

Grounded Theory and the Constant Comparative Method: Valid Research Strategies for Educators

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Grounded theory was developed by Glaser and Strauss who believed that theory could emerge through qualitative data analysis. In grounded theory, the researcher uses multiple stages of collecting, refining, and categorizing the data. The researcher uses the strategies of the making constant comparisons and applying theoretical sampling to obtain a theory grounded in the data. The justification of this paper is to provide discussion on the validity of grounded theory and the constant comparative method as effective research strategies for educators. The qualitative design of grounded theory will be the focus of this paper, along with a discussion of the constant comparative method, issues related to trustworthiness, and limitations inherent in grounded theory methodology

Keywords: qualitative research, grounded theory, constant comparative method, education research, qualitative methodology

INTRODUCTION

Grounded theory is one of four qualitative designs frequently used in the human and social sciences; the other designs are ethnographies, case studies, and phenomenological studies. The major difference between grounded theory and the other designs is the emphasis on theory development (Denzin & Lincoln, 2005). The qualitative design of grounded theory will be the focus of this paper, along with a discussion of the constant comparative method, issues related to trustworthiness, and limitations inherent in grounded theory methodology.

Grounded theory was developed by Barney Glaser and Anselm Strauss who believed that theory could emerge through qualitative data analysis (Strauss & Corbin, 1990). In grounded theory the researcher uses multiple stages of collecting, refining, and categorizing the data (Strauss & Corbin). As identified in the literature, making constant comparisons and applying theoretical sampling are necessary strategies used for developing grounded theory (Creswell, 2007; Locke, 1996; Strauss & Corbin; Taylor & Bogdan, 1998).

Constant Comparative Method

The constant comparative method is used by the researcher to develop concepts from the data by coding and analyzing at the same time (Taylor & Bogdan, 1998). The constant comparative method “combines systematic data collection, coding, and analysis with theoretical sampling in order to generate theory that is integrated, close to the data, and expressed in a form clear enough for further testing” (Conrad, Neumann, Haworth, & Scott, 1993, p. 280). Constant comparative methodology incorporates four stages: “(1) comparing incidents

applicable to each category, (2) integrating categories and their properties, (3) delimiting the theory, and (4) writing the theory” (Glaser & Strauss, 1967, p. 105). Throughout the four stages of the constant comparative method, the researcher continually sorts through the data collection, analyzes and codes the information, and reinforces theory generation through the process of theoretical sampling. The benefit of using this method is that the research begins with raw data; through constant comparisons a substantive theory will emerge (Glaser & Strauss). Grounded theory is a labor-intensive task that requires the researcher to invest time in the processes of analysis and data collection.

DATA COLLECTION

Data can be collected from observations, interviews or other research sessions (Bogdan & Biklen, 2006). During the process of gathering data the researcher can employ a variety of methods to elicit information pertaining to the study. The techniques commonly identified in the literature for collecting data are document collecting, participant observing, and interviewing (Glesne & Peshkin, 1992).

Document Collecting

Collecting written documents provide a source of information such as meeting dates or events as well as in-depth descriptions of how individuals think about their world. The research examines written documents to gain a deeper understanding and description of the participant’s convictions, conduct, and experiences (Bogdan & Biklen, 2006). Glesne and Peshkin stress the value of document collecting in corroborating observations and interviews and generating further trustworthiness among data (1992).

Participant Observing

Participant observation is a process where the researcher can observe a setting to fully participating in the setting to collect data (Glesne & Peshkin, 1992). The main purpose for participant observation is the gain thorough understanding of the research setting and the participants in the study. Often participant observation is used in conjunction with interviewing to collect data in the participant's words (Bogdan & Biklen, 2006).

Interviewing

The process of interviewing during a qualitative study allows the researcher the opportunity to gain the perspectives of other individuals. Glesne and Peshkin share how "the opportunity to learn about what you cannot see and to explore alternative explanations of what you do see is the special strength of interviewing in qualitative inquiry" (1992, p. 65). The interactive nature of interviewing is a component mentioned often as a practice in grounded theory (Strauss & Corbin, 1990). In the grounded theory approach the researcher attempts to analyze the data to develop a theoretical interpretation of what is acquired through observation (Kvale & Brickmann, 2008). Accordingly, vast amounts of data can be collected through the process of interviewing. Researchers should continue data collection until the point of data saturation (Glaser & Strauss, 1967).

Data saturation occurs when the researcher is no longer receiving information that has not previously been noted (Glaser & Strauss). During the onset of data saturation, the researcher begins to obtain a better understanding of which directions to pursue throughout analysis (Bogdan & Biklen, 2006). Data collection and data analysis occur simultaneously throughout the duration of a qualitative study (Kolb & Hanley-Maxwell, 2003). The development of generating theory is dependent on the conjunction of data collection and analysis.

ANALYSIS

Bogdan and Biklen (2007) explain data analysis as a systematic process of sifting and arranging all information obtained from interview transcripts, field notes and other material collected to increase your understanding of the data to enable the presentation of what have been discovered. In a grounded theory approach, the areas of reducing the data into manageable units and coding information are integral parts of the analysis process (Miles & Huberman, 1994).

Data reduction

In qualitative research, data reduction continues throughout the duration of the study. Data reduction is a process that involved selection, simplification, abstraction and transformation of the raw data (Miles

& Huberman, 1994). Data reduction is a form of analysis that can be used to combine pieces of information into categories.

Coding

Strauss and Corbin (2008) refer to the process of analyzing data as coding. Coding involves three levels of analyses: (a) open coding, (b) axial coding, and (c) selective coding, to gather a complete picture of the information obtained during the data collection process (Strauss & Corbin). During this first phase of the coding process the researcher is comparing data and continually asking questions about what is and is not understood. The identification of different categories, properties, and dimensions within and among the data can be accomplished by a variety of techniques that examine parts or the whole document in a systematic manner (Strauss & Corbin).

The next step of coding is the axial coding procedure where data are pieced together in new ways after open coding allowing connections between categories. By the continuation of asking question and making comparisons, the inductive and deductive thinking process of relating subcategories to a category is the main emphasis of the axial coding (Strauss & Corbin).

In the final stage of coding, Strauss and Corbin (2008) define selective coding as the process of identifying and choosing the core category, systematically connecting it to other categories, validating those similarities and relationships and then completing categories that, that need further refinement and development. Only after the process of crucial integration of weaving and refining all the major categories into the selection of a core category can the grounded theory emerge (Strauss & Corbin). The concepts and relationships that are developed through the coding process help guide the data collection and analysis process referred to as theoretical sampling.

THEORETICAL SAMPLING

In qualitative research, the process of theoretical sampling combined with the constant comparative method mentioned above is a significant strategy used by researchers in the development of grounded theory (Glaser & Strauss, 1967). Taylor and Bogdan (1998) explain that theoretical sampling is a procedure of selecting additional cases to be studied to gather new insights or expand and refine concepts already gained. Theoretical sampling is often used in conjunction with the three levels of coding as describe by Strauss and Corbin (2008). During the first level of open coding, sampling is purposeful and systematic; the second level of axial coding incorporates sampling in a more structured systematic approach to help validate relationships among the data; and the final level, selective coding, specifically

seeks a more deliberate agenda of sampling to help test and integrate categorical findings until the point of data saturation (Strauss & Corbin, 2008). Data saturation is the point when the information collected in the study becomes redundant (Bogdan & Biklen, 2006). It is necessary for data saturation to occur to help ensure that adequate information has been gathered to accurately reflect the perspectives of the study's participants.

Trustworthiness and Limitations

Establishing trustworthiness and considering study limitations are major factors in accurately reflecting the integrity of the research project (Glesne & Peshkin, 1992). Although it is difficult to prove absolute exactness of research; various strategies have been identified in the literature to improve trustworthiness through triangulation (Kolb & Hanley-Maxwell, 2003).

Triangulation

Triangulation is a technique used to accurately increase fidelity of interpretation of data by using multiple methods of data collection (Glesne & Peshkin, 1992). Triangulation usually depends on the convergence of data gathered by different methods; it can also be achieved using the same method gathered over time. Primarily, the goal of obtaining triangulation is the enhancement of validity and trustworthiness (Glesne & Peshkin).

Validity

It is the researcher's responsibility to take precautionary measures to confirm areas of validity within his/her research (Strauss & Corbin, 2008). Measures that can be taken to promote validity in a study are reflexivity, documentation, theoretical sampling, negative case analysis and transferability (Denzin & Lincoln, 2005). Because validity is an area of concern in research methodologies, researchers need to account for the information provided in the study and to acknowledge internal and external validity (Kolb & Hanley-Maxwell, 2003). Internal validity addresses the accuracy of the data by incorporating the procedures of triangulation, member checks, and participant involvement (Creswell, 2007). External validity addresses the areas of reliability and generalization. The focus of qualitative research is to form unique impressions and understandings of events rather than to generalize the findings (Creswell). Generalization in a qualitative study is enhanced by carefully examining the extent to which the development of the grounded theory can be applied to other cases (Bickman & Rog, 2008). The chances of replicating the study are more likely when detailed protocols are recorded, researcher biases are noted, and individual perspectives are anticipated (Creswell, 2007). In addition to validity, another measure to strengthen the validity is for the researcher to constantly be reflexive

throughout the duration of the study (Bickman & Rog).

Reflexivity

Another major threat to validity can be the researcher herself. Two threats to validity that commonly occur in qualitative studies are the bias of the researcher and reactivity which is the effect the researcher has on the setting or the study (Bickman & Rog, 2008). One attempt to help minimize the effects of the researcher bias on the study is reflexivity. In being reflexive the researcher must incorporate continuous awareness of reflecting, examining and exploring his/her relationship through all stages of the research process (Conrad et al., 1993). In addition to being reflexive an examination of negative case examples provides another method in checking accuracy of data analysis (Denzin & Lincoln, 2005).

Negative Cases

Similar to reflexivity, examining negative cases provides another strategy from interjecting personal bias in analysis. By investigative negative cases, researchers may gain valuable insight from the smallest piece of data that may appear insignificant at one moment but prove the contrary in the final analysis (Taylor & Bogdan, 1998). Negative cases refer to data that seems to stand far apart from the other data collected and does not coincide with the emergent theory. Researchers should carefully analyze negative cases to deepen understanding of the people they are studying (Taylor & Bogdan).

Finally, in conjunction with the above measures to increase validity with a grounded theory approach, the two central procedures of the constant comparison and theoretical sampling are recognized as a means of validity in research (Parry, 1998). Through a search of the literature, researchers continue to stress the importance of accurately presenting information to reflect the most vivid meaning of the data. It is the researcher's responsibility to take necessary measures to triangulate and validate findings, by thoroughly checking the interpretation and analysis to avoid unnecessary study limitations (Glesne & Peshkin, 1992). Regardless of what precautions are taken, limitations will be present; therefore, it is the researchers' responsibility to acknowledge those circumstances to help clarify the qualities of the study (Collet-Klingenberg, & Kolb (2011).

LIMITATIONS

Grounded theory is one of a variety of qualitative research methodologies, which may or may not be the most appropriate method based on the research problem or question. An area of caution is needed when selecting the most appropriate method to help the researcher arrive at a greater understanding and knowledge of the problem. Therefore, issues such as

managing the data and credibility are identified as concerns. Bickman and Rog (2008) suggested that data analysis should begin immediately after each interview and continue interpretive analysis until completion of the study. In a qualitative study, the sampling plan used by the researcher can have an inherent potential for bias. Purposive, convenience and theoretical sampling strategies may produce a biased sample (Bogdan & Biklen, 2006). Primarily, the researcher must be aware of potential limitations of the study and honestly share them with the readers (Collet-Klingenberg, & Kolb (2011). Lastly, the researcher's personal world view and individual biases are contributing factors that may influence the study. It is necessary to be cognizant of these factors and guard against interjecting bias within the study.

CONCLUSION

In summary, grounded theory is an approach that allows important concepts to emerge out of the data (Strauss & Corbin, 2008). The approaches and strategies described in this paper help demonstrate through the process of grounded theory; meaning is created through the generation of data. Glaser and Strauss explain "an insight, whether borrowed or original, is of no use to the theorist unless he converts it from being simply an anecdote to being an element of theory (1967, p. 254). There are creative and innovative ideas forming and evolving in the minds of educators. I feel the challenges that educators meet are not the lack of great ideas, but the lack of taking the time to listen to the ideas, asking more questions, comparing these thoughts with other ideas, pondering and sorting through these meanings, and then researching and writing these conclusions.

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