Teaching Qualitative Research Methods Online: A Scoping Review of the Literature

Chareen Snelson
Boise State University, csnelson@boisestate.edu

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Abstract

Online education has become well established as an avenue for flexible access to educational opportunities. Those who teach qualitative research methods online may find it difficult to locate research or best practice literature to inform practice. A scoping review was conducted to identify and synthesize the literature about teaching qualitative research methods courses online. Eleven peer-reviewed journal articles were identified through a scoping review of the literature. The TPACK framework, which defines teacher knowledge in terms of technological, pedagogical, and content knowledge, was used as a conceptual framework. Results from this scoping review indicate that online qualitative research methods educators choose course goals, instructional modules, and topics in a manner consistent with instructional design approaches. Pedagogical approaches included orientation strategies, strategic use of instructional media, online discussions, applied research activities, and writing projects. Technology was used for course management, to develop content, for communication, and to enable online teaching strategies in an online environment. The literature informs teaching practice in qualitative research methods education, but more research is needed to develop knowledge in this under explored area.

Keywords

Online Education, Distance Education, Teaching Online, Teaching Qualitative Methods, Literature Review

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Teaching Qualitative Research Methods Online: A Scoping Review of the Literature

Chareen Snelson
Boise State University, Idaho, USA

Online education has become well established as an avenue for flexible access to educational opportunities. Those who teach qualitative research methods online may find it difficult to locate research or best practice literature to inform practice. A scoping review was conducted to identify and synthesize the literature about teaching qualitative research methods courses online. Eleven peer-reviewed journal articles were identified through a scoping review of the literature. The TPACK framework, which defines teacher knowledge in terms of technological, pedagogical, and content knowledge, was used as a conceptual framework. Results from this scoping review indicate that online qualitative research methods educators choose course goals, instructional modules, and topics in a manner consistent with instructional design approaches. Pedagogical approaches included orientation strategies, strategic use of instructional media, online discussions, applied research activities, and writing projects. Technology was used for course management, to develop content, for communication, and to enable online teaching strategies in an online environment. The literature informs teaching practice in qualitative research methods education, but more research is needed to develop knowledge in this under explored area. Keywords: Online Education, Distance Education, Teaching Online, Teaching Qualitative Methods, Literature Review

Online education is a form of distance education that is delivered primarily through web technologies on the internet (Online Learning Consortium, 2015). Online learning has become well established as an attractive option in U.S. higher education with more than one in four students (28%) taking at least one distance course (Allen, Seaman, Poulin, & Straut, 2016). In Canada, results of a national survey revealed that 83% of post-secondary institutions are offering online courses for credit (Canadian Digital Learning Research Association, 2018). A survey study in European higher education revealed that 80% of responding institutions offered at least some form of distance education (Schneller & Holmberg, 2014). In recent years, MOOCs (Massive Open Online Courses) have attracted masses of online learners to at least attempt, if not always complete, coursework together with hundreds or thousands of other students enrolled in the same course (Jordan, 2014). Teaching practices in online qualitative research methods courses have become an increasingly important topic of inquiry in an age when a wide variety of online and distance education opportunities are available including online doctoral programs (Kung & Logan, 2014) in which qualitative methods courses are an established part of the curriculum (Card, Chambers, & Freeman, 2016).

The scholarship of teaching qualitative research methods has been diverse and scattered making it difficult to learn from the experiences of others. Drisko (2015) lamented the piecemeal literature that "does not adequately encompass the range of choices available for teaching qualitative research" (p. 308). The problem is even more pronounced for online qualitative methods education, which is a more recent phenomenon with an emergent and underdeveloped knowledge base. The few books available that inform qualitative methods instruction emphasize face-to-face teaching with little, if any, information about online approaches. Garner, Wagner, and Kawulich (2009) promote a culture of pedagogy in research

methods education but remain silent about online contexts where instruction is mediated by technology. Hurworth (2008) provides an extensive case study of face-to-face qualitative methods courses in Australian and English universities that concludes with recommendations for best practice. Swaminathan and Mulvihill (2018) offer practical advice and teaching tips for methods educators and include some information, albeit brief, about online approaches for teaching qualitative research methods.

The lack of a consolidated knowledge base to inform teaching in online qualitative research methods courses suggests that a scoping review of the literature is needed to examine the state of the field and map the terrain of scholarship. Scoping reviews, also referred to as scoping studies, are useful for identifying the extent, range, and nature of research activity on a topic, to determine the value of conducting a full systematic literature review, to summarize research findings, or to identify gaps in the literature for further research (Arksey & O'Malley, 2005; Levac, Colquhoun, & O'Brien, 2010). Therefore, a scoping review was conducted to answer the following research questions: (a) How have qualitative research methods teachers selected or developed content for online delivery?, (b) What types of pedagogy have teachers applied in qualitative research methods courses?, and (c) How has technology been selected and applied to support online teaching practice in qualitative research methods courses? I aligned the research questions to the TPACK (Technological, Pedagogical, and Content Knowledge) framework (Koehler & Mishra, 2009; Mishra & Koehler, 2006) in the context of online qualitative research methods education as described in the next section.

My experience in online education is extensive having designed and taught online graduate courses in the field of educational technology for more than 15 years. The impetus for this scoping review came from a programmatic need to develop a new online doctoral-level course in qualitative data analysis and the desire to learn more about how others have dealt with the challenges of teaching qualitative research methods in a fully online setting. The decision to conduct a scoping review of the literature came after discovering the limited and scattered information on this topic.

Conceptual Framework – TPACK

Technological Pedagogical and Content Knowledge (TPACK) is a conceptual framework used to characterize teacher knowledge required when integrating technology as part of content-area pedagogy (Koehler & Mishra, 2009; Mishra & Koehler, 2006). The TPACK framework emerged in response to a perceived lack of theoretical grounding about teachers' use of technology in their teaching. It extends Shulman's (1986) Pedagogical Content Knowledge (PCK) framework that was developed to advance thinking about teacher knowledge in the overlapping domains of content knowledge (i.e., knowledge of the subject matter) and pedagogical knowledge (i.e., knowledge about the practice and methods of teaching). The addition of educational technology (i.e., knowledge of how to use technology in teaching) contributes an additional knowledge domain. The TPACK framework is often depicted with a modified Venn diagram like Figure 1 to illustrate the interaction of teacher knowledge domains within educational contexts.

Technological Content Knowledge (TCK) refers to knowledge of the interrelationship between discipline-specific content and technology. Knowledge of the use of microscopes to view cells in biology, video cameras in a media production course, or computers for debugging code in computer science are examples of the intersection of technology and content knowledge domains. Davidson, Paulus, and Jackson (2016) have argued for the importance of preparing qualitative researchers to use a variety of technologies to support their work. Technologies might include Computer Assisted Qualitative Data Analysis Software (CAQDAS), mobile apps for fieldwork, or digital curation and data management tools to name a few. Technology

is also part of the Technological Pedagogical Knowledge (TPK) domain, albeit from the vantage point of how it is used in teaching practice. TPK refers to the knowledge of how to teach with technology based on the affordances of technological tools and how they enable or support instructional practices. In online education, teachers might choose synchronous (i.e., real-time) technologies such as web conferencing or asynchronous (i.e., not real time) technologies such as discussion forums to achieve different types of learning goals. Depending on the institution, teachers might also need to know how to use a particular learning management system (LMS) and its integrated collection of technological tools such as announcements, course menu, content areas, communication tools, gradebook, and multimedia tools for audio or video content (Boettcher & Conrad, 2016; Ko & Rossen, 2017). LMS technologies have been used when teaching qualitative research methods courses (Kaczynski, 2004; Mortera-Gutierrez, 2007). Others have turned to social media tools to support a learning community space (Veloso, Orellana, & Reeves, 2018).
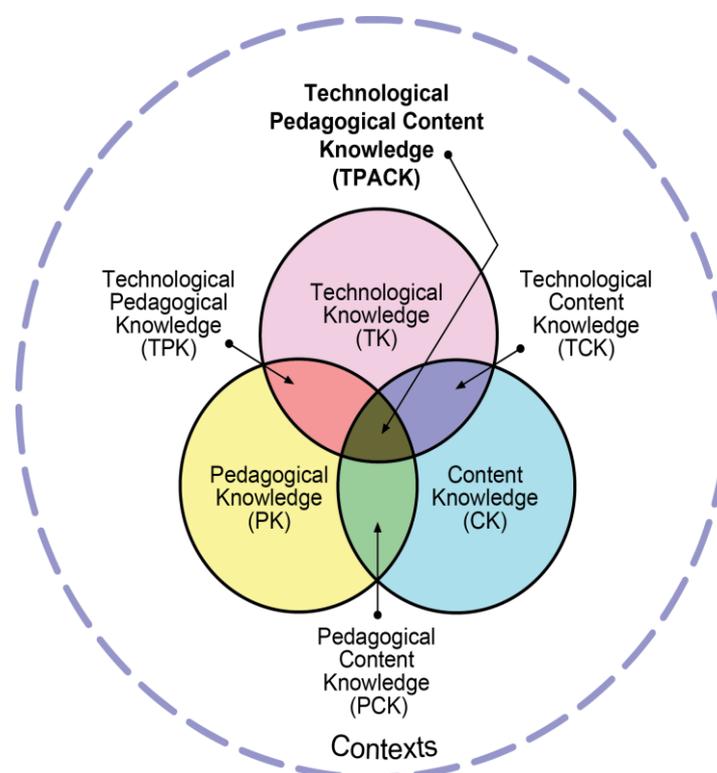

Figure 1. TPACK Image (Reproduced by permission of the publisher, © 2012 by tpack.org)

The TPACK framework has been widely used to formulize what teachers need to know in order to teach with technology (Herring, Koehler, & Mishra, 2016). The framework has been used extensively in K-12 education but has also been applied to online and higher education contexts (Anderson, Barham, & Northcote, 2013). TPACK has been used as a conceptual framework to study a model for training new online instructors (Brinkley-Etzkorn, 2018), to evaluate and create profiles of teacher expertise in online higher education (Benson & Ward, 2013), and to structure analysis (i.e., coding) of lecturer interviews about their online teaching practice (Anderson et al., 2013). At the time of this writing, TPACK does not seem to have been used as a conceptual framework in a literature review specifically about online qualitative research methods teachers or their instructional practice, but it offers a plausible framework for conceptualizing the overlapping domains of knowledge they are likely to require. In related work, Moore-Adams, Jones, and Cohen (2016) used the TPACK framework during a

systematic literature review to identify the types of knowledge and skills needed for preparation of K-12 online teachers. TPACK is a viable conceptual framework for a review of literature about online qualitative research method teaching practices.

Method

A scoping review (Arksey & O'Malley, 2005; Levac et al., 2010) was conducted to examine research on the topic of online qualitative research methods teaching. This was a good fit for the present study given the limited information available on the topic (Booth, Sutton, & Papaioannou, 2016). The purpose of a scoping review is more about examining the nature and extent of the literature for a specified topic rather than critical appraisal of research quality.

There are known variations in the application of scoping review methods and terminology (Pham et al., 2014; Tricco et al., 2016), but the well-cited framework developed by Arksey and O'Malley (2005) suggests five stages that include: (a) identify the research question, (b) identify relevant studies, (c) select the studies, (d) chart the data, and (e) collate, summarize and report the results. These stages guided the trajectory of the present study with some minor modifications. Concisely summarized, the research questions that were stated in the introduction served to set the scope and focus for the scoping review. Identification and selection of literature followed a search and selection process to identify peer-reviewed articles that met specified criteria. Then, selected articles were analyzed and data were extracted and charted to identify themes across the data set.

Identification and Selection of Literature

The central purpose of this study was to review scholarly literature to gain insights about teaching practices in online qualitative research methods courses. Included papers met the criteria of being a peer-reviewed article published in an academic journal, available in full text, written in English, with a central focus on teaching practice or teaching experiences in an online qualitative research methods course. The rationale for these inclusion criteria was to ensure selection of refereed studies of sufficient quality to merit publication in a peer-reviewed academic journal. They were obtained in full-text English so that the content could be reviewed in a language understood by the researcher. In addition, no restriction was placed on publication date to include as many relevant articles as possible. The process for identification and selection of articles followed the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) flow diagram shown in Figure 2. The PRISMA flow diagram originated as part of a group of strategies designed to improve reporting in systematic literature reviews (Moher, Liberati, Tetzlaff, & Altman, 2009). The PRISMA flow diagram serves as an illustration of the process for identification, screening, eligibility, and selection of studies for inclusion in a literature review. The numbers in parentheses indicate the number of articles involved in each stage of the process.

Articles were identified through a systematic search of several academic databases and a review of the bibliography found in Chenail's (2018) compendium of teaching and learning qualitative research resources. Database searches were conducted in a combination of multidisciplinary and education-oriented databases to search across disciplines and also search within indexes that were more likely to include articles about teaching. The databases searched were Academic Search Premier, Education Research Complete, ERIC (Education Resource Information Center), and the Web of Science Core Collection (i.e., Science Citation Index Expanded, Social Sciences Citation Index, Arts & Humanities Citation Index, Emerging Sources Citation Index). Searches were conducted in September 2018.
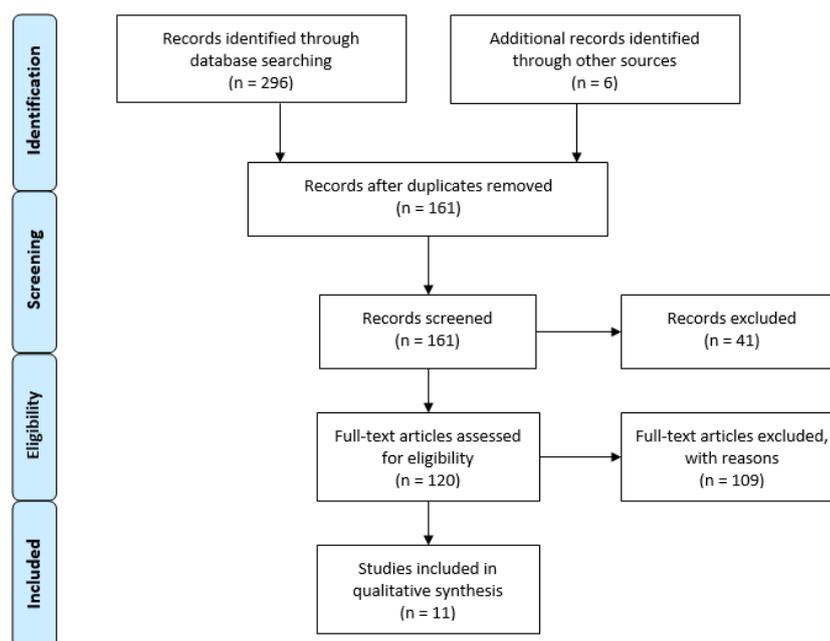
Figure 2. PRISMA Flow Diagram Adapted from Moher et al. (2009).

The search phrase was identified after running several pilot tests to determine which phrase would generate results that aligned to the purpose of the scoping review study. This can be a challenge when striking a balance between precision (i.e., accurate results) and sensitivity (i.e., broader results) so that inclusion criteria are met and search results are also a manageable size (Booth et al., 2016). Furthermore, terminology for online and distance education is known to be used inconsistently (Moore, Dickson-Deane, & Galyen, 2011), which can make it difficult to develop a search phrase that encompasses appropriate literature without generating a large number of irrelevant results. Initial search phrase testing indicated that inclusion of terms related to online or distance qualitative research methods courses produced many citations to articles involving the use of qualitative methods to study online teaching in various contexts or subject areas not always related to the teaching of qualitative methods. The more complex the search phrase became, the larger and less precise the results became. In the end, it was better to use a simpler search phrase that produced a more precise set of articles that focused on the content area of qualitative research methods education. The search phrase used was "teaching qualitative" or "teach qualitative." The phrase was entered as a topic search in the Web of Science and as a basic search filtered for scholarly peer-reviewed articles in the Academic Search Premier, Education Research Complete, and ERIC databases. The results from this search, which produced articles about teaching qualitative methods without restriction to context, were later screened to identify the subset that presented information specifically about teaching qualitative research methods courses online. After running the search, results were exported directly from each of the databases into EndNote online software (Clarivate Analytics, n.d.). After import, the "Find Duplicates" tool was used to identify and remove exact duplicates from the list of references. Additional duplicates were identified and removed during manual screening.

Articles were screened in two stages. In the first stage, titles and abstracts were reviewed to identify and exclude references to articles that were clearly not a fit. For example, when the abstract described use of qualitative methods to study teaching in a context other than a qualitative methods course. The remaining references were selected for full-text review during the second stage of screening. Full-text copies of the articles were obtained from the

university library, online repositories, or interlibrary loan. Each article was reviewed to determine if it met the inclusion criteria. A sample of 11 articles meeting inclusion criteria was selected for analysis.

Data Analysis

The sample of articles selected for this review was analyzed like a qualitative data set since each article presented information in a qualitative format that was predominately text narrative with some images or tables. The articles were prepared by importing them into Mendeley (n.d.) reference management software where bibliographic information was verified and the peer-reviewed status was confirmed. The PDF (Portable Document Format) copy of each article was linked from its reference. This step ensured that both the article and the bibliographic information could be exported in a form suitable for analysis in NVivo 12 Plus for Windows (QSR International, n.d.). The set of articles, with bibliographic information, were exported from Mendeley and then imported into NVivo for analysis. This step also generated a classification sheet (i.e., like a spreadsheet) of bibliographic data within NVivo that could be sorted or queried.

The use of Qualitative Data Analysis Software (QDAS) has been recommended for analysis, identification of patterns, interpretation of literature, and development of an audit trail when conducting a literature review (O'Neill, Booth, & Lamb, 2018). In the present study, NVivo was used to code the articles in iterative stages. First, all of the articles were read closely to develop familiarity with the data set as a whole. Next, two cycles of coding were conducted (Saldaña, 2016). Descriptive coding was applied in the first cycle to generate an index of topics pertaining to technology, pedagogy, content, and context in alignment to the TPACK conceptual framework. Pattern coding was applied during a second round of coding to merge similar codes and group related codes into hierarchical clusters. Next, a matrix containing summaries of the coded content was created as part of the "chart the data" stage of a scoping review (Arksey & O'Malley, 2005). A matrix display can be useful during analysis and interpretation by extracting and summarizing data into a visual grid that can be examined across rows and columns in a concise display (Miles, Huberman, & Saldaña, 2014). In this review, the matrix provided a broad-brush overview of the studies to summarize the purpose, context, technology, pedagogy, and content in a concise display. The matrix was used in conjunction with the coded articles in NVivo to move back and forth from broad overview to detailed content collected in the codes (i.e., nodes in NVivo vernacular) when synthesizing the findings.

Rigor, Trustworthiness, and Limitations

A structured approach was used to promote rigor and trustworthiness in this scoping review (Booth et al., 2016; Lincoln & Guba, 1985; Miles et al., 2014). Methods and procedures were described in explicit detail to make the sequence clear, repeatable, and confirmable. The process included following published guidelines for structuring a scoping review (Arksey & O'Malley, 2005; Levac et al., 2010), the use of the PRISMA flowchart to document the search and selection process (Moher et al., 2009), the use of technology to minimize human error during search and data management, and the application of repeated cycles of coding in NVivo to improve coding consistency and gain a strong degree of familiarity with the data while generating themes (O'Neill et al., 2018). During the entire study, a research journal was maintained as an audit trail of procedures, activities, and ideas. A total of 34 detailed journal entries were made during a six-month period that started with data collection and concluded after analysis of the literature sample was completed.

It should be noted that this scoping review represents a sample of literature and even though extensive coverage was sought there is a possibility that something was missed. This is a limitation for nearly any systematic literature review based on factors including search phrase sensitivity, database settings, inclusion criteria, or mistakes made during the selection process (Booth et al., 2016; Petticrew & Roberts, 2008). All of the articles sampled in the present review are listed in the reference section with an asterisk next to each item. Other online educators and researchers can review the references and expand this work to build toward a larger consolidated body of knowledge on the topic of online qualitative research methods instruction.

Results

The 11 articles included in this scoping review were published over a 16-year period from 2001 through 2017 as shown in Figure 3. The disciplinary contexts where the online qualitative research methods were situated included conflict management (Mehra, 2002), development management (Ryen, 2009), education (Schulze, 2009), educational and organizational leadership (Miskovic & Lyutykh, 2017), educational technology (Snelson, Wertz, Onstott, & Bader, 2017), and nursing and health sciences (Holtslander, Racine, Furniss, Burles, & Turner, 2012; Moore & Janzen, 2012; Steckler et al., 2001). Some of the papers emphasized pedagogical recommendations (Bender & Hill, 2016) or offered the reflective perspectives of qualitative methods instructors from education, social science, or qualitative methods programs (Hunter, Ortloff, & Winkle-Wagner, 2014; Roulston, deMarrais, & Paulus, 2017).
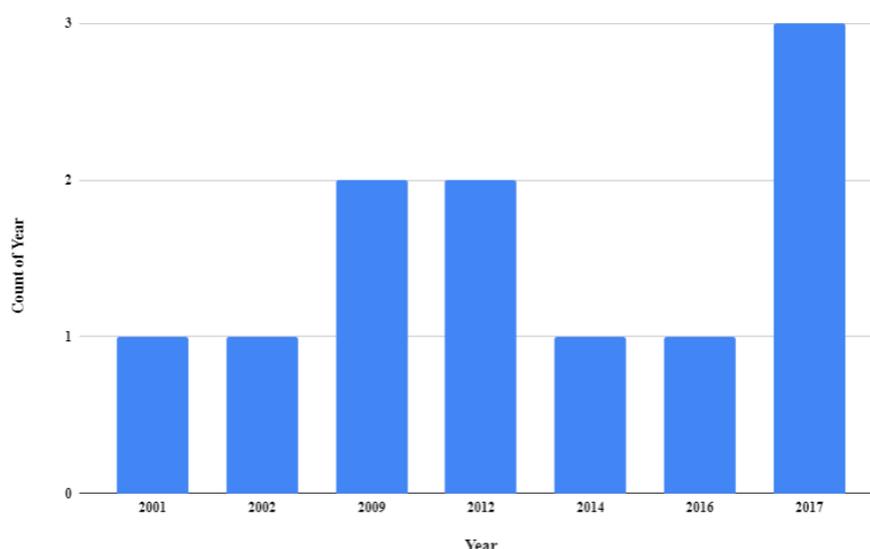

Figure 3. Distribution of Publication Years for Articles

A conceptual/thematic approach was used to synthesize information through the lens of a conceptual framework (Sandelowski & Barroso, 2007). Findings are organized based the TPACK framework (Koehler & Mishra, 2009; Mishra & Koehler, 2006) to describe how course content (what was taught), pedagogy (how it was taught), and the use of technology (what tools were used) were described within the articles included in this scoping review. This information illustrates the state of the field, uncovers current instructional practice, and suggests how domains of knowledge defined by TPACK are manifesting in online qualitative research methods teaching.

Content

The content domain was examined by looking at course topics described in the literature and how content was selected, designed, and developed in online qualitative research methods courses. The field of qualitative research is extensive and teachers of qualitative methods courses "must make decisions about how to introduce and begin to integrate an enormous intellectual territory" (Drisko, 2015, p. 309). Instructors of online research methods courses have covered topics on qualitative research design (Holtslander et al., 2012; Mehra, 2002; Schulze, 2009, ethical research practice (Ryen, 2009; Steckler et al., 2001), data collection and analysis (Mehra, 2002; Snelson et al., 2017) and writing (Bender & Hill, 2016; Holtslander et al., 2012). Decisions about course content, topics to include, instructional goals, course organization, development of instructional materials, implementation strategies, assessment, or evaluation, as described in the literature, resembled instructional design practices such as the ADDIE process. ADDIE stands for Analysis, Design, Development, Implementation, and Evaluation (Larson & Lockee, 2014). ADDIE has been linked to the design tasks performed by online instructors as part of the normal workflow of designing and developing online courses (Baldwin, Ching, & Friesen, 2018).

The design and development of content for online qualitative methods courses can be described in terms of the ADDIE approach. The *analysis* part of ADDIE determines the direction and priorities of the course, which includes formulation of course goals and objectives. In online qualitative research methods courses, instructional goals were determined based on instructor expertise about essential knowledge and skills that should be attained during a qualitative research methods course (Moore & Janzen, 2012; Roulston et al., 2017), programmatic factors such as what a course needs to cover as part of a larger program (Schulze, 2009), or how the course promotes disciplinary standards (Snelson et al., 2017). During *design* and *development*, the instructor plans and organizes lessons, creates course content, selects resources, and plans assessment. Instructors of online qualitative research courses engage in these types of activities when segmenting (i.e., chunking) and sequencing content into online modules (Ryen, 2009; Roulston et al., 2017; Snelson et al., 2017), creating multimedia content (Moore & Janzen, 2012), selecting or producing online resources (Bender & Hill, 2016; Ryen, 2009), or developing assessment rubrics (Bender & Hill, 2016; Roulston et al.,, 2017). The *implementation* component of ADDIE occurs when the course is actually taught and pedagogy (described later) is enacted. Finally, *evaluation* occurs when the course is evaluated, such as with student evaluations, which informs course revision to improve it. For example, Schultze (2009) explained how feedback from student evaluations was used to identify areas for improvement such as providing greater student support.

A formal instructional design model was followed in one of the studies. Holtslander et al. (2012) described how their development team followed the Four-Component Instructional Design (4C/ID) model (van Merriënboer, Clark, & de Croock, 2002) when creating an online qualitative methods course. The 4C/ID model is suitable for designing instruction involving complex learning with four interrelated components that include (a) *learning tasks* that are authentic and whole task in nature such as developing a research proposal, (b) *supportive information* to help make connections to new knowledge such as when an instructor explains the decision processes in qualitative analysis, (c) *just in time information* to provide timely information when it is needed such as when providing tutorial videos for reference software when students are writing papers, and (d) *part-task practice* on smaller version of task or skill such as when providing students with small qualitative data sets practice the kind of analysis they might do on a larger research project. Even though many of the studies described informal processes for course design, a formal instructional design model, such as 4C/ID, can provide a

systematic approach for conceptualizing, planning, designing, and developing content for an online qualitative methods course.

Pedagogy

The pedagogy domain was examined by looking at the instructional strategies described in the literature. Those who teach qualitative research methods courses online have been faced with little information to guide them about instructional strategies specifically for the online classroom. Miskovic and Lyutykh (2017) expressed this situation well when they lamented that "there are few studies on how to teach qualitative research, let alone how to go about it in an online format" (p. 2705). Teaching approaches were varied and included orientation strategies, strategic use of instructional media, online discussions, applied research activities, and writing projects. Examples of some of these strategies will be briefly discussed to illustrate how they are implemented as pedagogy in online qualitative methods courses.

Orientation strategies, such as providing course overviews, announcements, and assignment instructions are important for communicating expectations and minimizing confusion in online courses (Boettcher & Conrad, 2016; Ko & Rossen, 2017; Vai & Sosulski, 2016). Several authors described these types of strategies when teaching online qualitative research methods courses. Bender and Hill (2016) recommend providing materials such as an orientation module or introduction video and a list of resources to acclimate students to the technologies used and expectations for the course. Roulston et al. (2017) described orientation strategies such an introduction for each course module that includes learning objectives and a checklist to let students know what they have to do. Moore and Janzen (2012) described the use of a study guide approach that students followed when working through learning modules. A photograph and metaphor were used to introduce and frame study topics within the modules. For example, a picture of a quilt and metaphor of a tapestry were used to indicate how qualitative design was similar because it involved rearrangement of pieces to create something new.

Instructional media was strategically used for a variety of pedagogical purposes in online qualitative research methods courses, albeit with mixed reactions from the educators who created them. Moore and Janzen (2012) created a multimedia show of images from nature set to relaxing music. Students watched the show and responded to a set of reflection questions to promote thinking about the qualitative research process. Roulston et al. (2017) integrated opening videos at the start of each week and recap videos that were described as "more relational than content delivery" (p. 221). The recap videos were used to discuss the previous week, answer questions, and give reminders to students. Bender and Hill (2016) suggest creating narrated slide lectures to emulate a traditional lecture for those students who prefer this type of learning modality. This can be beneficial for learners but can also be challenging to create. Hunter et al. (2014) described creating PowerPoint presentations to convey information similar to what was covered in a face-to-face version of the course but found the experience overly time consuming with the result being "a flat version of what I wanted to teach" (p. 15). Nevertheless, instructional media were generally described as beneficial for instructional practice in the online qualitative methods course.

Online discussions played an integral role in online qualitative research methods pedagogy to promote collaborative interaction, meaningful reflection, development of perspectives about the nature of qualitative research, what it means to be a qualitative researcher, and how to engage in qualitative research practice (Bender & Hill, 2016; Holtslander et al., 2012; Mehra, 2002; Moore & Janzen, 2012). Instructors used diverse approaches for online discussions in qualitative methods courses including the use of questions or discussion prompts for students to respond to (Mehra, 2002; Moore & Janzen, 2012), the

use of Facebook as a space for voluntary discussions (Hunter et al., 2014), or as a space for students to ask general questions or ask for help (Roulston et al., 2017). Asynchronous online discussions, where students submit posts at different times, provide advantages such as flexibility to fit learning into busy schedules, time to think, reflect, and process information before submitting posts, and the opportunity for equity since everyone has a chance to share their perspectives and ideas. Although many online discussions may be asynchronous, some instructors of online qualitative research methods courses have also used synchronous sessions where discussions occur in real time (Roulston et al., 2017; Snelson, et al., 2017). Guest speakers with live question and answer sessions, virtual office hours, or collaborative online fieldwork in a virtual world are situations where synchronous online discussions can be beneficial.

Applied research activities provide hands-on practice with research activities such as doing observations, writing fieldnotes, practicing interviewing techniques, data collection and analysis, or working on small-scale research projects. Observation activities in online qualitative research methods courses included a video observation exercise where students watched a video and wrote field notes about it (Steckler et al., 2001). In another example students practiced participant observation in the virtual world of an online game where they entered as avatars, interacted with other people in the game, and wrote field notes to record their experiences (Snelson, et al., 2017). Interview activities included critique of a recorded audio interview (Steckler et al., 2001), development of an interview guide (Schulze, 2009; Miskovic & Lyutykh, 2017; Steckler et al., 2001), and practice conducting interviews locally or online with other students (Bender & Hill, 2016; Miskovic & Lyutykh, 2017; Steckler et al., 2001). Interview transcripts, either already existing or generated by students, were recommended for use as a data set for students to practice coding (Bender & Hill, 2016). Data collection and analysis activities were designed to work in the online course format. For example, Moore and Janzen (2012) described a data collection activity where students collected articles from the popular press about health care in Canada, developed a coding scheme, coded the data, and developed themes about the health of Canadians. Miskovic and Lyutykh (2017) asked students to respond in narrative form to a question about the purpose of education, which became a data set for them to practice coding and thematic analysis.

Writing projects were common in online qualitative methods courses. In addition to writing discussion posts, students had an opportunity to practice different types of writing in qualitative research including memos, journals, methods papers, or research papers. Bender and Hill (2016) argued for the importance of having students engage in reflexivity to examine their understanding of truth, preconceptions, and perceptions of the research process. These types of activities were implemented in online qualitative methods courses when students wrote bracketing memos to identify a lens, perspective, or position they were taking when discussing the purpose of education (Miskovic & Lyutykh, 2017) or when writing a subjectivity journal to monitor thought processes, personal reactions, biases, and values during the research process (Mehra, 2002). Other writing projects gave students a space to practice more formalized writing such as a research proposal (Holtslander et al., 2012), qualitative methods paper, (Moore & Janzen, 2012), thesis (Ryen, 2009), final paper (Hunter et al., 2014; Miskovic & Lyutykh, 2017), or portfolio to document and report on the results of a research project (Schulze, 2009).

Technology

The technology domain was examined by looking at the various technologies described as having been used when teaching online qualitative research methods courses. Technologies used in online education come in many forms including computers or mobile devices used to access the course, production technologies for creating digital course content, communication

tools such as email or web conferencing, or learning management systems that include an integrated bundle of tools such as announcements, course menu and navigation, content area, discussion forums, gradebook, test and quiz tools, email tools, collaboration tools, or audio and video tools (Boettcher & Conrad, 2016). Online educators use a learning management system to create an organized space where students who are distributed geographically can interact, share their diverse perspectives, and learn together in a shared virtual classroom. For example, Ryen (2009) explained how a multi-national online qualitative research methods course was organized in an e-learning system to provide students from different countries with access to course content, resources, group discussion forums, and a place to submit assignments.

In addition to learning management systems, online qualitative research methods instructors used various media technologies for developing instructional materials, offering feedback, or interacting with students. PowerPoint was used to create informational presentations about course topics (Hunter et al., 2014; Roulston et al., 2017), audio feedback was recorded as part of the assessment process (Hunter et al., 2014), videos were created to offer introductions or orientations, provide procedural tutorials for developing technical skills, give video lectures (Hunter et al., 2014; Roulston et al., 2017), or conduct live video meetings (Snelson et al., 2017). Social media technologies have also been either recommended or used for work in online qualitative methods courses. Bender and Hill (2016) suggested using Facebook to create a class page, Pinterest to create boards of supplemental materials for different qualitative methods and techniques, or social media management tools to schedule announcements and the release of resources to students at predetermined times. Other applications of social media included Twitter and Blogger for recording field notes (Snelson et al., 2017) and wikis for collaborative projects (Holtslander et al., 2012).

Qualitative Data Analysis Software (QDAS) was seldom discussed in the literature about teaching online qualitative research methods courses despite its role in qualitative analysis (Wolski, 2018). When QDAS was discussed it was given brief attention such as when Hunter et al. (2014) suggested that instructors provide YouTube videos or webinars to teach qualitative coding software. There was little information available in the sample of articles included in this scoping review to inform teaching QDAS in a fully online course. Elsewhere, Kaczynski (2004) delves into the topic of teaching QDAS through an online format with insights into curriculum design as well as student, content, and technological challenges.

Implications and Conclusions

The central purpose for this scoping review was to examine scholarly activity that informs teaching practice in online qualitative research methods courses. The body of peer-reviewed literature is small at the present time, but yields insights into how knowledge of content, pedagogy, and technology have manifested in online teaching practice. Several key findings and implications can be drawn from this review. With respect to content, online qualitative research methods educators discussed decisions about course goals, instructional modules, and sequences of topics in a manner consistent with instructional design approaches (see Baldwin et al., 2018; Larson & Lockee, 2014). An implication of this finding is that, in addition to content knowledge of qualitative research traditions and methods, teachers may benefit from knowledge of instructional design approaches as a systematic framework to guide development of online course content. Additional research on the application of instructional design methods in online qualitative research methods courses would shed light on the possible value for educators.

The pedagogical approaches described in the literature were designed to fit into the online course context, which was not always comfortable for teachers who were accustomed to a face-to-face format (Hunter et al., 2014). Yet, a wide variety of instructional strategies

were implemented. Educators used orientation strategies to acclimate students to the course, created instructional media to present information about qualitative research topics, held online discussions as a collaborative space to share ideas, and integrated applied research and writing activities to give online learners experience with qualitative research practice. These pedagogical practices were, by necessity, mediated by technology due to the context of the online learning environment. The practical implication is the importance of teacher knowledge of digital pedagogy in online education and how the affordances of digital technologies support different types of learning (Harasim, 2017). Yet, the scant literature in this review only begins to examine pedagogical practice in online qualitative research methods education. Additional research is needed to develop a deeper understanding of effective pedagogical practice and teacher preparation.

Information has been presented in this article to explain how content, pedagogy, and the use of technology were actualized as part of teaching practice in online qualitative research methods courses as described in the literature. Each of these areas represent teacher knowledge domains in the TPACK model but should not be thought of as independent and unrelated constructs (Koehler & Mishra, 2009; Mishra & Koehler, 2006). It is difficult to discuss content without also considering pedagogy and how technology can be used to create or distribute content in an online course. Similarly, it is not easy to discuss pedagogy without discussing how technology is used to make pedagogy possible. Therefore, future research studies might examine the intersections of Technological Content Knowledge (TCK) or Technological Pedagogical Knowledge (TPK) in the context of online qualitative research methods education. This would advance the call for development of a pedagogical culture in research methods education (Garner et al., 2009) with an emphasis toward online qualitative research methods pedagogy. Research on digital pedagogy in online qualitative research methods education is an area where more study is warranted to identify effective instructional strategies and expand the knowledge base in this minimally researched area.

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Author Note

Dr. Chareen Snelson has worked in online education for more than fifteen years having designed and taught a wide variety of graduate-level educational technology courses including media design, leadership, and qualitative methods. Her scholarly activity has focused on several areas including online learning, educational video production, educational applications of YouTube, media literacy, and qualitative methods education. Correspondence regarding this article can be addressed directly to: csnelson@boisestate.edu.

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