that best explains the discussion board CMO pattern.

Discussion of Findings and Recommendations for Future Research

After an in-depth review of the included studies, the Discussion Board CMO is the causal pattern that most supported the initial rough theory, particularly when scaffolding was added. This addition to the initial rough theory is consistent with the theoretical foundations of online learning, which is embedded in social constructivism and cognitive theory (Siemens, 2005). This results in a formal theory configuration of networked learning, social constructivism and scaffolding.

However, Siemens (as cited in Ryburg, Buus and Georgson, 2012) argues that social constructivism and cognitive theories alone do not provide sufficient structure for knowledge building in a context that requires professionals to continuously update their knowledge and skills. Connection to people and information, and collaboration in the development of knowledge, are essential elements to the establishment of networks. It is within these networks that personal knowledge is shared with others, meaning is negotiated, and then examined in a larger context (Hodgson, McConnel and Dirckinck-Holmfeld, 2012; Ryburg, Buus and Georgsen, 2012). This iterative process is precisely what occurs in discussion board activities and is within the parameters of a networked learning context.

Given the strong connection of various aspects of the Discussion Board CMO to the formal theory configuration cited above, it perplexing that the online learners did not achieve better learning outcomes than those in the F2F classes. Although the learners in Douville's (2013) small group learning communities did achieve significantly better results than those in the full class discussion board, the remaining five studies did not yield much difference. A review of the remaining studies revealed several data collection and analysis issues that might have affected this outcome, including differences in how the discussion board activities were scored (Wilke *et al.*, 2016) and lack of pre- and post-test KSA data (Forgey and Ortega-Williams, 2016). Future studies may wish to consider increased standardisation of data collection and analysis to avoid these difficulties.

Overall challenges to exploring these phenomena are related to additional factors related to data collection and research design of online/blended social work practice courses, and the number of articles that met the inclusion criteria for this study. Comparative studies that result in no significant differences between learners in online/blended and F2F courses do not add significant understanding to which digital educational practices work and for whom - let alone how or why. More studies are needed that compare multiple iterations of online/blended courses with each other, such as Douville (2013). Infusion of digital educational theories clearly need to be included in these studies. Social work is well behind many other professions in exploring and adopting these pedagogical perspectives.

All of the included studies provided excellent descriptions of the broad conditions of the learning contexts, such as learning activities and assessment. A number of the included studies note the possible influence of learner characteristics on outcomes. There appears to be a phenomenon regarding the age and work experience of learners in online/blended social work practice courses. This is consistent with more general studies of online/blended learning. Bye *et al.*, (2009) found that younger learners expect to learn more than older learners, and theorize that younger learners actually do need to develop more knowledge than older learners, who may have already spent several years in the profession. Wernet *et al.*, (2000) found that older learners express more satisfaction with online/blended learning. However, the data in the included studies are not well-matched enough to engage in an exploration of this phenomenon using realist synthesis or other systematic review methods. Future researchers might consider some standardization of how this data is collected. Exploration of other factors related to learner characteristics might result in more in-depth information about the mechanisms that result in better learning outcomes.

In addition to these, specific learner characteristics related to ethnicity or heritage, geographic location of the learner, and the languages that learners speak when engaging with service users might also be useful to explore. Jones (2015) indicates that age, gender, ethnicity, social class and nation of residence may account for the differences in learner abilities and use of technology. From a social constructivist perspective, these aspects of context can greatly influence learning outcomes. For example, Douville's study of mutual aid learning communities (2013) was the only study in this paper to include a sample of learners that included primarily

those who identify as African American. Studies of collectivist vs. individualistic cultural styles is mixed in the U.S. (Vargas, and Kemmelmeier, 2013), and Douville cites other studies focusing on the use of learning communities and mutual aid to promote knowledge-building that do not break down their results by ethnicity and heritage (Randolph and Krause, 2002; Reeves and Reeves, 2008). Given that many of the studies of pedagogy amongst online/blended social work practice courses did not include results regarding this learner characteristic, it would be useful for future studies to explore if the use of mutual aid communities influences online/blended with learners from differing ethnic and heritage groups.

Future studies of online social work practice courses should consider including some specific details, including (a) the pedagogical methods used in each course, (b) greater depth of the details of assignments, perhaps including sample instructions, (c) exploration of different methods of assessment for online and F2F, including possible instructor bias, both positive and negative, (d) assessment methods that enable learners to demonstrate actual skill acquisition, and (e) evaluation methods that include pre and post-test or some other method to establish baseline skills at the beginning of the course.

Although the studies in this paper focused on learner characteristics, future research might wish to also explore the effects of instructor characteristics or training for teaching online/blended learning. Douville (2013) noted her positive bias in reading and responding to the small group learning discussion boards vs. those of the whole class discussion boards. Numerous studies explore issues related to assessment of online instruction and instructors (Parietti and Turi, 2011), and assessment of instructors remains a fraught topic in many institutions (Socha, 2013). However, given the rapid growth of online/blended learning, the often market-driven reasons for establishing such programmes, and the over-taxing of instructors' time to develop online courses and learn new methods of instruction, studies of instructor characteristics might yield useful results.

Caution should be taken when applying the findings of this study. A primary weakness is the small number of studies that met the inclusion criteria and the small samples of participants in those studies. It is likely that thousands of learners participate in online social work practice courses throughout the U.S., and decisions about pedagogy and program design should not rest on a sample of two to three

hundred learners. The limitations of this study should be a call to other researchers to engage in a comprehensive exploration of the factors that will contribute to the understanding of how learners develop KSAs in social work practice courses.

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