Using grounded theory to explore learners’ perspectives of workplace learning

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Grounded theory is an inductive enquiry that explains social processes in complex real-world contexts. Research methods are cumulative cyclic processes, not sequential processes. Researchers remain theoretically sensitive and approach data with no preconceived hypotheses or theoretical frameworks. Literature is reviewed as lines of enquiry and substantive theories emerge. Interviewers ask broad open questions, check understanding and prompt further description. Participants choose how they share their perspectives and experiences. Everything is considered data. Data is analyzed in cyclic processes. Initially coding uses participants’ words, and then identifies patterns, social processes and emerging substantive theories. Memos and diagrams facilitate understanding of data and literature. Grounded theory is a suitable research methodology for work-integrated learning because grounded theory explains social processes, such as learning, in complex real-world contexts, such as workplaces, where multiple influencing factors occur simultaneously. A case study illustrates how grounded theory was used to explain learning in the workplace.

Keywords: Research methodology, research methods, grounded theory, inductive enquiry, work-integrated learning, teacher education

GROUNDED THEORY METHODOLOGY

Using an Inductive Approach

Grounded theory was developed by Glaser and Strauss (1967) from pragmatism (Mead, 1967) and symbolic interactionism (Blumer, 1969) as “a reaction against … ‘grand’ theories produced through the logico-deductive method of science” (Denscombe, 2007, p. 100). Grounded theory does not test hypotheses nor merely describe phenomenon (Birks & Mills, 2012; Dunne, 2011). Urquhart (2013) describes grounded theory as having integrity because it “does not seek to impose preconceived ideas on the world (p. 7).” Through empirical fieldwork in social settings, grounded theory explores participants’ perspectives and actions through an inductive approach to generate theory grounded in the complexities of the real world (Urquhart, 2013). Data is not forced nor shaped to fit any preconceived ideas (Urquhart, 2013). Researchers are required to be theoretically sensitive, that is, simultaneously maintain an open mind and identify significant theoretical concepts by challenging their biases and acknowledging their own experiences. No theoretical framework is initially identified or applied (Birks & Mills, 2012). A grounded theory study allows whatever is theoretically relevant from the perspectives of those involved to emerge inductively (Andersen, Inoue, & Walsh, 2013).

Comparing First and Second Generation Theorists

Researchers need to be aware that grounded theory is an evolving method, and Urquhart (2013) advises researchers to select the variant (Glaserian or Straussian or first or second generation theorists) that is appropriate to their research question and context. Classic grounded theory (also known as Glaserian grounded theory) provides clear guidelines for the reflexive and cyclic research processes, which assists early-career researchers, and allows codes to be created from the data, which suits a study of a

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previously unexplored area. Whereas, second generation or Straussian grounded theory applies preconceived codes to data.

**Using Cyclic Processes**

Although grounded theory has an emergent structure, clear guidelines are provided for the complete systematic research process (Glaser, 1998) and lines of enquiry are followed in consistent yet flexible ways (Denscombe, 2010). Grounded theory is not a linear process, but instead is a self-correcting approach that integrates research processes—such as collecting data, defining subsequent samples, coding data, analysing data, writing memos and diagrams, generating theory, and reviewing literature—in cyclic and cumulative ways so that emerging concepts can be explored further (Birks & Mills, 2012; Denscombe, 2010; Urquhart, 2013).

**Reviewing Literature**

In contrast with many other research methodologies, the literature review in the substantive areas commences after initial coding, that is after the theory emerges, and is used as further data during constant comparative analysis (Giles, King, & de Lacey, 2013; Glaser, 1998). In grounded theory, it is acknowledged that the substantive area of enquiry is not known before data collection, coding and emergence of theory (Christiansen, 2011; Glaser, 1998). A detailed and in-depth literature review is commenced as soon as codes, categories, and an emerging theory identify the specific areas of concern.

Birks and Mills (2012, p. 22) warn that “the use of literature in grounded theory is one of the most contentious and misunderstood aspects of this approach”. One of the main aims is that the researcher remains as theoretically sensitive as possible and approaches the data with an open mind to avoid assumptions and preconceptions (Hallberg, 2010). Grounded theory studies do not use literature in ways that easily conform to traditional academic conventions (Dunne, 2011; Elliott & Higgins, 2012; Giles et al., 2013; Hallberg, 2010; McGhee, Marland, & Atkinson, 2007; Xie, 2009). Many research methodologies use initial literature reviews to form research questions, design research methods and identify theoretical frameworks (L. Cohen, Manion, & Morrison, 2007; Creswell, 2012; Dunne, 2011; Hallberg, 2010). In contrast, grounded theory uses participants’ perspectives and cyclic processes of data collection and analysis to generate focused research questions, subsequent data collection methods, codes, substantive areas of literature for review, and theories (Birks & Mills, 2012; Charmaz, 2006; Glaser & Strauss, 1967; Hallberg, 2010). In grounded theory, an initial literature review in the specific area of theory development is avoided to ensure that theoretical sensitivity is maintained and data is not forced nor shaped to fit preconceived ideas or theories (Birks & Mills, 2012; Glaser, 1998; Hallberg, 2010). Glaser argues that “once a fundamental process is generated then … the literature is discovered just as the theory is … [and] is compared as simply more data” (p. 69). Literature is searched after, not before, emergence of the theory (Urquhart, 2013). To clarify the use of the literature review, Glaser (1998) explains that,

to avoid reading the literature beforehand is a strategic grounded theory pacing; it is not neglect and anti-scholarship … Since grounded theory generates hypotheses from data and in no way tests theories found in literature, it is appropriate to deliberately avoid a literature review in the substantive area under study at the beginning of the research. Grounded theory must be free from the claims of related literature, its findings and its assumptions in order to render the data conceptually with the best fit (pp. 68-69).
However, many authors acknowledge the realities of academic regulations and advise researchers using grounded theory to complete an early literature review to provide a rationale for the study, ascertain a gap in research literature, place the proposed research within the body of current academic knowledge, and meet academic regulations (Birks & Mills, 2012; Corbin & Strauss, 2008; Dunne, 2011; Elliott & Higgins, 2012; McGhee et al., 2007; Xie, 2009).

In accordance with the principles of grounded theory, throughout the research process the researcher continues to read widely outside the substantive area to maintain theoretical sensitivity, and then once a theory begins to emerge, completes a full and detailed literature review within the emerging area of the substantive enquiry and incorporates literature into constant comparative analysis processes as further data. As Glaser (1998) declares, in grounded theory “literature is discovered just as the theory is. Once discovered the literature is compared as simply more data.” (p. 69).

**Collecting Data**

Data collection is not an isolated event (Birks & Mills, 2012) and continues throughout the research process, therefore subsequent phases of data collection must be planned (Urquhart, 2013). However, practical and ethical issues may limit data collection (Birks & Mills, 2012). Data collection aims to capture a range of contexts, perspectives and timeframes and can include transcripts, interviews, field notes, memos, elicited texts, questionnaires, documents, and scholarly literature (Charmaz, 2006). The constant cyclic and combined processes of data collection, analysis, coding, and memo writing, and direct theoretical sampling are used to identify further research participants, contexts and data collection methods. The research timeline needs to be purposefully flexible because data collection methods react reflexively to emerging concepts and theory (Glaser & Strauss, 1967). An audit trail needs to be maintained through detailed field notes, data records, memo writing and diagramming to show how the substantive theory emerges from the data and record flexible, systematic research processes (Birks & Mills, 2012; Denscombe, 2010).

**Empowering Participants**

During a grounded theory interview, the participants and the interviewer are treated as equals (Scott, 2011). Participants select the time and location of the interview (Birks & Mills, 2012), and also lead the conversation. Interviews can be both individual or group (Birks & Mills, 2012). Scott (2011) advises researchers to ask broad open questions, without preconceived issues, listen to the participants, let the conversation unfold, and empower participants to share experiences and perspectives. Researchers record field notes describing the context and any nonverbal clues (Birks & Mills, 2012). Despite the power bestowed on the participants, the researcher is not passive, but instead coordinates the conversation to generate theory (Corbin & Strauss, 2008). The interview is initially practiced with a critical friend (Birks & Mills, 2012). Finally, previous participants are contacted for further follow up (Charmaz, 2006) by email or interview. Data can include other documents and data. Participants are contacted to check whether emerging codes, memo-ideas and theory development resonate and are recognised by them as a part of a member checking process.
Coding Data

Although, different theorist use different terms for coding processes, Glaser (2005) uses the terms open, selective and theoretical coding. First, open coding is used line by line throughout the interview transcripts. Gerunds are used during open coding to remain close the participants’ behaviour and language (Charmaz, 2006; Denscombe, 2010). Gerunds record the participants’ actions through use of nouns in the form of the present participle of verbs, that is the –ing form. Initial coding needs to accurately preserve participants’ words, actions and processes. Second, selective coding is used to identify core categories. Patterns and relationships emerge through an on-going cyclic process of comparing data with data, and informal clustering, and mind mapping. Finally, theoretical coding is used to find constructs, connections, and explain relationships to generate theory (Urquhart, 2013). Glaser and Strauss (1967) and Glaser (2005) insist that no prescribed or pre-planned codes are used. Codes are created from the participants’ words and collected data. Core categories emerge to show basic social processes that explain rather than merely describe the phenomenon being studied.

Writing Memos

Memo writing is an essential part of grounded theory. Birks and Mills (2012) recommend that memo writing should interrupt other research activities, and include feelings and assumptions, philosophical position, ideas from literature, concerns regarding the study design, reflections on research process, procedural and analytical decision making, coding categories and generating theory. Glaser (1978) states that memos should remain open and be categorised so that they can be referred to as theory emerges and also provide part of the audit trail. Birks and Mills (2012) stress that memos need to be written from the start of the study and can be used as part of the thesis. Diagrams are used concurrently to “map and connect codes” to increase transparency (Birks & Mills, 2012, p. 105).

Achieving Saturation

In grounded theory, research processes continue until a point of saturation is reached, that is “no new concepts emerging from data” (Urquhart, 2013). Researchers need to “look for groups that stretch diversity, confident that category is saturated, based on widest possible range of data” (Glaser & Strauss, 1967, p. 61). As Birks and Mills (2012) instruct, in continuous cyclic processes, the researcher needs to collect and analyse data using constant comparative analysis until new data requires no new codes or categories, and instead fits within existing codes and a point of saturation appears to be reached.

Acknowledging Limitations

Continuing a grounded theory study to a point of saturation can overwhelm the researcher with huge amounts of data. Furthermore, initial coding that remains close to the participants’ words can create hundreds of overlapping initial-codes. To avoid becoming overwhelmed and drowning in data and codes, researchers need to create and maintain excellent systems and processes to record data collection, coding, analysis and a robust audit trail. Each code and significant quote needs to be able to be clearly traced back to the original data. Researchers need to record where codes and quotes specifically occur in the data, including, for example, the participant, interview date, and precise time during the interview recording. Also, coding could be biased by personal preconceptions; however, inter-rater checking and member checking can be used to minimize any bias. Collecting data from a limited number of participants limits generalizability; however grounded theory studies focus on a specific context with defined boundaries. Finally, learning is a complex behaviour and participants
may not be able to accurately describe more automatic and less conscious social processes that they use to learn within complex contexts. Researchers need to use a variety of data collection methods within a grounded theory study to ensure that triangulation is achieved.

GROUNDED THEORY FOR WORK-INTEGRATED LEARNING

Grounded theory is an appropriate research methodology for work-integrated learning because grounded theory does not attempt to adapt, simplify nor obscure the real-world as a research context. Instead grounded theory can root data collection firmly in the complexity of real-world workplaces where multiple influencing factors occur simultaneously. Real-word workplaces can be studied with integrity and honesty, including all their complex social behaviours. Grounded theory is suitable for the research of work-integrated learning because previous theories and research about learning—from formal educational contexts, such as institutes of higher education and classrooms—is not used to provide preconceived hypotheses or theoretical frameworks. Instead the inductive and cumulative cyclic data collection and analysis processes allow what is relevant and significant to the participants to emerge and shape the ongoing research processes and theory development. Areas of study from a variety of different disciplines may be identified as relevant during the data collection and analysis processes and then included and explored further as part of the study. The literature review includes whatever is identified during the study as a substantive area of enquiry. In addition, grounded theory is valuable because it does more than just describe processes: the substantive theories that emerge inductively explain social processes in complex real-world contexts. Grounded theory is an effective way to explore “uncharted territories” (Dörnyei, 2007, p. 155) where it is not known in advance what will be revealed or what will be needed to further the enquiry (L. Cohen et al., 2007, p. 168). Although, grounded theory uses research processes which are reflexive and not sequential, grounded theory provides clear guidelines for research processes that can assist early career researchers. When selecting and justifying a research methodology, Denscombe (2010) asserts that researchers need to identify their philosophical perspectives to clarify the foundation of their research, as this affects the design and scope of research questions, methodology, methods, data, limitations and conclusions. Birks and Mills (2012) also caution that methodological congruence is essential to establish research as credible, that is, consistency between 1) the researcher’s personal philosophical position, 2) the methodological approach, and 3) the research aim (Birks & Mills, 2012).

CASE STUDY

Using Grounded Theory in Work-Integrated Learning

Grounded theory was used to examine how adults without teaching qualifications learn to teach English to speakers of other languages in the work-place. The huge number of adults teaching English without formal teaching qualifications presented an opportunity to look beyond the usual parameters of teacher education within institutes of higher education to examine how adults learn to teach in workplaces.

Researching in Teacher Education

English is a global language and English language teaching is an international multibillion dollar industry (Crystal, 2003; Graddol, 1997). The demand for English language teachers now far exceeds supply, so English language teaching providers have lowered the usual standards required to teach (Howson, 2013; Santiago, 2002). Adults who use English proficiently now teach English without first learning about teaching, learning, applied linguistics or the English language. These teachers learn to
teach while teaching in workplaces without the support of teacher education. This hiring of unqualified teachers creates a valuable opportunity to look beyond teacher education within educational institutes and instead examine how adults learn to teach in the complex contexts of the real-world workplaces. We need to explore all possible perspectives because to date research appears to be inconclusive about the effectiveness of teacher education (Darling-Hammond, Holtzman, Gatlin, & Vasquez Heilig, 2005; Ingersoll, 2012; Ludlow, 2013).

Learning Teaching Skills

Researchers of second language learning have previously investigated how people autonomously learn second languages outside classrooms to improve teaching of second languages inside classrooms (Benson, 2001; A. Cohen & Macaro, 2007; Griffiths, 2008; Rubin, 1975). However, researchers appear to have not yet explored how people learn second language teaching skills outside teacher education institutes to potentially improve second language teacher education. The Teaching English to Speaker of Other Languages (TESOL) industry appears to have conflicting ideologies and realities in relation to how they value how people learn languages, compared to how they value how people learn TESOL teaching skills. Four decades ago, Rubin (1975) was partly responsible for a change in TESOL ideology, from ‘teachers know best’ to valuing, identifying and using learners’ second language learning skills outside classrooms to improve teachers’ teaching inside classrooms (A. Cohen & Macaro, 2007; Griffiths, 2008; Nunan & Richards, 2015; Rubin, 1975). In contrast, the TESOL industry frequently seems to expect that adults learn to teach without teacher education and yet simultaneously appear to support the ideology that teacher educators know best in teacher education institutes (Brown, 2007; Harmer, 2007; Johnson, 2008; Scrivener, 2009). In line with how researchers have examined how language learners learn second language outside classrooms (Benson, 2001, 2006, 2010; Cotteral, 2008; Griffiths, 2008; Richards, 2015; Rubin, 1975), this study explored how unqualified teachers learned TESOL teaching skills in the workplace to potentially explain ways adults learn to teach. A substantive theory that explains how unqualified teachers learn TESOL skills could provide recommendations to improve second language teacher education (SLTE).

Gaining Ethics Approval

Ethics approval was gained from the University of the Sunshine Coast Human Research Ethics Committee: Ethics approval number: S171073. Before data collection began, participants were formally invited to participate, received written information about the study and signed a consent form. Participation was voluntary and participants could withdraw from the study at any time. All information gathered from participants was stored securely. Participants were asked if and how they want to be identified in this study. All participants had access to the initial results and any publications that result from this study.

Selecting Participants

Initially criterion sampling was used to identify participants who did not have formal teacher education qualifications and who teach English as a second language. Participants who had completed brief (less than three months of full time study) fast-track and alternative programs of teacher education were included in this study. Initially approximately 10 second language teachers of English without teaching qualifications teaching English to speakers of other languages were recruited to participate in interviews. A specific number of research participants was not identified at the beginning of this study because theoretical sampling was used to identify future research participants, that is, as lines of inquiry.
emerged, participants who appeared able to further theory development were contacted to participate in future interviews, or other forms of data collection, such as answering questionnaires.

**Conducting Interviews**

Initial interviews were held at times and in locations of the participants’ choosing. Due to the huge geographical distance between the researcher (in New Zealand) and the research participants in Europe and Asia, synchronous audio-visual video interviews were conducted using Voice over Internet Protocol (VoIP)/ video conference call/video chat software, such as Skype, Google Hangouts, and Face Time. As Scott (2011) asserts, online video chat software can be used effectively for grounded theory interviews as long as the “researcher has considered the basics of interview design from a grounded theory perspective” and uses “technology with which both the researcher and participant are comfortable and which their combined connection speed can support” (p. 87); therefore, participants selected video chat software that was familiar to them and interview times that were convenient for them. In line with recommendations by Chenitz and Swanson (1986), the interviews were similar to everyday conversations. As Birks and Mills (2012) state “the internet is now an established part of life in most societies” (p. 86), and online video chat is a normal part of everyday life. In addition, Kvale and Brinkmann (2009, p. 149) state that computer assisted interviewing may enable participants to speak more easily about personal aspects of their lives because of digital discourse norms. Interviews were recorded.

Interviews were individual or focus group depending on participants’ preferences. In line with grounded theory processes, the participants led the conversation and decided when and in what form interviews would be. Furthermore in grounded theory everything is considered data and individual and group interviews were both considered valuable data within the complexity of the real-world social workplace context. If possible, focus group interviews were preferred because, as Davidson and Tolich (2003) state, focus groups enable participants to freely discuss topics and allow researchers to gather a variety of views and to gain insight into the beliefs of a specific population group within less time than required for successive individual interviews. Participants were treated as experts, encouraged to lead open discussions that are initiated through broad open questions. The researcher coordinated the conversation to encourage participants to share perceptions and experiences that potentially explain how they learn TESOL teaching skills. Charmaz (2006) recommendations for appropriate interview questions during grounded theory studies were followed. During semi-focused interviews participants were asked to describe and explain their experiences, actions, ideas, and feelings by proving examples of specific situations, incidents, language and behaviours. Participants were asked to share their expertise and experiences, tell stories, break silences, reflect on events and chose what to share and how to explain it, and also state how the information should be interpreted. Participants’ statements were repeated to check clarity and interpretation. Observation and social skills were used to further the discussion. Previous responses were used to formulate further discussion topics.

Initial interview questions and introductions were used to collect basic information such as name, gender, age, nationalities, educational background, employment and voluntary service histories, first languages and second languages, current teaching responsibilities, and if acceptable an email address or telephone number in case further contact was required.

Below are examples of possible interview questions.

- How is your learning of TESOL teaching skills directed by yourself or others?
- If you discuss your learning of TESOL teaching skills, what do you discuss?
How do you use resources to learn and improve TESOL teaching skills?
What do you do when you are unsure how to teach an individual, group or topic?
Can you describe a time that illustrates how you learned a TESOL teaching skill?

Prompts were also used to further the discussion.

- Can you explain that further / in more detail?
- Tell me more about …
- What happens when… ?
- Is there anything else you would like to say?

Statements were restated to check understanding and encourage further explanations:

- Have I understood correctly?
- Did you say that … ?
- How should I interpret that?

Each interview lasted a maximum of one hour. Participants were contacted for a follow up interview or elicited email texts to further explain their ideas. Interview techniques were initially trialled with another postgraduate researcher. Interviews were recorded. The researcher transcribed the interviews to remain close to the data and facilitate line-by-line coding. An audit trail was maintained, with references to location, participants, date and time of interview. Field notes describing the participants’ non-verbal behaviour, learning contexts and workplaces, and the location of each interview was completed as soon as possible after each interview.

As suggested by theoretical sampling processes, participants were asked if think-aloud-protocols, and extant personal texts and professional texts could also be used as data for this study. All research participants were contacted to partake in member checking processes to check whether emerging codes, memo-ideas and theory development resonate and are recognised by them.

**Reviewing Literature**

In line with a grounded theory study, literature was reviewed throughout the research processes. Before an emerging theory was identified, the researcher continued to read widely across disciplines to maintain theoretical sensitively. As paths of enquiry were revealed and a substantive area of enquiry and theory began to emerge, literature from specific areas of study and disciplines were identified, sourced, reviewed and included as further data. The literature became part of the data and the literature review became interwoven into the discussion of data and the emerging theory.

**Analysing Data**

Coding was completed simultaneously as data was collected and transcribed. Initially, gerunds were used to remain close to the participants’ words as open codes line by line throughout the interview transcripts. Then selective codes were assigned to identify core categories as similarities and patterns emerge from initial codes. Finally, theoretical coding was used to identify patterns and explain relationships to generate theory as relationships between and among categories emerge. In accordance with grounded theory research principles, as described by Glaser and Strauss (1967) and Glaser (2005), no pre-planned codes were used. Memo writing and diagramming continued throughout the research process to facilitate coding and theory development. In continuous cyclic processes, the researcher
collected and analysed data using constant comparative analysis until new data fitted within existing codes and a point of saturation appeared to have been reached.

Acknowledging Limitations

The study used a limited number of participants which limited generalizability. The researcher’s bias was minimised by using inter-rater checking and member checking. Participants were encouraged to share their perceptions and experiences of learning; however they may have chosen not to nor have had the time to include all relevant information and also may not have been able to describe nor be aware of all of their complex learning processes. The researcher needed to judge when a point of saturation was reached and cease data collection processes; however more data could have added valuable information to further the understanding and explanation of learning in the workplace.

CONCLUSION

Although grounded theory was initially developed in 1967 by Glaser and Strauss (1967), within some disciplines and research contexts it is not yet established as an acceptable research methodology. Some universities appear to compromise grounded theory studies by requiring that initial literature reviews are used to identify hypotheses and apply critical theoretical frameworks. However, grounded theory is an inductive research methodology that avoids preconceived ideas and follows paths of enquiry as they are revealed. Grounded theory is a research methodology firmly grounded in the perspectives, experiences and realities of participants. Research processes, data collection processes, analysis processes, literature review processes and substantive theories emerge from complex real-world contexts that are not shaped to fit research ideals. Grounded theory maintains integrity by reflecting back and explaining the real-world as it is, and by not applying preconceived ideas (Urquhart, 2013). Work-Integrated Learning could benefit from the use of grounded theory to examine the perspectives of those stakeholders teaching and learning from complex social interactions in complex contexts with multiple conflicting factors. Work-integrated learning can respect participants in grounded theory studies as experts, who lead discussions, generate data, and partake in member-checking processes. Researchers using grounded theory can combine formal research processes with inquiry, experiential and autonomous learning, while challenging their own biases to reach further understanding. A grounded theory study allows whatever is theoretically relevant from the perspectives of those involved to emerge inductively (Andersen et al., 2013). Grounded theory gives researchers opportunities to explore work-integrated learning from the perspectives of many stakeholders in real-world work-place contexts while remaining open to emerging ideas, explanations and theories.

REFERENCES


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