

# The Use of Grounded Theory in Educational Research: Exploring the Application of the Methodology in an Investigation on e-Learning in Maltese SMEs

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## Abstract

Emergent researchers are faced with a plethora of research methodologies to choose from for their investigations. Deciding on which approach best fits their ontological and epistemological beliefs and requirements can be a daunting task. Many, indeed, shy away from the Grounded Theory (GT) method which is often considered to be much more labour intensive than other approaches. This paper attempts to make a case for this methodology, in its constructivist form, and as it is being applied in a current case study in Maltese SMEs.

**Keywords:** adult education and training, e-learning, Grounded Theory (GT), qualitative research, small and medium-sized enterprises (SMEs)

## Introduction

Through a Grounded Theory (GT) research project, the author is currently trying to develop a conceptual model that explains the adoption, or otherwise, of e-learning, particularly distance online learning, by older (50+) Maltese workers, including those employed in small and medium-sized enterprises (SMEs). Why was GT selected for this project among so many other research approaches?

At the planning stage of the case study, a systematic review of the literature revealed that there was a lack of scientific publications on education (both formal and informal) and training, and particularly e-learning, among SME employees including older workers. Moreover, Nolan and Garavan (2016, p.85), through their review of research on human resource development (HRD) in SMEs, note that “studies do not address employees’ perceptions and responses to HR practices” and quantitative investigations “often stopped at the owner-managers rather than the employers”. Johnson and Devins (2008, p.2), in their review of studies on training in SMEs in the UK, also found that the existing research, which is mainly survey-based, “do(es) not take sufficient account of the informal, flexible nature of much workforce development that takes place in small organisations”. There is, consequently, a lack of a theory about older employee learning, and particularly e-learning in the unique

context of these businesses. In such a research dimension, Creswell (2012, p.423) suggests, “when existing theories do not address your problem or the participants that you plan to study”, the GT method is one of the better research options.

GT has other important characteristics that fit well with this researcher’s ontological and epistemological beliefs, and the investigation’s objectives. First, conceptualisations are developed from grounded data. This allows the investigation not to become contaminated by the researcher’s bias towards pre-existing theories, prior knowledge, beliefs and experiences, and particularly his social and critical constructivist alignment. Indeed, to further ensure rigour and reliability and to safeguard the investigation from the researcher’s previously ‘accumulated knowledge’ (Dey, 1993, p.66), GT demands the researcher to engage in a constant and continuous exercise of reflexivity. Second, the methodology does not allow the investigation to become a positivist exercise of validation or rejection of a hypothesis that is developed through a literature review (Lawrence and Tar, 2013). Third, GT uses the researched subjects’ “interpretations, perceptions, meanings and understandings” as “the primary sources of data” (Mason, 2007, p.56). Fourth, GT, as a research method, has become a popular choice in many social science disciplines (Lawrence and Tar, 2013), including education (see, for example Cherubini et. al., 2010; Chong and Yeo, 2015; Drugli, Clifford and Larsson, 2008; Givon and Court, 2010; Jones, 2002; Jones and Hill, 2003; Leino, 2006; Smart and Brent, 2010).

Yet, Thornberg (2014, p.243) notes that there are still too many emergent educational researchers who are only aware of the original formulation of GT which comes with the “classic dictum of delaying a literature review” after the collection and analysis of data. This limited knowledge of the methodology “might lead to a rejection of GT among educational researchers” (ibid.). Dey (1999, p.2) moreover notes that there are “probably as many versions of GT as there (are) grounded theorists”, while Priya (2016, p.50) argues that “its epistemology and techniques of data collection and analyses are still matters of animated debates among the social scientists”, making the choice for GT for an educational investigation, such as a PhD project or otherwise, difficult.

Moreover, today, many different forms of GT exist, making the choice of the methodology even more complicated, particularly for novice researchers. After its development by Barney Glaser and Anselm Strauss in the late 1960s, the technique developed in “somewhat conflicting directions” (Charmaz, 2000, p.510). Even Glaser and Strauss parted ways. The former went as far as accusing Strauss of no longer being a true grounded theorist (Glaser, 1992), and, later, claiming to be the original founder of GT (Grounded Theory Institute, 2018). His claim is supported by his followers who argue that his article ‘The Constant Comparative Method of Qualitative Research’ (Glaser, 1965) confirms that Glaser “already had conceived and written about all the basic principles of Grounded Theory before his work with Anselm Strauss” (Grounded Theory Institute, 2018). Researchers entered into this “methodological fray” (Charmaz, 2006, p.xi) adapting and adopting this approach

(including Clarke, 2005; Charmaz, 2006; Bowers and Schatzman, 2009; Babchuk, 2011) leading the debate to the brink of a “theoretical Armageddon” (Babchuk, 2008, p.10). A “family of methods” (Bryant and Charmaz, 2007b, p.11) eventually developed with “certain (shared) key characteristics that distinguish all versions from other qualitative designs” (Babchuk, 2008, p.10). One of these methods is the constructivist GT approach developed by Charmaz (2000, 2006, 2011, 2017) and others (Bryant, 2002; Mills, Bonner and Francis, 2006, 2008). This method was used in the current case study (Vancell, 2018) and will be described in the rest of this paper.

## Origins of GT

In a GT investigation, a researcher can use any data collection strategy. These include quantitative techniques (see, for example, Glaser and Strauss, 1967; Lössch, 2006; Glaser, 2007; 2008). However, the roots of this methodology lie in the qualitative research tradition (Babchuk, 2011; Birks and Mills, 2011).

The ‘Chicago School’ sociologists, in the 1920s and 1930s, legitimised qualitative inquiry in sociology (Denzin and Lincoln, 2010; Bryant and Charmaz, 2007c; Babchuk, 2011). However, up till the 1950s, scholars still “relegated qualitative research to a subordinate status in the scientific arena” (Denzin and Lincoln, 2005, p.2) and quantitative ‘objectivist’ methodologies, akin to the experimental sciences, dominated the social sciences (Charmaz, 2000; 2006). Positivism was the ‘gold standard’ of educational research (Wright, 2006).

Qualitative research only gained the respect of the scientific world in the post-World War II era (Birks and Mills, 2011). Denzin and Lincoln (2005, p.17) refer to the period 1950–1970 as the “modernist moment” in the social sciences and consider it to be the “golden age of rigorous qualitative analysis”. One of the most important books of this second phase of qualitative research was Glaser and Strauss’s (1967) the *Discovery of Grounded Theory*. In this book, the authors describe how they developed GT through their investigation of the experience of patients dying in hospital.

Glaser’s background comprised rigorous training in quantitative methods. Strauss, in contrast, had a background in symbolic interactionism, “embraced while in his doctoral program at the University of Chicago” (Charmaz, 2006, p.7), and its emphasis on pragmatist philosophy, social psychology and ethnographic field research (Bryant and Charmaz, 2007a). Pragmatist philosophers, including Mead (1917) and Dewey (1916; 1929), assume that knowledge is created through action and interaction and view reality as characterised by indeterminacy and fluidity, and as open to multiple interpretations.

Glaser and Strauss, through their new, jointly created research approach, sought “to understand human beings and their behaviour by developing a systematic and

detailed procedure which would be viewed as positivistic and, therefore, truly scientific” (as cited in Bluff, 2005, p.148). This “systematic inductive” (Charmaz, 2000, p.509) approach to social science research was one in which “the researcher has no preconceived ideas to prove or disprove” (Mills, Bonner and Francis, 2006, p.27) and theory is grounded in data. Mills, Bonner and Francis (2006, p.27) succinctly describe the GT process as proposed by Glaser and Strauss:

The researcher analyzes data by constant comparison, initially of data with data, progressing to comparisons between their interpretations translated into codes and categories and more data. This constant comparison of analysis to the field grounds the researcher’s final theorizing in the participants’ experiences.

By developing this method, Glaser and Strauss (1967, p.3) aimed to move away from a model where theory was “generated by logical deduction from a priori assumptions”, as happened in other research models. However, the GT proposed by Glaser and Strauss, resided in the positivist paradigm “which holds that the veracity of a theory can be determined simply by recourse to the data” (Bryant and Charmaz, 2007c, p.33). The ‘classical GT’ also carried an epistemological dilemma - the researcher had to believe or pretend to be a ‘tabula rasa’ who was free of any preconceptions and knowledge about the field and subjects under study.

The rest of the paper is structured as follows. It begins with an overview of the origin and development of GT. It is followed by an exploration of the key elements of its constructivist approach, and the way the methodology is being used in a case study in the Maltese labour market. Finally, some conclusions are presented.

## **The Evolution of GT**

After their collaboration, Glaser and Strauss parted ways and, later, published work of conflicting ontological and epistemological positions. Glaser (1978) “remained in the positivist camp” (Charmaz, 2000, p.512). Strauss, with Juliet Corbin in 1990, co-authored the book *Basics of Qualitative Research*. The book was republished in 1998, and after Strauss’s death, its 3rd edition was published in 2008 with Corbin as the main author. In Corbin and Strauss’s books, the authors challenge the underpinnings of the initial formulation of GT particularly the assumptions of the existence of an objective, external reality, and ‘the researcher as a theoretical virgin’ myth (Clark, 2005). Instead, the authors also claimed that “the truth is enacted’ and there are multiple variations of reality” (Corbin and Strauss, 2008, p.4). Thus, to understand experience, “that experience must be located within and can’t be divorced from the larger events in a social, political, cultural, racial, gender-related, informational, and technological framework” (ibid.).

Denzin and Lincoln (2005, pp.16-17) note that between 1970 and 1986,

“the naturalistic, postpositivist and constructionist paradigms gained power” in qualitative research. In these years scientists did their best “to locate themselves and their subjects in reflexive texts” (Birks and Mills, 2011, p. 6) and constructivist thinking became very important in social research. For the constructivist researcher “meanings are constructed by human beings as they engage with the world they are interpreting based on their historical and social perspective” (Mogoshoa, 2014, p.57).

## **Constructivist GT**

The influence of constructivism on social research was, by the 1990s, very strong. In 1995, Kathy Charmaz wrote her first piece about a reformulated GT. This author continued to develop her work and in 2000 published a milestone contribution in the *SAGE Handbook of Qualitative Research* in which she took a further move away from positivism. She insisted that Strauss and Corbin, like Glaser, still stood “in the objectivist terrain” and that they still believed that GT was “verificational” (Charmaz, 2000, p.512). Charmaz noted that, when developing “analytic questions, hypothesis [relational statements], and methodological applications” (ibid., p.513), Corbin and Strauss still assumed the existence of an external reality. She thus proposed a ‘repositioned’ GT which was “ontologically relativist and epistemologically subjectivist” and positioned within the social constructivist research paradigm. In practical terms, Charmaz (1995; 2000) proposed that researchers co-create meaning with the subjects of their study, in the process producing tentative or ‘fuzzy’ (Basse, 1998) interpretations of the phenomenon under study.

The next section provides an introductory description of the procedures involved in collecting and analysing data in a constructivist GT investigation.

## **Essential GT Elements**

The constructivist GT approach, as proposed by Charmaz (2006), and as applied in Vancell (2018), has the key elements of the ‘first generation’ GT process which include “...data collection, coding and analysing through memoing, theoretical sampling and sorting to writing, using the constant comparative method” (Glaser, 1998, p.12). The methods of sampling, data collection and data analysis are not considered as separate procedural steps in the research process. Instead, they are considered as a continuous cycle of data collection, analysis and sampling (Elliott and Lazenbatt, 2005). However, Lawrence and Tar (2013, p.30), echoing Corbin and Strauss (2008), warn that “rigid adherence to any procedure can hinder the analytic process and stifle a researcher’s creativity”. Indeed, Lawrence and Tar (2013, p.31) also recommend that these elements “should be thought of as rules of thumb, rather

than hard or fixed rules, and advise researchers to study these rules of thumb, use them, and modify them in accordance with the requirements of their research”.

### **Theoretical Sampling and Saturation**

In other research designs, the sampling procedure is “designed in advance and adhered to rigorously” (Schreiber 2001, p.64). In GT, the sampling process is entirely controlled by the emerging theory (Glaser and Strauss, 1967, p.45) and thereby called “theoretical sampling”. The pioneers of GT defined theoretical sampling as:

the process of data collection for generating theory whereby the analyst jointly collects, codes, and analyses his (sic) data and decides what data to collect next and where to find them, in order to develop his (sic) theory as it emerges (Glaser and Strauss 1967, p.45).

In the case study (Vancell, 2018), the researcher entered the field, that is, Maltese SMEs, with a very open research question: How is e-learning used by older workers? The researcher, therefore, had no pre-conceived theory to guide the sampling. This research started with interviews with key informants and gatekeepers and included key personnel from Jobsplus, the Malta Chamber of SMEs (GRTU), the Malta College of Arts, Science and Technology (MCAST) and SME owner-managers. After coding and analysing these first interviews it became apparent that the number of SMEs engaged in e-learning was very small (Vancell, 2018). It also emerged that most owner-managers considered professional development to be ‘the responsibility’ of the employees, particularly if they were no longer young, not the business. Moreover, there was agreement that a ‘rationality of informality’ (Johnson & Devins, 2008) was pervasive in SMEs. This heavily affected the adoption, or otherwise, of training initiatives. It was thus important to interview older employees to gain a better insight into their workplace reality, and particularly their educational perspectives and needs.

As the research progressed, theoretical sampling continued to be used to guide and adapt the interview questions. It was also used, in the sampling of employees, so as to ensure the theory would develop as fully as possible – in GT terms, until it reached “theoretical saturation” (Elliott & Lazenbatt, 2005, p.4). This is achieved, according to Charmaz (2006, p.113), when “gathering fresh data no longer sparks new theoretical insights, nor reveals new properties of the core theoretical category/ies”.

Theoretical sampling and coding (described below) occurred concurrently with the review of a sample of literature, selectively identified to support or refute the conceptual categories that were developing through the research, and add depth to the analysis. This selective sample was not covered in the systematic review of literature that was undertaken before the start of the iterative data collection and analysis process, and which was important in sensitising the researcher to the field.

## The Constant Comparative Method

Charmaz (2006, p.187) defines the constant comparative method, first presented by Glaser and Strauss (1967), as

a method of analysis that generates successively more abstract concepts and theories through inductive processes of comparing data with data, data with category, category with category, and category to concept. Comparisons then constitute each stage of analytic development.

This method, according to Glaser and Strauss (1967), involves four stages:

1. Comparing incidents applicable to each category;
2. Integrating categories and their properties;
3. Delimiting the theory; and
4. Writing theory.

All forms of GT, including the constructivist approach, have these four stages as the basis for constant comparison, albeit with some variations. For example, in the case study (Vancell, 2018) this researcher followed the recommendations of Charmaz (2006) and Birks and Mills (2011) as to what constitutes the key features of the constant comparative method. These include (i) coding, (ii) concurrent data generation or collection and analysis, and (iii) memo writing. These will be explained in the next sections.

### *Coding*

Saldaña (2009, p.3) explains that “a code in qualitative inquiry is most often a word or short phrase that symbolically assigns a summative, salient, essence-capturing, and/or evocative attribute for a portion of language-based or visual data”.

Coding, according to Holton (2007, p.238)

gets the researcher off the empirical level by fracturing the data, then conceptualizing the underlying pattern of a set of empirical indicators within the data as a theory that explains what is happening in the data.

It also provides, the researcher with

a condensed, abstract view with scope and dimension that encompasses otherwise seemingly disparate phenomena (ibid.).

The coding in the present study was aided by Atlas.ti, a computer-assisted qualitative data analysis software (CAQDAS). It consisted of two main phases

drawn from Charmaz (2006), Saldaña (2009) and Birks and Mills (2011): (i) an initial phase, that is, a 'first cycle' (Saldaña, 2009, p.3) of *open coding* which involved "identifying important words, or groups of words, in the data and then labelling them accordingly" (Birks and Mills, 2011, p. 9), and (ii) a 'second cycle' (Saldaña, 2009, p.149) of '*intermediate coding*' (Birks and Mills, 2011, p.11) in which the most significant initial codes were sorted, synthesised and/or integrated (Charmaz, 2006), and, subsequent (and/or concurrent) '*theoretical coding*' through which the substantive codes are related to each other "as hypothesis to be integrated into a theory" (Glaser, 1978, p.72).

The initial coding stuck closely to the data and was a non-sequential and iterative inductive process. It started with the development of an initial list of two types of open codes: (i) *in vivo* codes taken directly from the respondents' narratives and (ii) researcher codes (Glaser, 1978; Charmaz, 2006; Corbin and Strauss, 2008).

In the second cycle of coding, the researcher did not use the 'axial coding' method as suggested by Charmaz (2006) and Corbin and Strauss (2008). The researcher felt that this process was too complicated in the context of this case study. Instead, he used an intermediate process consisting of *focused coding*: conceptually similar codes were merged together, codes that were infrequent were reassessed for their usefulness in the emerging theory, and some codes, which during the initial cycle seemed like good conceptualisations, were dropped because they were considered marginal or redundant to the emerging theory. Theoretical coding was then used to lend form to the focused codes and develop the 'core category', the one "that appears to have the greatest explanatory relevance" for the phenomenon (Corbin and Strauss, 2008, p.104). During this stage, this researcher also engaged in computer-aided diagramming to integrate theoretical codes.

### *Concurrent data generation or collection and analysis*

Birks and Mills (2011) note that concurrent data generation or collection and analysis are fundamental in a GT study. To achieve this in the case study, the researcher worked in the following manner: after the first interview, he coded its transcript; he then examined the codes and found that some of these codes could be integrated into categories. This process started to highlight areas of theoretical interest which the researcher revisited and re-evaluated (through other interviews) when returning to the research setting.

As described in Vancell (2018, p.397), the researcher, to gain a deep understanding of the educational beliefs and lifeworld of the respondents used "intensive qualitative interviews" as recommended by Charmaz (2006, 28). These interviews, which followed no scripted questions, but a topic guide, allowed the interviewer and respondent to engage in "conversations with a purpose" (Burgess, 1984, p. 102) in which knowledge was constructed rather than discovered.



### *Memo writing*

Throughout all the coding stages, as suggested by Saldaña (2011), Friese (2012), and Grounded Theorists, including Glaser and Strauss (1967), Charmaz (2006) and Corbin and Strauss (2008), this researcher engaged in the writing of memos concurrently with coding. Memos are analytical notes in which the researcher records his thinking. They can be a sentence, a paragraph or a few pages of notes. Saldaña (2009, p.32) explains:

The purpose of analytic memo writing is to document and reflect on: your coding process and code choices; how the process is taking shape; and the emergent patterns, categories and subcategories, themes, and concepts in your data – all possibly leading toward theory.

For Charmaz (2006) memos form the core of a GT investigation and will help the researcher identify the 'core category'. They are also important in the audit trail that ensures rigour in a qualitative research investigation (Chiovitti and Piran, 2003).

### **Conclusion**

This paper explored the constructivist GT approach that underpins a case study – part of a larger project - which is looking at the e-learning experiences and perceptions of older workers in Maltese SMEs. GT is particularly important in the field of educational research because it allows the researcher to delve deeply into the social perceptions of learners while 'bracketing' his prior beliefs through constant reflexivity, theoretical sampling, semi-structured interviews and concurrent and iterative coding and reviewing of literature, category building and memo writing. The methodology was originally developed by Glaser and Strauss (1967) within the positivist paradigm, elevating in the process the status of the method in the scientific world. Later, Charmaz (2000; 2006) took a middle ground between positivism and postmodernism, and developed an 'evolved' and constructivist GT which "assumed the relativism of multiple social realities, recognised the mutual creation of knowledge by the viewer and the viewed, and aimed toward interpretive understanding of subjects' meanings" (Charmaz, 2000, p.510).

Lawrence and Tar (2013, p.31) do however warn of a very practical problem with constructivist GT: the methodology is "extremely labour intensive". However, this researcher believes that the method is very effective in studying the hidden world of training and e-learning in SMEs, as well as other educational and training settings.

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## Bio-note

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