Trends and Issues in Qualitative Research Methods

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Abstract

In the almost two decades since the first AECT *Handbook* article on qualitative research debates about research philosophy, design, and purposes have led to clashes of opinion in the field of educational communications and technology as well as in the larger sphere of educational research. At the same time, the number of publications on qualitative methods specific to the field has increased, expanding the understanding of the potential of such approaches to explore, describe, and explicate key issues in instructional design and the application of technology to learning. While other chapters have included examples of qualitative studies related to specific disciplinary topics, this chapter focuses on trends in the use of qualitative research design and emerging approaches more generally. Within this framework, issues of design, methods, and knowledge generation are reviewed and examined through a sample of recent directions in qualitative studies and designs. For each method reviewed, examples are provided along with common issues and potential directions for future use of these.

Keywords

Qualitative research • Interpretive tradition • Case study • Ethnography • Discourse analysis • Cooperative inquiry • Grounded theory • Research quality

Introduction

In the almost two decades since publication of the first article in the AECT *Handbook* on qualitative research (Savenye & Robinson, 1996), debates about research philosophy, design, and purposes have led to clashes of opinion in the field of educational communications and technology (ECT) as well as in the larger sphere of educational research. At the same time, the number of published ECT studies using qualitative methods increased, expanding the potential of such approaches to explore, describe, and explicate key issues in instructional design and the application of technology to learning.

While other chapters have included examples of qualitative studies related to specific disciplinary topics, this chapter focuses on qualitative approaches more generally.

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Within the qualitative framework, issues of design, methods, and knowledge generation are examined. In this chapter, we will

- Explore definitions of qualitative research.
- Provide a framework for discussing various qualitative traditions and methods that have been applied in ECT research.
- Describe some key methods briefly, providing a sample of recent studies that are representative of the approach.
- Review current issues in application and implications for the future of qualitative research approaches.

We should preface the chapter with what is not covered. The chapter is not intended to be a general introduction to qualitative research which is covered in multiple textbooks, but rather is a brief review of current application and issues in qualitative methods within the field of educational communications and technology. Because the scope of qualitative research is beyond a single chapter, our intent is to lead the reader to other authoritative sources for more detailed reviews and explanations.

In this review, the authors focus on methodological strategies and their related data collection and analysis methods that are typically classified as qualitative in scope rather than on the epistemological or political debates that have emerged over several decades. Following Denzin and Lincoln (2008), we recognize that all research is political and implies value judgments about purpose and the warrant of knowledge. We propose that our descriptive approach allows us to present an overview of trends in ECT empirical studies that does not privilege a particular stance in the continuing debate over educational research methods. We also point to the separate chapter in the *Handbook* on the use of technology in qualitative research (Chap. 20), noting that we understand the importance of this topic but have limited our discussion in this review.

The Issue of Terminology: What Is Qualitative Research?

In developing this chapter, a central issue that arises concerns the definition of *qualitative research*. A number of authors have attempted to delineate the scope covered by this concept. To date, no commonly accepted terminology for defining or describing "qualitative" has come into common usage in educational research or more widely in social research.

At one level, qualitative research has been defined in the negative; it is understood to mean systematic social and behavioral research studies that are *not* quantitative (numerical and statistical) in character. Qualitative research more typically is portrayed as focusing on language and meaning, individual perspectives and beliefs, discourse and social interaction, and emergent group processes and culture. Studies tend to be in naturalistic settings involving direct researcher interaction with participants or derived from primary sources and artifacts. It is usually described as an approach to best answer what and how questions, providing rich descriptions to explore and understand complex, multilayered, and multicausal social perspectives and dynamics.

Table 15.1 Levels of qualitative research

Level	Some examples
Methods: Data level	Collection methods: interview, observation, focus group Analysis methods: discourse analysis, thematic coding, categorical analysis
Methodology: Design level	Phenomenology, narrative, ethnography, case study
Theoretical or conceptual level	Feminist theory, ecological theory, activity theory, grounded theory[a]
Epistemological level	Post-positivist, post-modern, constructivist, interpretivist, connectivist, critical

[a]Grounded theory has elements of both methods and theory which are discussed in more detail below

Terminology and Levels of Qualitative Analysis

The term "qualitative research" is used in a variety of ways that are not equivalent, a fact that is particularly confusing to novice researchers. In fact, the terms method, methodology, tradition, framework, and paradigm are not applied consistently from one author to another.

At one level, the discussion of qualitative research focuses on the philosophy and worldview of the researcher and research community, often under the topic of epistemology and ontology. Such discussions applied to qualitative research relate to beliefs about the nature of knowledge and truth statements; the approaches that are brought to interpretation of empirical data; and the relative importance of social equity and change in research purposes. Intense debates arising in the 1980s, commonly referred to as the "paradigm wars," and continuing into the present, focus on epistemological issues, describing qualitative research by such terms as post-positivist, post-modern, constructivist, interpretivist, or critical.

At another level, the qualitative label applies to what may be called methodological strategies or traditions typically associated with research design, such as phenomenology, grounded theory, qualitative case study, narrative research, or ethnography. At a more pragmatic level, the qualitative descriptor is applied to particular methods of collecting and analyzing data, such as interviews, observation, thematic coding, or narrative analysis.

This difference in levels in qualitative research is summarized in Table 15.1. The table generally provides the terminology as we are using it in this chapter, with the recognition that other authors use different classification schemes. As we will show, the boundaries between some of these levels and the overlapping use of specific terms is actually more complex than a simplified table can show.

Qualitative Versus Quantitative Research: A Slippery Divide

In practice, qualitative research is not neatly bounded, nor is there a clear dichotomy between qualitative and quantitative (Ercikan & Roth, 2006). While the paradigm wars between those strongly advocating differing research traditions suggested the incompatibility of quantitative and qualitative approaches, literature in the past decade appears to increasingly acknowledge the artificiality of the divide. Twining (2010) suggests that the degree to which quantitative and qualitative approaches are considered complementary is dependent on the level at which one is looking. Some vocal proponents of the qualitative tradition such as Denzin and Lincoln (2008) continue to champion the need for a highly distinct qualitative discipline essential to the advancement of a critical focus and in recognition of the subjectivity of language and meaning. Yet they acknowledge that at the level of practice, qualitative researchers may use statistical methods or alternatively, approaches that are more literary than systematic.

Symonds and Gorard (2010) show that there is no one-to-one correspondence between types of data collection and analysis to the qualitative or quantitative paradigms, while all methods have inherent strengths and weaknesses in terms of validity. In any given research study, qualitative methods and strategies may be mixed and matched to meet the demands of the research setting, the research questions of interest, the personal characteristics and history of the individual researchers, and the accepted norms of a scholarly community (Bryman, 2008; Greene, 2008; Haggis, 2008; Maxwell, 2010; Willis, 2008). The real-world complexity of social research practice eludes simple classification schemes or tightly bounded definitions for qualitative research. As Gorard and Smith (2006) note, "qualitative or quantitative represents only one, perhaps not very useful, way of classifying methods" (p. 61), yet it remains a currently accepted way to examine as well as teach differing research approaches.

The Tradition of Qualitative Research in Educational Studies and ECT

The expansion of qualitative approaches has long historical roots that precede the formalization of ECT as a scholarly discipline (Denzin & Lincoln, 2008; Fielding, 2005). Initial practices from the early 1900s of field studies in anthropology and sociology were increasingly incorporated into a larger research tradition labeled "qualitative," promoting the expansion of more naturalistic, interpretive, and critical research methods. Linking social sciences and the humanities and following a post-positivist critique of the rational, technical and scientific paradigm of progress, new views of research were explored that promoted pluralism, emergence, deconstruction, contextualism, and criticism as themes of inquiry beginning in the 1960s (Solomon, 2000).

The outcome of these expanded views of research within education was a more nuanced examination of teaching, learning, organizational structures, and change along with expanded tools and methods for research (Willis, 2008). In reviewing the history of qualitative approaches, Denzin and Lincoln (2008) note that each stage in the development of qualitative research has been additive in terms of designs and methods. This has led to an "embarrassment of choices" (p. 27) for qualitative researchers and continuing debate about the purposes and processes of social research. Further, they indicate that qualitative traditions continue to vary nationally and culturally, pointing to diverse strands such as:

> the British tradition and its presence in other national contexts; the American pragmatic, naturalistic, and interpretive traditions in sociology, anthropology, communications, and education; the German and French phenomenological, hermeneutic, semiotic, Marxist, structural and post-structural perspectives; feminist studies, African American studies, Latino studies, queer studies, studies of indigenous and aboriginal cultures. The politics of qualitative research creates a tension that informs each of these traditions. (p. 13)

Usage Studies of Qualitative Methods in ECT Scholarship

The diversity of approaches and tensions among qualitative traditions is equally applicable to ECT and, as this review will suggest, not all qualitative methods and methodologies are equally represented. Despite active exploration of new qualitative approaches in the past decade, quantitative studies appear to continue to predominate in major ECT journals, particularly in the USA (Axtell, Chaffing, Aberasturi, Paone, & Maddux, 2007; Hrastinski & Keller, 2007). In a survey of articles from a single journal covering 2006–2008, the researchers found 58 % of the articles using descriptive research designs, including qualitative studies as well as case studies, developmental research, formative evaluation, observation, and surveys; an earlier study of articles prior to 2001 showed a predominance of experimental designs (Ross, Morrison, & Lowther, 2010). Using a different classification scheme including a focus on methods, Hew, Kale, and Kim (2007) found that qualitative data collection methods were common in published empirical research articles, with 94 including interviews, 82 observation, and 121 content analyses out of 340 articles in three ECT journals from 2000 to 2004.

Randolph, Julnes, and Sutinen (2009) in a content review of computer education journal articles, noted that North American authors were less likely to publish qualitative research studies than those in Europe and the Middle East in both computer education and other educational fields. In a similar finding resulting from a study of ECT journals and

collaborative learning (CSCL), and *computer-mediated discourse analysis* (CMD/CMDA) as well as in gamer interactions (De Wever, Schellens, Valcke, & Van Keer, 2006; Jeong & Hmelo-Silver, 2010). While existing studies have focused on human-to-human dialogue, an emerging area is analysis of conversation with non-animate agent technologies in support of learning (see this volume, Chap. 20).

From Live Conversations to Online Discourse

Historically, naturally occurring talk was one form of collecting data in field observational studies such as anthropology and sociology (Moerman, 1988), continuing into the present with some recent suggestions for using field notes to record the talk of students in teacher action research (Dana & Yendol-Hoppey, 2009). Focus on conversation was spurred by audiovisual and later digital methods of capturing talk in detail, with intensified focus on theory and methods of analysis since the late 1990s (Evers, 2011; Hammersley, 2008; Rostvall & West, 2005).

With the growth of digital communications for human messaging, discourse analysis began to be applied to electronic discussions. Although there is a recognition that face-to-face and online conversations differ in many ways, the analysis of either follows similar steps once spoken conversations have been converted to text (Davidson, 2009; Hammersley, 2010; Rostvall & West, 2005); computer and online discussions have the advantage of not requiring transcription.

Methods in Analyzing Discourse

In *conversation analysis*, transcripts are examined for evidence of the procedures by which speakers produce utterances and make mutual meaning of ordinary talk, with particular attention to turn taking and sequences of action (Wooffitt, 2005). In all forms of conversational *discourse analysis*, content is "chunked" into meaningful units which may be counted and analyzed statistically or classified thematically in relation to a study's purpose and research questions (Gee, 2011). As Herring (2004a) notes, using discourse analysis methods requires precision and understanding of its techniques, with attention to conventions and limitations.

> As with other forms of content analysis, the CMDA researcher must meet certain basic requirements in order to conduct a successful (i.e., valid, coherent, convincing) analysis. She must pose a research question that is in principle answerable. She must select methods that address the research question, and apply them to a sufficient and appropriate corpus of data. If a "coding and counting" approach is taken, she must operationalize the phenomena to be coded, create coding categories, and establish their reliability, for example, by getting multiple raters to agree on how they should be applied to a sample of the data. If statistical methods of analysis are to be used, appropriate statistical tests must be identified and applied. Finally, the findings must be interpreted responsibly and in relation to the original research question. (p. 343)

Applications in ECT

Early studies using conversation and discourse analysis in ECT focused on face-to-face classroom student interaction while using computers (Dalton, Hannafin, & Hooper, 1989; Wegerif, Mercer, & Dawes, 1998). Classroom studies of interaction continue, particularly in science and mathematics education (Warwick, Mercer, Kershner, & Staarman, 2010). The importance of teacher–student and student–student interactions are key in several major recommended frameworks in the study of teaching and learning (Ball & Forzani, 2007; Hirumi, 2009; Rovai, 2007), providing a major impetus to discourse studies in natural classroom settings. Qualitative studies of communication have also been used in understanding team interaction and processes in design (Duncan, 2010; Games, 2010; Pan & Thompson, 2009).

Increasingly, many of the current ECT research studies come from examination of interaction in e-learning and online professional development (Clarke, 2009; Donnelly, 2010; Kim & Bateman, 2010; Ng'ambi, 2008; Soter et al., 2008; Zhang, Scardamalia, Lamon, Messina, & Reeve, 2007). While most studies of online discussion rely on methods of discourse analysis or procedures developed in CMC studies, Gibson (2009) applied classic concepts from conversation analysis in his study of an asynchronous postgraduate reading group.

Trends and Issues in Discourse Studies

A number of issues arise around qualitative discourse studies in ECT (Valcke & Martens, 2006). Discourse analysis, conversation analysis, and methods of CMC/CSCL/CMDA are covered by few introductory education or general social qualitative research methods textbooks, in which emphasis is on naturalistic field research and participant–researcher interaction such as interviews. As with interpretivist methodologies covered in the earlier part of this chapter, limited guidelines to help novice researchers may result in decreased or weak applications of discourse analysis in ECT studies. However, as conversation-based approaches grow in popularity, new textbooks are beginning to appear that may help beginners with differentiating the methods (e.g., Wertz et al., 2011).

While the focus within ECT has been primarily discourse analysis relating to discussion and language interaction for learning, finding appropriate theoretical and methodological frameworks can be challenging without a clear recognition of the variation among studies with the common label of discourse studies but very different purposes. The issues of methodology are confounded because *discourse analysis* is not congruent among scholarly disciplines. The term *discourse* is applicable to all aspects of human use of language

to communicate. Thus, the study of human language production ranges from a very specialized interpretation with statistical analysis of word usage, sequence, and context in linguistics to the study of policy "discourse" in public documents or candidate speeches in political science. Discourse study also emerges in the humanities in studying literature, often from a critical perspective. In more literary approaches to discourse studies, interpretivist approaches such as those in the previous section may predominate.

The diversity in approaches and lack of a common vocabulary for these studies presents a challenge to those in ECT attempting to apply conversation or discourse analysis without a strong background in the disciplines from which the methods emerged. Reflecting general concerns raised in the broader arena of discourse analysis, ECT studies may lack grounding in earlier research; fail to acknowledge emerging critiques and limitations; and be confounded by imprecise and overlapping terminology (Antaki, Billig, Edwards, & Potter, 2003; Hammersley, 2008). Each variant of discourse analysis has unique processes for transcription, coding, classification, interpretation, and validity (Herring, 2008). Silverman (2006) argued that lack of theory and over-reliance on general thematic analysis of talk in many studies results in weak common sense or normative reinterpretations in the results of poorly designed studies. Others have raised concerns relating to the relationship of communication patterns to effective learning and teaching, with critics urging increased attention to studies that go beyond description of interaction among social groups to more development of theory and use of frameworks related to learning (Dennen, 2008; Naidu & Järvelä, 2006; Spatariu, Quinn, & Hartley, 2007).

Beyond terminology and critiques of application, a number of challenges in such studies relate to discourse interactional process and shifting technologies (see this volume, Chap. 20). Many methodologists have urged greater attention to the differences in content and context between face-to-face and online interactions which might impact appropriate methods, but this remains an area for continued research and theoretical development (Greenhow, Robelia, & Hughes, 2009). The proliferation of studies of digital discourse practices and communities-in-action has been accompanied by exploration of new and more specific research techniques (Hmelo-Silver & Bromme, 2007; Park, 2007; Zemel, Xhafa, & Cakir, 2007). More than in face-to-face studies, concerns arise over ethics and privacy in studying online discussions (Bos et al., 2009; Eynon, Schroeder, & Fry, 2009; Kanuka & Anderson, 2007; Zimmer, 2010).

The Researcher as Practitioner

The ongoing concerns in qualitative research about the unequal relationship between researcher and researched, particularly in critical approaches (Denzin & Lincoln, 2008), promote methods that are more inclusive of participant voices, such as action research, participatory approaches, and collaborative research. While some methodologies such as design research (see this volume, Chap. 20) may be jointly initiated, the role of the researcher remains that of the expert. However, a number of proposals have urged greater teacher voice and empowerment in research, along with recognition of the methods of evaluation and practice, as providing needed context for theory and policy (Loughran, 2002). In particular, Tabachnick and Zeichner, 1999 has pointed to the role of self study as "sensitive to the social and personal complexities of the work," and its contribution to a "deep and critical look at practice and structure" (p. 11). In contrast to the traditions covered above focused on data collection and analysis, participatory researchers typically adopt procedures from the broad palette of social science methods but the emphasis here is on research purposes related to stakeholder involvement and shared understandings, as well as action oriented outcomes.

Cooperative inquiry (CI), a form of participatory research, is designed for institutions responsible for social transformation, a category that includes schools. CI has potential for a field like ECT, with its foundations in improving educational opportunities for learners and exploring new technologies for teaching and learning. The CI tradition has roots in such diverse areas as human–computer interaction, cooperative design, contextual inquiry, and activity theory (Druin, 2010). Although participatory research is a long-established research method, there are limited examples in ECT and therefore little recognition in earlier *Handbook* editions, with a single case study cited in the third edition in the chapter on change agentry (Beabout & Carr-Chellman, 2007). In schools, CI was initially spurred by calls for teacher research (Cochran-Smith & Lytle, 1990), but has gained traction with the push for evidence-based practice and effective professional development (Desimone, 2009; Groundwater-Smith & Mockler, 2009). However, CI is also relevant to workplace and adult learning (Yorks & Kasl, 2002), design studies (Druin, 2010), and instructional design (Morris & Hiebert, 2011).

Because cooperative inquiry is both a methodology and a method, the philosophy behind CI guides the way data are collected. Group members share the values of the endeavor and then, in concert, compile information and develop strategies for implementing solutions, gathering more data, and making adjustments to enactment. CI adds a humanistic quality to scientific inquiry by seeking the opinions of those who are truly experiencing the research questions. Qualitative approaches are often recommended because they fit with the flow of classroom routine and focus on context, process, and relationships in CI, but quantitative methods may also be applied (Dana & Yendol-Hoppey, 2009). Debates exist about the potential for rigor in collaborative inquiry studies (Hodgkinson & Rousseau, 2009; Kieser & Leiner, 2009; Newton & Burgess, 2008), but others have

noted that stakeholders are more likely to be aware of potential data sources as well as practitioner or stakeholder wisdom, and are thus able to exploit these in ways not possible by outsiders (Dana & Yendol-Hoppey, 2009).

Cooperative inquiry is an emergent process that contributes to the acquisition and creation of knowledge through strengthening trust and collaborative relationships among group members (Oates, 2002). It is designed to bridge the perspectives and approaches of diverse stakeholders through the phases of mutual inquiry across multiple iterations, cycling between action and reflection in an effort to "heal" their divergent points of view into a common solution (Ospina, El Hadidy, & Hofmann-Pinilla, 2008). The experience of CI requires coinvestigators to share how they react to particular situations and sensitive topics. As such, coinvestigators must build a trustworthy rapport. Participants often find their research creates empathetic connections through previously unrecognized perspectives (Kovari et al., 2004). Some have suggested the process is more applicable to formative evaluation in applied educational settings because of its openness to nontraditional data sources and iterative nature, but purposes may vary.

While some researchers may regard these experiences as insignificant and not objective, Reason and Heron (2004) indicate researchers can "develop their attention so they can look at themselves—their way of being, their intuitions and imaginings, their beliefs and actions—critically and in this way improve the quality of their claims to four-fold knowing" (p. 43). Reason and Heron stressed that such "critical subjectivity" adds strength to cooperative inquiry, allowing coinvestigators to be objective without having to disregard their personal experiences. Instead, coinvestigators use their personal knowledge and the experiences they have shared with others who are involved in the same task to gain an authentic perspective on a particular issue (Paulus, Woodside, & Ziegler, 2010).

For educators and education researchers, collaborative inquiry can be a powerful means to develop cultural competencies and the awareness necessary to function effectively in a variety of educational and political contexts (Kasl & Yorks, 2010; Seidl, 2007). The CI process is particularly useful for ECT because it allows for the merging of perspectives of diverse stakeholders at every stage of using technology in addressing a mutually agreed-upon problem.

Application in ECT

The ever-changing relationship between education and technology in schools is well suited to exploration through CI. Indeed, researchers have noted that a complex or "hypertextual" learning environment as found with increasing technological innovation in education demands user-centered approaches since structures of information are relatively unfixed and are intended to be suited to a particular user's needs (McKnight, Dillon, & Richardson, 1996). However, this focus on interactivity and personalization accompanied by the need to account for rapid technological change results in a recurring complication in determining the effects of ECT on a learning environment. In addition to personal differences, the determination of effect involves capturing the access, skill, structural, and political factors as well as the needs and motivational perspectives across roles and generations, potentially including adult and youth learners, parents, school librarians, educators, technology personnel, administrators, and community members (Hill, Wiley, & Nelson, 2004; Mardis, Hoffman, & Marshall, 2008). The CI method can help participants to articulate learning experiences and requirements in difficult-to-study environments in educational contexts, such as informal education and professional development (Lom & Sullenger, 2011).

In response to this tradition's documented benefits, researchers have used CI to ensure that the variations in interpretation, development need, and use are explicitly accounted for in design of ECT learning experiences, two of which are detailed here. The first example reflects how CI has been used in the development of distance learning platforms that meet the needs of a diverse range of learners and faculty (Palaigeorgiou, Triantafyllakos, & Tsinakos, 2011). With the use of participatory design organized as a Cooperative Inquiry, undergraduate students from two Informatics Departments worked together to describe a learning platform which would accommodate their learning differences and needs, build on their new Web 2.0 tool preferences, and could be seamlessly situated in their daily routines. Students came up with 773 different learning needs that developers had not considered. Through the CI process, students were revealed to have refined views of successful elements of online learning applications. Their findings not only paralleled previous instantiations of online learning platforms, in which course content and contextualization of knowledge were top priorities, but included essential complements that designers otherwise neglected such as various aspects of networking, participation, content distribution, and collaboration mediated through Web 2.0 technologies.

CI has also been applied to the design of interactive activities to achieve learner engagement and effective learning outcomes for a variety of educational purposes (Brown et al., 1989; Druin, 2005; Triantafyllakos, Palaigeorgiou, & Tsoukalas, 2008). The research team headed by Allison Druin at the University of Maryland (UMD) Human Computer Interaction Lab (HCIL) recognized that children today have unique experiences and are savvy about technology in ways that are often unrepresented in design. In response, the UMD HCIL team now includes children in cooperative inquiries. They codesign methods to enable adults and children to share their

ideas through brainstorming, use a variety of feedback mechanisms, and provide input on creative change in prototype designs for the International Children's Digital Library (ICDL) a digital library of children's literature from all over the world (http://childrenslibrary.org). A group of six children, ages 7–11, work regularly with the adults in the HCIL to develop and evaluate computer interface technologies that support searching, browsing, reading, and sharing books in electronic form. Both the ICDL's CI approach and its interface have been the subject of numerous studies and commendations (Druin, 2010).

Trends and Issues in Practitioner-Focused Research

The increasing pace of change in ECT is driven, in part, by the need to serve greater numbers of learners and, in many instances, stakeholders through an increasingly multifaceted formal and informal learning complex. Trends in student types can be seen in the growing number of adult learners seeking career re-tooling or advanced education (U.S. Department of Education National Center for Education Statistics, 2007); the increased enrollment in virtual schools (Watson, Murin, Vashaw, Gemin, & Rapp, 2010); and an emphasis on twenty-first century skills in all curriculum areas (Trilling & Fadel, 2009). Likewise, the partnerships that result in charter schools, magnet programs, and alternative programs (Epstein, 2007; Epstein & Sanders, 2006) as well as the globalization of learning experiences bring a greater number of stakeholders to the ECT table (Reimers, 2009) at a time when technology's alienating effects are being seen and felt in education (Turkle, 2011). The use of CI has increased in other applied fields, including community development, public health, social work, nursing, and special education (e.g., Guha, Druin, & Fails, 2010; Ospina, El Hadidy, & Hofmann-Pinilla, 2008). This increase suggests that the blending of qualitative methods with participatory methods is not just becoming more accepted, but may be an essential tool for knowledge-building on the role of ECT in learning environments and meaningful contribution to practice to incorporate diverse perspectives.

Qualitative Research on Groups: Case Study and Beyond

Any qualitative study of groups, be they work teams, classrooms, schools, regional populations, or other human communities, may be addressed through case study research. While not all researchers will agree with broad usages of the term, at a practical level almost any study of a human group could be seen as a case study requiring a bounding by population, locale, timeframe, and/or process. As a term, *case study* is widely used and has long traditions, with some referring to this as a methodology or tradition while others suggest it is the nature of what is studied (Stake, 2008; VanWynsberghe & Khan, 2007). Although case study has also been used to describe detailed studies of a single person (a case) as an exemplar of some larger group (i.e., Luehmann, 2008), this review discusses the concept of case study in relation to empirical research on groups, particularly using qualitative methods.

Case study is centered on systematic empirical research employing multiple methods to generate rich descriptions to understand bounded complex social systems or processes, whether inductive or deductive in design (Stake, 2008; Yin, 2008). Qualitative data collection and analysis often predominate in case studies, but may be accompanied by surveys or other quantitative methods. Such mixed methods studies are lauded because of the ability to reveal a level of detail about content, context, and process that is concealed in purely quantitative studies (Buchanan & Bryman, 2007; Horn, 2008; Onwuegbuzie, Johnson, & Collins, 2009; Onwuegbuzie & Leech, 2004; Symonds & Gorard, 2010). In fact, many argue that the qualitative–quantitative divide is artificial and limiting when applied to the complexities of groups, proposing that methods should be adopted from the range of possibilities on a pragmatic basis to fit the research situation and purpose (Yin, 2008).

Methodologists regularly cited as guiding case study research design include Yin (2008, 2011), Creswell (2007), and in education, Merriam (1998, 2009). Stake (2006, 2008, 2010) is influential in his development of qualitative and multiple case study methodologies.

Application of Case Study in ECT

There are many case study types, including descriptive, exploratory, explanatory, instrumental, critical, longitudinal, deviant, extreme, or intrinsic, with competing paradigms or frameworks in which this research is couched such as interpretive, positivist, constructionist, or critical (VanWynsberghe & Khan, 2007). Qualitative case study in ECT may apply to:

- In-depth descriptions of instructional design projects (Bennett, 2010; Khan, 2008; Larson & Lockee, 2009).
- More evaluative or applied approaches including action research focused on what works (Girvan & Savage, 2010; Kim & Hannafin, 2010; Whipp & Lorentz, 2009).
- Descriptive studies providing detail on a particular process or phenomena (Ghislandi, Calidoni, Falcinelli, & Scurati, 2008; Roytek, 2010).
- Studies examining change processes and effects related to technology innovation in education (Juuti, Lavonen,

Table 15.2 Types of qualitative research

Research focus	Types of qualitative research[a]	Role of researcher
Individual and perceptions	Phenomenology Narrative Biography	Typically external, privileges the individual(s) being studied but may be empathetic
	Hermeneutic phenomenology Autoethnograpy Autobiography	Insider or shared perspective
Social interaction and group behavior	Discourse analysis Conversation analysis Computer-mediated discourse analysis	Strongly objective examination of language process and structure
	Cooperative inquiry Participative action research Practitioner action research	Insider view of participants, shared inquiry
	Ethnography Virtual ethnography Case study[a]	Objective approach common although researcher may be an insider to the group studied
Behavioral representations (Human "artifacts")	Qualitative content analysis Visual ethnography	Objective observer, often retrospective

[a]Case studies are commonly seen as intensive study of a group or groups, but the broader definition sometimes used includes intensive study of a single person who typifies a group or phenomenon

conference papers in New Zealand beginning in 1994 (Williamson, Nodder, & Baker, 2001), half were qualitative. Qualitative research can be seen as an important although nondominant element in ECT studies with distinct regional variations.

No formal analytical studies have been published to date reviewing the prevalence of qualitative methodological traditions such as case study, ethnography, phenomenology, etc., in studies published within ECT journals. In the absence of any quantitative basis for selection of studies, this article provides a snapshot approach in terms of sampling to show a range of high quality and emerging qualitative research in ECT.

A Classification of Qualitative Methodologies

In the following sections of this chapter, we explore some of the methodologies in greater depth. We offer a framework for grouping qualitative methodologies that is unique to this chapter, but we think offers one way of looking at qualitative studies that helps researchers see relationships of methods and methodology, as well as the centrality of purpose in research design. Table 15.2 lays out the framework we have used in organizing our discussion. Some of these methodologies are reviewed in more depth, reflecting their more common use in ECT or what appears to be an emerging trend of inquiry.

Interpreting Individual Experience

The study of experience has led researchers to seek out ways to describe an individual's interpretation of a certain event or phenomenon, often from the participant's point of view. In the *interpretive tradition* in ECT research, understanding individual experience is as paramount as learning. While learning is socially and contextually mediated, it is ultimately an individual endeavor (Barg, Gollwitzer, & Oettingen, 2010; Brown, Collins, & Duguid, 1989).

Interpretivistic approaches offer personal, often imperfect descriptions of human cognition (Bengston & Marshik, 2007), behavior (Sutin & Gillath, 2009), emotion (Frie, 2010), or interrelations (Schönpflug, 2008). Perception therefore becomes as important as, if not more important than, an agreed-upon reality. As demonstrated by the Pygmalion effect (Rosenthal & Jacobson, 1992), the way people interpret the world often affects the way they interact with and ultimately act on it and other individuals. Thus, interpretivistic methods seek to understand the individual's interpretation of experience without imposing the researcher's own interpretations of such events. Researchers acknowledge potential influence on interpreting others' interpretation of their own experience by bracketing their own subjectivities (Tufford & Newman, 2010), or by embracing them through a hermeneutical (Van Manen, 1995) or autoethnographical rendering of accounts.

Interpretivistic research tends to describe experience from three different perspectives: (1) the individual, (2) the researcher, or (3) the experience itself. These are each discussed in more detail.

Research Focus on the Individual

The individual may best be understood through *narrative analysis* (Clandinin, 2007) or *phenomenographic* methods (Marton & Booth, 1997).

Narrative analysis methods recreate the participant's view of experience by piecing together snippets of oral or written accounts of experience into stories of lived experience (Clandinin, Pushor, & Orr, 2007), portraying events in the words of the participant wherever possible. The product of narrative analysis is a story that may be expressed as a case, a life history, or a biography constructed from the data collected. These narratives are dependent on the audience to which one is telling the event (Langellier, 2003) and the speaker's relationships to this audience (Cortazzi, 1993).

Narratives may even change with the proximity to or distance from the occurrence of the event (Gergen, 2004). Clandinin et al. (2007) proposed that narrative inquiry has been employed in educational contexts to better understand temporal conditions, social interactions, and spatial influences. Recently, researchers have used narrative analysis to understand the second-grade experience of English-language learners (Brown, 2009), the differing accounts of online learners (Coryell & Clark, 2009), educational policy (Craig, 2009), and international influences on learning (Liang & Lin, 2008).

While also attempting to demonstrate individual interpretation of events, *phenomenographical approaches* seek to understand the breadth of variety of human experiences surrounding an event, process, entity, or effect (Marton & Booth, 1997). That is, these studies' findings explore the many different ways one might experience and interpret the event. Phenomenographical researchers emphasize that they do not describe the primary experience itself, but instead seek to illuminate a second order account (Bowden, 2005). Because the focus of phenomenography is on variation of experience, most phenomenographic studies involve a larger number of participants than many qualitative studies. Studies often include at least 15 participants to get sufficient variation (Trigwell, 2006), although it is possible for a single participant to experience a range of the possible variations (Åkerlind, 2008). Recent educational studies have used phenomenography to understand issues surrounding higher education, such as academics' conception of teaching and learning (Åkerlind, 2007); graduate students' understanding of research (Bruce, Stoodley, & Pham, 2009); general graduate student attributes (Barrie, 2006); professors' perception of the use of e-learning in the classroom (Gonzalez, 2010); and how individuals interact with technological artifacts (Collier-Reed, Case, & Linder, 2009).

Sharing Voices: Researcher, Participants, and Readers

Some interpretivist methods recognize that it is impossible to separate the researcher's own biases from the retelling of another's accounts. Researchers who adhere to this philosophy seek to include their own voices as part of the interpretation of events, often through a *hermeneutic phenomenology* (Van Manen, 1995) or even by describing themselves as learners (Fox, 2008).

Autoethnographic accounts offer a unique window into experience because the researcher is not constrained to be either a researcher or a participant, but rather can embrace that duality, offering greater reflexivity than is possible in other methods that only stimulate reflexivity through secondary means such as interviews and surveys (Anderson, 2006). The work by Magdalene Lampert (2001) to study student thinking in her own fifth-grade mathematics classroom provides a valuable example of the detail and insight that might be gained through autoethnographies. Autoethnographic methods have been employed to understand the role of language in a child's education (Souto-Manning, 2006); to examine the quality of software (McBride, 2008); and to reflect on how to teach qualitative research methods (Humphreys, 2006).

The Personal Experience

Rather than a focus on the individual or the researcher, *phenomenology* and an *analysis of narratives* provide ways for researchers to attempt to describe the essence of an experience itself.

By focusing on the lived experience of an individual (Van Manen, 1995), *phenomenology* seeks to enable readers to better understand and feel what the participant may have felt in the way s/he may have felt it. Whereas phenomenographic methods seek variation (Marton & Booth, 1997), phenomenology looks for commonalities among participants that help describe the shared or lived experience. "Phenomenological analysis becomes a tool for investigating what occurs outside awareness" (Schwartzman, 2007, p. 210). In order to draw out this awareness, researchers conduct in-depth, searching interviews in hopes of making participants aware of that which occurred but they may not have explicitly noticed previously (Seidman, 1998). Recent phenomenological research in education has investigated student attitudes in learning to design software (Schwartzman, 2007); the way a teacher engaged students' authentic learning contexts (Miller, Veletsianos, & Doering, 2008); student perceptions of academic success and failure (Forsyth, Story, Kelley, & McMillan, 2009); perceptions of students with disabilities in higher education (Denhart, 2008); and participants in social networks (Corwin & Cintrón, 2011).

The goal of *analysis of narrative* research is to interpret story elements or structure as opposed to that of narrative analysis, which is to produce rich narratives in the participants' own voices (Crawford, Brown, & Majomi, 2008). An analysis of narratives might present a series of themes, categories, and subcategories, possibly resulting in quantitative counts or statistical comparisons (Møller, Theuns, Erstad, & Bernheim, 2008). Langellier (2003) suggested that an analysis of narratives allows the researcher to focus not only on the content of a participant's story, but on the way it is told. This *performativity* reveals important characteristics of the participant as well as his/her assumptions about the story's audience and what is important for them to hear. Thus, researchers using an analysis of narratives may seek differing accounts of the same event (Pacheco, 2010). Through an

analysis of narratives, researchers have been able to demonstrate the importance of education as an exit strategy (Crawford et al., 2008); the effect of policy on English-language learners' academic achievement (Pacheco, 2010); and social change over a lifetime (Sliwa, 2009).

Issues and Trends in Interpretivist Approaches

Despite benefits including close attention to participant perspective and usefulness in approaching a range of research questions, many issues exist in interpretivist work in general and within ECT more specifically. First, despite well-established guidelines by experts in narrative analysis (Clandinin, 2007), phenomenology (Moustakas, 1994; Van Manen, 1995), autoethnography (Ellis & Bochner, 2000), and analysis of narratives (Rymes, 2001), there does not appear to be any continuity amongst the specific procedures researchers follow to employ such methods. Phenomenographic research stands in stark contrast, as most such research relies on methods detailed by Marton and Booth (1997) or other key phenomenographers.

This lack of continuity in many of the described approaches makes it challenging to understand exactly how to apply interpretivist methods to analyze and present research. This problem may further complicate the utility of such research because "research on learning…demonstrates that novices and advanced beginners in any craft…rely heavily on rule-based structures to learn" (Tracy, 2010, p. 838). Thus, it is less likely that qualitative researchers in ECT will engage in interpretivist research, instead applying more well-outlined methods or generic *open-coding* schemes (e.g., Corbin & Strauss, 2008; Spradley, 1980). Exacerbating the problem is that many of these approaches are often used in tandem with each other in the same study without the researchers' acknowledging their potentially conflicting assumptions and processes. While narrative and autoethnographic traditions are commonly employed together successfully (Pacheco, 2010), open-coding and phenomenology are combined under the guise of *case study* along with multiple other qualitative approaches (see below). It is interesting to note that many of the interpretive approaches addressed in this section share the customary method of collecting data, semi-structured interviews, to make them appear more compatible. Though the interview is one of the qualitative researcher's most important tools, relying on it as the sole tool for data collection has inherent limitations and weakens the researcher's ability to strengthen credibility through triangulation (Denzin & Lincoln, 2003; Kvale & Brinkmann, 2009).

Of lesser methodological importance, but of note nonetheless, is the fact that interpretivistic work seems to be gaining ground in Europe (Hallett, 2010; Ingerman, Linder, & Marshall, 2009; Virtanen & Lindblom-Ylänne, 2010), Asia (Yang, 2008), Oceania (Stein, Shephard, & Harris, 2011), Latin America (Gonzalez, 2010), Africa (Collier-Reed et al., 2009) and Canada (Fox, 2008; Lyle, 2009) but is underrepresented in ECT research in North American contexts (Cilesiz, 2011). By contrast, qualitative research published in North American journals tends to be heavily centered on open coding techniques and case studies.

Communication and the Social Group

The study of naturally occurring conversation, face-to-face or online dialogue not mediated by the researcher, is typically initiated using qualitative methods but final analysis may be qualitative or quantitative. Growing interest in discourse practices within ECT research has been propelled by shifting paradigms such as constructivism, situated learning, and communities of practice that emphasize the social nature of learning. Also impacting expansion in use are communication technology developments such as the expansion of ubiquitous social media and distance learning (Maddux & Johnson, 2009). Recent thinking in *connectivism* premised on the networking of knowledge is promoting a renewed look at the nature of discourse (Ravenscroft, 2011).

Types and Processes of Qualitative Analyses of Language Interactions

The primary approaches that underlie discourse-related research were developed in other disciplines including communications, linguistics, and psychology. Language-focused forms of content analysis are most commonly identified by the process of analysis rather than by a single overarching methodological name (Hammersley, 2003; Leech & Onwuegbuzie, 2008). ECT journal articles often refer to empirical research studies of discussion as *discourse analysis*, whether at the level of meaning or centered on group communication interactions. However, discourse analysis as initially developed in linguistics is a narrower, highly formalized approach applied to the study of meaning and context of words (Hammersley, 2008). The related study of formal conversation procedures known as *conversation analysis* is another way of understanding talk-in-action growing out of the larger research framework of *ethnomethodology* (Hammersley, 2003, 2008). Research purposes may emphasize understanding of content, structure, interaction patterns, participation, or social presence (Herring, 2004b), with authority and power being of particular interest in critical theory approaches such as *critical discourse analysis* (Wodak & Meyer, 2009).

Analysis of online discourse occurs in the areas of *computer-mediated communication* (CMC), *computer-supported*

Aksela, & Meisalo, 2009; Lawson & Comber, 2010; Wong, Li, Choi, & Lee, 2008).
- Knowledge building studies aimed at generating or testing theory (Arnold & Paulus, 2010; Hong & Jung, 2011; Yanchar, South, Williams, Allen, & Wilson, 2010).
- Critical studies aimed at critique and reform (Arshad-Ayaz, 2010; Lee, 2010).

The popularity of case study research in ECT has been attributed to limited resources leading to small-scale (sometimes called small-n) studies and the presence of prescriptive guidelines in methods books and articles that make the approach more understandable to novice researchers. Case study, particularly as presented by Yin (2008) and Stake (2006), tends to promote a positivist or pragmatic philosophy that aligns with prominent views of ECT as a science and the field's grounding in the technical (Twining, 2010; Willis, 2008). In addition, the exploratory use of case study research provides a way to examine situations that are new or relatively unknown which is pertinent to examining the factors and processes of adoption and use of emerging technologies in teaching and learning.

Many Methods for Studying Groups

While case study may be a dominant form in ECT research on groups, many methodologies may be applied that are purely qualitative in method or are mixed methods with a major qualitative component. Some of these are discussed in detail in other chapters within this *Handbook* so are not reviewed here. However, two of the better known qualitative traditions, *ethnography* and *grounded theory*, should be mentioned although neither has been extensively applied in ECT studies. Both have deep histories of application in education and beyond, are described in multiple books and articles on methods and methodology, and have been the source of heated debates among proponents that have served to highlight strengths, weaknesses and variants in use (Hammersley, 2008; Lincoln, 2010).

Ethnography as a Qualitative Approach

Ethnography with its focus on culture has an associated set of methods and field procedures, culture-centered definitions for what constitutes a group, and a theoretical framework within which results are interpreted emerging from a disciplinary paradigm in anthropology (Hammersley, 2006; Hammersley & Atkinson, 2007; Wolcott, 2008). Traditional ethnographic studies were conducted over long periods primarily through participant observation, supplemented by additional methods of data collection including interviews with key informants, questionnaires, and examination of material artifacts and documents. The term "ethnography" is also used as the name of the resulting research report in which the emphasis is on "thick description" as delineated by Geertz (1973) and holistic cultural interpretation.

More recently, ethnography has been used to classify qualitative field studies in many disciplines that result in rich descriptions. Research in which participant observation over time is used in data collection is sometimes referred to as applying ethnographic methods although these may lack the grounding in culture, prolonged study times, and the goal of holistic interpretation. Wolcott (2001) argued against terming such studies as ethnography, proposing these are merely educational research drawing on "ethnographic approaches in doing descriptive studies" (p. 167).

Recent examples of ethnography in ECT studies include research on faculty who teach online (Yoshimura, 2008), children's experiences in educational gaming (Dodge et al., 2008), use of whiteboards in classrooms (Reedy, 2008), and technology in college classrooms (Hemmi, Bayne, & Land, 2009; Lohnes & Kinzer, 2007). Of particular relevance to ECT research are two more recent variants of ethnography: *virtual ethnography* with a focus on populations in digital environments, particularly online games and virtual worlds (Garcia, Standlee, Bechkoff, & Cui, 2009; Kozinets, 2010; Schuck, Aubusson, & Kearney, 2010); and *design ethnography* as a way to understand impacts of instructional design (Barab, Thomas, Dodge, Squire, & Newell, 2004; Blomberg, Burrell, & Guest, 2003; Bossen, 2002).

Grounded Theory: More than Methodology

In contrast to ethnography, *grounded theory* is a qualitative approach that does not presuppose that the study participants are groups or individual; as such it does not easily fit into the classification scheme used in this chapter.

In grounded theory, the researcher is encouraged to approach data with an open mind not limited by prior conceptions, take a reflexive stance in relation to participant interaction, examine data to saturation to ensure full coverage and trustworthiness, and from the analysis, extrapolate commonalities that lead to theory development (Bryant & Charmaz, 2007; Charmaz, 2006; Corbin & Strauss, 2008; Glaser & Strauss, 1967; Mills, Bonner, & Francis, 2006). Grounded theory may be used with multiple forms of data collection. Unlike the holistic approach of ethnography, analytical techniques emphasize deconstruction through formal mechanisms of coding, then reconstruction of concepts and themes that will lead to building theory or frameworks (Shah & Corley, 2006; Urquhart, 2012). While early development of grounded theory was a response to calls for a more empirical process of qualitative research with systematized and formal methods to parallel positivist research approaches (Glaser, 2002), more recently grounded theory has been advocated within an interpretivist, constructionist, or critical

approach (Charmaz, 2006; Mills et al., 2006; Mills, Chapman, Bonner, & Francis, 2007).

Examples of grounded theory application in ECT research include studies of the instructional design process (Ertmer et al., 2008), cross-cultural distance learning (Rogers, Graham, & Mayes, 2007), learning in virtual worlds (Oliver & Carr, 2009), educational game environments (Dickey, 2011), and adoption of wireless on a university campus (Vuojärvi, Isomäki, & Hynes, 2010).

As was the case with ethnography, the analytic methods of grounded theory have been applied within multiple research studies in which the overall methodology and epistemological framing is not present. In a number of cases, grounded theory is merged with other frameworks, including cultural–historical activity theory (Seaman, 2008) or case study in research on virtual networks in Peru (Díaz Andrade, 2009).

In particular, the partial adoption of grounded theory as method is found in research that Merriam (2009) classifies as a *general qualitative study*, which uses open coding and thematic analysis, commonly referred to as the constant comparative method, in the absence of grounding in a more encompassing methodological framework. She notes that general qualitative studies are common in applied fields such as education, in which such research may examine bounded groups such as classrooms or schools, or specific populations such as teachers or learners.

Some critics have proposed that the widespread use of the general qualitative study identified by Merriam (2009) is more a result of under-specification of method and approach in case study rather than an ideal type in social research (Backman & Kyngäs, 1999; Caelli, Ray, & Mill, 2003; Urquhart, 2012). This is an issue in ECT research, where an analysis of empirical research articles in journals by Randolph (2008) found that research procedures were "grossly underreported" (p. 68). Further, Leech and Ongwuegbuzie (2007, 2011) note the unfamiliarity of education researchers with methods of qualitative data analysis other than the constant comparative method used in general qualitative studies. They also point to lack of coverage of varied qualitative data analysis techniques in textbooks as contributing to the limited use of other data analysis methods even when it is appropriate or would strengthen conclusions. Their recommendation is that researchers consider using at least two if not more data analysis methods to triangulate results.

Issues and Trends in Studying Groups

Many commonly applied methods and methodologies in qualitative research on groups are not new but arise from long-standing traditions in social and educational research (Travers, 2009), whether case studies, ethnographies, grounded theory studies or the many others described in this *Handbook*. While the volume of the arguments over appropriate research techniques has waxed and waned erratically over time, the critiques have also opened doors to refinement, convergence, and expansion of qualitative research options as well as new insights on the context, processes and dynamics of human groups.

A number of the challenges relevant to studying groups are also those that are foundational to the challenges of qualitative research as a whole, and are parallel to issues reported in earlier sections of this chapter. These include issues of level of analysis, relationship of methods, methodology and purpose in research design, matching analysis to purpose, and the validation and inference from results (Anfara & Mertz, 2006; Leech & Onwuegbuzie, 2011; Onwuegbuzie & Leech, 2005). While each methodology may use overlapping methods of data collection and analysis, such as interview and observations or formal processes of categorizing data, methodologies vary in other ways including appropriate design of questions, the prescribed level of researcher intervention in the interaction with the participant, and the assumptions about the concreteness of responses and observations in relation to some social or physical reality (e.g., whether a conversation is unique, situated, and emergent or is direct evidence of a person's culture, identity, cognitive or emotional self). Further, methods and methodologies may be merged without adequate attention to impacts on validity or potential contradictions arising from disparate data sources (Bryman, 2007; Morse, 2010). The multiple dimensions of variability elude simple categorization and present challenges to researchers using qualitative methods and methodologies.

The requirement for parallel structuring of theory, purpose, methodology and methods in research is commonly referred to as *coherence* (Kline, 2008; Tracy, 2010). Such coherence may be lacking in research design among novice researchers who initially see methods as a technical issue or normative process, thus following prescriptive guidelines in the absence of a more refined understanding of a particular qualitative method's history and limitations (Walford, 2001). Yet even experienced researchers can run into such problems when approaching a new research technique. Such issues may be most pronounced in case study in which creative repurposing of methods and traditions to best answer research questions posed is both a strength and weakness (Taber, 2010). However, methodological "borrowing" can also be a concern when such traditions as ethnography or grounded theory are used in new ways and outside the disciplinary paradigms in which they developed.

Conclusions

This chapter's review of qualitative traditions and methods reveals an increasing range of possibilities for ECT researchers along with a multitude of qualitative studies examining questions of significance to the discipline. The diversity

of theoretical perspectives, methods, and methodologies provide support for Denzin and Lincoln's (2008) perception that qualitative approaches continue to proliferate. Some methods are just beginning to gain prominence, while new methods are emerging that have yet to make a major impacts on the field (e.g., Hesse-Biber & Leavy, 2008). Such advancements hold promise for expanding research designs useful in approaching the complexity of context and content in instruction, technology, and education.

In this final section of the paper, we will take a look at some of the broader prospects and concerns impacting qualitative research in ECT.

Opening New Vistas in ECT Qualitative Research

Perhaps most exciting in terms of new vistas from the perspective of ECT are the repurposing of the traditional methods of qualitative studies in the context of new digital technologies. Not only do new technologies provide additional tools for data collection and analysis (see Chap. 20), but online social technologies, knowledge management systems, powerful search engines, and computerized logging of user actions allow insights not previously possible into human behavior and social interaction. Some examples have already been given in this chapter such netnography or the study of dialogic interaction with computerized agents, with more appearing regularly.

An area of heated debate and also one that has substantial potential to lead to innovation in methods and theoretical frameworks revolves around the issue of explanation and causation in social behavior. In particular, an increasing number of proponents argue for the utility of case study research and the rich descriptions resulting from qualitative studies as legitimate means for theory development and testing, including the potential for meaningful contributions to evidence-based practice (Bennett & Elman, 2006; Chenail, 2010; Eisenhardt & Graebner, 2007; Flyvbjerg, 2006; Larsson, 2009; Shaw, Walls, Dacy, Levin, & Robinson, 2010). Support for the role of qualitative research as an accepted approach to theory on causation comes from multiple perspectives, including those who urge recognition of complex systems and evolutionary processes in social analysis from a positivist perspective (Morrison, 2009) and those who focus on informants' words, views, and sense-making following interpretive traditions (Díaz Andrade, 2009).

A third trend of interest is in the increasing sophistication and numbers of articles reviewing research, both those that are syntheses of research results that include qualitative studies, and those that examine the processes of research itself. At one level, many of these reviews are a form of qualitative study in the categorization of article types or internal content, although most reviews also apply some statistical analysis. While studies such as Randolph's (2008) reporting on the methods of research used in computer education journal articles are a beginning for ECT, some of the reviews beginning to appear in medicine and organizational studies comparing the uses of specific methods and methodologies in published research provide models for using the results of qualitative content analysis for a better understanding of research design. Of particular relevance is the application of findings to practice through meta-synthesis qualitative review in such fields as medicine (Cunningham, Felland, Ginsburg, & Pham, 2011; Donaldson, 2009), suggesting future trends in education.

Prospects in an Age of Quantifiable Outcomes

Despite some positive examples of qualitative research trends described above, the prospects for qualitative research in ECT and education more broadly are unclear. Internal debates about the purposes and methods of research continue, but perhaps more critical are the external critiques raising questions about appropriate methods and purposes in educational research (Denzin, 2009; Hammersley, 2008).

The Politics of Educational Research and the Qualitative Tradition

Externally, particularly in the USA and increasingly in other English-speaking countries, policy-makers are taking a more activist role in defining what is appropriate educational and social science research (Atkinson & Delamont, 2006; Denzin & Lincoln, 2008; Eisenhart, 2006; Liston, Whitcomb, & Borko, 2007). Such policies impact potential funding and lead to internal debates about research directions. With a focus on evidence-based practice and assumptions about proving cause through linear science, the trend, if played out, could increasingly negate the qualitative premise of explicating complex causes and emergent social processes. Such political forces could push qualitative research to a minor status of exploring phenomenon primarily to determine directions for quantitative studies (Denzin, 2009, 2010).

Further, as Denzin and others suggest, current policy debates about education not only have implications for research methods but also raise broader issues about what are considered appropriate research topics by equating "quality" with "useful" in the sense of immediately applicable to practice and "proven" to work (Biesta, 2007). Recent calls by ECT journal editors for effectiveness studies echo this direction (Roblyer & Knezek, 2003; Schrum et al., 2007; Thompson, 2005), while others have argued against such narrowed definitions of scholarship (Gardner & Galanouli, 2004; Hammersley, 2000, 2005, 2008). The role of politics and social values on education is well recognized given the scope and public nature of the institution in modern

society, with the fallout as it relates to research direction and the future of qualitative research in the field yet to be determined.

The Internal Problems of Quality

The issues raised by Randolph (2008) of under-specifying research design in ECT empirical studies remain true in the samples of numerous articles reviewed by the authors for this chapter. Given many examples of under-delineated methods and design, it is not surprising to see ECT research discussions imply qualitative research has at best a secondary role to more rigorous quantitative results (Ross & Morrison, 2007). Maddux (2003) has vehemently railed against ECT qualitative research as lacking rigor and produced by those who are incapable of understanding scientific design and statistics—what he calls number fear, while other critics have taken a more moderate approach seeking new designs or promoting mixed methods (Amiel & Reeves, 2008; Creswell & Garrett, 2008).

Inspiration Within and Beyond ECT Borders

Despite some negative indicators, qualitative research is thriving, particularly in Europe and other parts of the world with stronger traditions of philosophy and theory supporting studies produced than in the USA. In addition, qualitative research in other applied fields is being critically examined in terms of rigor and quality, and through critical review being used to impact practice (Maggs-Rapport, 2001; Onwuegbuzie & Leech, 2007). This provides an opportunity not only for self-examination but for ECT to look outside the field for strengthening its own qualitative work.

Improvement Through Enhanced Evidentiary Standards

The debates over educational research are not entirely without benefit. The critiques of the earlier "paradigm wars" and the more recent discussion of validity and generalizability resulting from discussion of the "gold standard" in educational research have pushed for increased consideration of rigor and quality, not only in qualitative but in quantitative studies as well (Fielding, 2010; Gorard, 2002). Desimone (2009) and others have suggested that we are in a period of increased evidentiary standards, requiring more careful definition of terms and clearer delineation of methods that may promote knowledge building and theory (Ball & Forzani, 2007).

Recent articles in social work (Barusch, Gringeri, & George, 2011; Lietz & Zayas, 2010), counseling (Kline, 2008), organizational studies (Beverland & Lindgreen, 2010; Easterby-Smith, Golden-Biddle, & Locke, 2008; Gibbert & Ruigrok, 2010), and particularly health care (Collingridge & Gantt, 2008; Macdonald, 2009; Smith, 2009), provide models of enhanced quality and precision in qualitative methodology. These approaches may portend strategies for the evolution of rigor in ECT qualitative research and lead to reexamination of submission criteria by journal editors (Chenail, Duffy, St. George, & Wulff, 2011; Lin, Wang, Klecka, Odell, & Spalding, 2010). It should be noted that some of the recommendations for research standards emerging in other fields are not explicitly aimed at creating a one-size-fits-all scientific standard of evidence but propose that researchers be more transparent about the theory, epistemologies, and ontologies that framed their study (Freeman, deMarrais, Preissle, Roulston, & St. Pierre, 2007; Koro-Ljungberg, Yendol-Hoppey, Smith, & Hayes, 2009; Lewis, 2009; Tracy, 2010).

Building on Our Strengths

Like all disciplines, ECT research has norms of appropriate content and research design established by the disciplinary community and largely enforced by issues of hiring, publication and funding (Randolph et al., 2009). Willis (2008) has suggested that this community is more pragmatic, positivistic and conservative in its adoption of new research methods and methodologies than other areas of education. Relatedly, Maddux (2001), Maddux and Cummings (2004), and others warn about fads and assumptions that create barriers in developing continuity, urging researchers to build on past theory and research findings.

Qualitative research has potential to do more than it does by thoughtfully building on what we already know and then attentively crossing disciplinary boundaries for inspiration (Czerniewicz, 2008; McDougall & Jones, 2010; Wiles, Pain, & Crow, 2010). The outlook for qualitative research in ECT is high and the options exciting, as new technologies and innovative methods are added to freshen perspectives on our world.

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