Reducing Confusion about Grounded Theory and Qualitative Content Analysis: Similarities and Differences

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Although grounded theory and qualitative content analysis are similar in some respects, they differ as well; yet the differences between the two have rarely been made clear in the literature. The purpose of this article was to clarify ambiguities and reduce confusion about grounded theory and qualitative content analysis by identifying similarities and differences in the two based on a literature review and critical reflection on the authors' own research. Six areas of difference emerged: (a) background and philosophical base, (b) unique characteristics of each method, (c) goals and rationale of each method, (d) data analysis process, (e) outcomes of the research, and (f) evaluation of trustworthiness. This article provides knowledge that can assist researchers and students in the selection of appropriate research methods for their inquiries. Keywords: Data Analysis, Grounded Theory, Qualitative Content Analysis, Qualitative Research, Research Method

Introduction

Using an appropriate research method for inquiry is critical to successful research. Grounded theory and qualitative content analysis share similarities. Both are based on naturalistic inquiry that entails identifying themes and patterns and involves rigorous coding. They are both used to analyze and interpret qualitative data; however, the similarities and differences in grounded theory and qualitative content analysis have not been clarified in the literature (Priest, Roberts, & Woods, 2002), nor have they been consistently considered.

To illustrate, both have been considered equivalent approaches to interpret qualitative data (e.g., Priest et al., 2002). Grounded theory was treated as a research methodology, and content analysis as a method (e.g., Crotty, 2003); furthermore, grounded theory was considered a theoretical framework and content analysis a research method of textual data analysis (e.g., Patton, 2002). Qualitative content analysis was considered a strategy for the analysis of qualitative descriptive studies (Sandelowski, 2000) and a technique with overtones of other research methods, such as ethnographic and grounded theory (Altheide, 1987). Qualitative content analysis was unknown as a research method until recently, especially in English-speaking countries, because of the dominance of quantitative content analysis (Schreier, 2012).

Moreover, a researcher's approach purportedly following grounded theory actually seems closer to qualitative content analysis or other methods (Sandelowski & Barroso, 2003; Suddaby, 2006). Sandelowski and Barroso (2003) cited the discrepancy between "method claims and the actual use of methods" (p. 905) in research papers. Novice researchers, especially students who want to conduct qualitative research, are often confused by the characteristics of the two as result of the lack of comparative references. Some researchers who stated they had used grounded theory actually used qualitative content analysis, which

incorporates some procedures of grounded theory, such as open coding or memoing (Sandelowski & Barroso, 2003).

Thus, the purpose of this paper is to clarify ambiguities about the characteristics of grounded theory and qualitative content analysis. Using our own research as examples, we have discussed the similarities and differences in the two in the following six areas:

a) background and philosophical basis,
b) unique characteristics of each method,
c) goals and rationale of each method,
d) data analysis process,
e) outcomes of the research, and
f) evaluation of trustworthiness of research.

We have also discussed the strengths and weaknesses of each. Through this paper, we expect to provide knowledge that can assist novice researchers in the selection of appropriate research methods for their inquiries.

Background and Philosophical Basis

Grounded Theory

The term *grounded theory* was introduced in *The Discovery of Grounded Theory* (1967) by Glaser and Strauss as "the discovery of theory from data—systematically obtained and analyzed in social research" (p. 1). Instead of verification of theories, they introduced a research method to arrive at a "theory suited to its supposed uses" contrasting with a "theory generated by logical deduction from *a priori* assumptions" (p. 3). According to Strauss and Corbin (1994) it is "a general methodology, a way of thinking about and conceptualizing data" (p. 275).

The Grounded Theory Institute, run by Glaser, one of the founders of grounded theory, defined it as follows:

> Grounded Theory is an inductive methodology. Although many call Grounded Theory a qualitative method, it is not. It is a general method. It is the systematic generation of theory from systematic research. It is a set of rigorous research procedures leading to the emergence of conceptual categories. . . . Grounded Theory can be used with either qualitative or quantitative data. (Grounded Theory Institute, 2013)

According to Crotty (2003), methodology is "the strategy, plan of action, process or design," and method is "the techniques or procedures used to gather and analyze data" (p. 3); however, based on its founders' definitions, grounded theory works as a method as well as a methodology.

The proposal of grounded theory was a reaction to positivism, which followed a scientific falsification and verification. Glaser and Strauss (1967) suggested that a researcher can achieve a theory that is meaningful in certain contexts from observations and the observers' consensus (Suddaby, 2006). Grounded theory involves the "use of an intensive, open-ended, and iterative process that simultaneously involves data collection, coding (data analysis), and memo-writing (theory building)" (Groat & Wang, 2002, p. 181).

The conceptual orientation of grounded theory resembles that of symbolic interactionism (Priest et al., 2002), which is based on the belief that "human beings are acting

rather than just responding beings and that human action is purposeful and based on the meanings that the individual has for them" (Nusbaum & Chenitz, 1990). Inherent in the symbolic interactionism is the position that "meaning is negotiated and understood through interactions with others in social processes" (Starks & Trinidad, 2007, p. 1374).

After Glaser and Strauss' introduction, grounded theory developed in several directions with variations (Tan, 2010). To illustrate, Glaser emphasized openness and creativity in interpretation of data, whereas Strauss and Corbin emphasized rigorous and prescriptive routines in data analysis (Tan, 2010). Glaser (1992) criticized Strauss and Corbin's approach as forcing data and too prescriptive, and Glaser's approach was criticized as too open and difficult for novice researchers to follow (Buckley & Warning, 2009). In addition to those two approaches, Charmaz (2006) suggested a social interaction approach in using grounded theory that emphasized the researcher's interaction and involvement with participants in constructing theory. Although the origin was from sociology, grounded theory has been actively used in many disciplines, such as psychology, anthropology, education, social work, and nursing (Strauss & Corbin, 1994).

Qualitative Content Analysis

The early definition of content analysis shows that it started as a quantitative research method: "a research technique for the objective, systematic, and quantitative description of the manifest content of communication" (Berelson, 1952, p. 18). Content analysis is described as a method to classify written or oral materials into identified categories of similar meanings (Moretti et al., 2011). These categories represent either explicit or inferred communication (Hsieh & Shannon, 2005). Abrahamson (1983) asserted that content analysis can be fruitfully used to examine virtually any kind of communication materials, including "narrative responses, open-end survey questions, interviews, focus groups, observations, printed media such as articles, books, or manuals" (as cited in Hsieh & Shannon, 2005, p. 1278). Because researchers can engage in data collection with or without direct contact with persons studied, it can be an unobtrusive method.

Content analysis was first used as an analytic technique at the outset of the 20th century for analysing textual materials from hymns, newspaper and magazine articles, political speeches, advertisements, and folktales and riddles (Elo & Kyngäs, 2008; Harwood & Garry, 2003). It was primarily used as a quantitative research method to analyze "the content of media text to enable similar results to be established across a group of text coders" (Priest et al., 2002, p. 35).

The quantitative approach in content analysis was criticized, however, because it often simplified and distorted meaning as a result of breaking down text into quantifiable units in the analytic process. Kracauer (1952) advocated a qualitative approach to content analysis, in which meanings and insights can be derived from the text more holistically. That critique led finally to the development of qualitative content analysis by application of the systematic use of a category system (Mayring, 2000; Priest et al., 2002). Qualitative content analysis can be referred to as "a research method for subjective interpretation of the content of text data through the systematic classification process of coding and identifying themes or patterns" (Hsieh & Shannon, 2005, p. 1278). It is "a method for systematically describing the meaning of qualitative material" (Schreier, 2012, p. 1).

Unique Characteristics in Each Method

Grounded Theory

Grounded theory has two unique characteristics: constant comparative analysis and theoretical sampling (Glaser & Strauss, 1967). Constant comparative analysis entails an iterative process of concurrent data collection and analysis, which involves "the systematic choice and study of several comparison groups" (Glaser & Strauss, 1967, p. 9). The researcher does not wait until data are completely collected to begin data analysis; instead, data collection and analysis occur simultaneously so that the analyzed data guides subsequent data collection. During the data analysis process, an incident should be compared and contrasted with other incidents (Corbin & Strauss, 1990). Researchers need to make comparisons between empirical data and concept, between concept and categories, among data, among categories, and among "different 'slices of data' in order to reach higher levels of abstraction and advance with the conceptualization" (Gregory, 2010, p. 7).

The purposes of comparative analysis are to obtain accuracy of evidence in the conceptual category and to establish the generality of a fact. In addition, one can achieve two major requirements of theory:

1) parsimony of variables and formulation and
2) scope in the applicability of the theory to a wide range of situations" (Glaser & Strauss, 1967, p. 111).

Theoretical sampling is "the process of collecting data for comparative analysis" (Glaser & Strauss, 1967, p. 9), which means insight from initial data collection and analysis leads to subsequent data collection and analysis. It involves "recruiting participants with differing experiences of the phenomenon so as to explore multiple dimensions of the social processes under study" (Starks & Trinidad, 2007). During analysis, researchers must be theoretically sensitive to the data analysis that guides them toward what to do next.

Qualitative Content Analysis

One unique characteristic of qualitative content analysis is the flexibility of using inductive or deductive approaches or a combination of both approaches in data analysis. Second is the ability to extract manifest and latent content meaning.

First, qualitative content analysis is flexible in the use of inductive and deductive analysis of data depending on the purpose of one's studies (Elo & Kyngäs, 2008). The key difference between the two approaches centers on how initial codes or categories are developed. An inductive approach is appropriate when prior knowledge regarding the phenomenon under investigation is limited or fragmented (Elo & Kyngäs, 2008). In the inductive approach, codes, categories, or themes are directly drawn from the data, whereas the deductive approach starts with preconceived codes or categories derived from prior relevant theory, research, or literature (Cavanagh, 1997; Kondracki, Wellman, & Amundson, 2002). The deductive approach is appropriate when the objective of the study is to test existing theory or retest existing data in a new context.

Second, coding in qualitative content analysis can attend to the manifest as well as the latent content meaning of communications. Whereas manifest content means the researcher codes the visible and surface content of text, latent content means that the researcher codes the underlying meaning of the text (Graneheim & Lundman, 2004). Often the researcher wishes to reach beyond the manifest content of the text and analyze latent content (Potter &

Levine-Donnerstein, 1999). Schreier (2012) argued qualitative content analysis is suitable for data that require some degree of interpretation.

Research Goals and Rationale for Using a Specific Method

A researcher who uses grounded theory aims to generate a substantive theory that will explain a phenomenon in a specific context and suited to its supposed use. The emphasis in grounded theory is theory development (Strauss & Corbin, 1994). Thus, grounded theory is appropriate when no theory exists or when a theory exists that is too abstract to be tested, but it is not appropriate for the test of a theory or generation of knowledge from objective reality (Martin & Turner, 1986; Suddaby, 2006).

In contrast, a researcher who uses qualitative content analysis aims to "systematically describe the meaning" of materials in a certain respect that the researcher specified from research questions (Schreier, 2012, p. 3). Although both grounded theory and qualitative content analysis follow coding processes, content analysis does not focus on finding relationships among categories or theory building; instead, it focuses on extracting categories from the data.

Two research examples appear below in order to explain and demonstrate the rationale of using one or the other of the methods. The examples are from the dissertations written by the authors of this paper.

Study 1: Using Grounded Theory

The sample research using grounded theory done by Cho (2011) is a study of the process of aesthetic education in architectural design studios, titled *Pedagogy of Aesthetics: A Study of Three Architectural Design Studios* (2011). Interested in how aesthetics (discussion of beauty) is handled in architectural design studios, she wanted to understand the process of aesthetic education holistically, this is, what contributes to that education process and how each component of the process relates and interacts with the other components. It was a broad and open inquiry instead of a specified one made from a certain perspective or angle.

Little discussion, dialogue, or debate about the pedagogy of aesthetics in architectural design is available in the literature even though aesthetics is one of the central issues in the field (Johnson, 1994). Neither aesthetics nor pedagogy was commonly discussed in architectural education (Johnson, 1994; Ochsner, 2000). The grounded theory approach seemed appropriate because no theory exists regarding the pedagogy of aesthetics; thus, her research was intended to generate a theory from comparative analysis of educational context. If her research question was not intended to generate a theory but to identify the components of the pedagogy of aesthetics, she might have used qualitative content analysis instead of grounded theory.

Sample selection was a key essential element for the research. What context is most appropriate for the researcher to discover phenomena regarding the process of aesthetics? She, therefore, decided to collect data using purposeful sampling, which involves "selecting information-rich cases strategically and purposefully" (Patton, 2002, p. 243). Three instructors' design studios were selected based on two criteria: (a) winning at least one teaching award from their respective universities and (b) recommendation by each school's administrator for their ability to help students produce design outcomes of high aesthetic quality.

Data were obtained from multiple sources, such as observations of the three design studios once a week for one academic semester per studio; interviews with the three

instructors, their 40 students, and the three administrators; and students' design outcome material reviews.

Study 2: Using Qualitative Content Analysis

Lee, the other author of this article, was interested in understanding of the overall features of physical, social, and organizational environments of U.S. nursing homes where many Korean American elders live. She was also interested in the residents' particular needs, preferences, and levels of satisfaction regarding the nursing home environment. If her research question had not been to identify the residents' needs, preferences, and levels but to understand what occurs in that context and how each need influences the residents' lives and to generate a theory explaining those relationships, she might have used grounded theory instead of qualitative content analysis.

Three Case Studies of Korean American Nursing Homes was the title of Lee's dissertation (2010). Korean American elders are one of the fastest increasing Asian groups in the United States, and they add to the growing cultural and linguistic diversity of the older population. In spite of their continuous and rapid demographic increase, Lee found a dearth of research regarding the living experiences of older Korean American nursing home residents, their particular needs and preferences, and the environment provided by nursing homes in the United States. Thus, she selected three nursing homes for Korean American residents on the East Coast as research sites to identify their physical, social, and organizational features in order to increase their cultural appropriateness and thus improve their quality of life.

Her two research questions were

(1) What are the physical, social, and organizational features of the environment of nursing homes for Korean American elders living in the United States?
(2) What are the particular needs, preferences, and levels of satisfaction of Korean American residents regarding the physical, social, and organizational features of the environment of nursing homes?

Data were collected from in-depth, face-to-face interviews with 26 Korean American residents, six family members, and five staff members. In addition, observations, document review, and field notes enriched and complemented the primary data. The participants were selected among those who

a) were Korean Americans, aged 55 and older, who resided in a nursing home and
b) had the cognitive ability to understand and answer questions.

Qualitative content analysis is frequently employed "to answer questions such as what, why and how, and the common patterns in the data are searched for" by using a consistent set of codes to organize text with similar content (Heikkilä & Ekman, 2003, p. 138). Lee used both deductive and inductive approaches to qualitative content analysis. The former was used to identify the overall physical, social, and organizational features of each nursing home by applying existing theory and prior categories. The latter was used to identify needs, preferences, and levels of satisfaction of Korean American elders in nursing homes.

Data Analysis Process

Data analysis in grounded theory and data analysis in qualitative content analysis share similarities in that both involve a systematic coding process. They entail coding, finding categories and theme(s); however, the procedure is different. Specifically, data collection and analysis are parallel in grounded theory, and the procedure is neither linear nor sequential. The amount of data for analysis is based not on availability but on saturation. Moreover, in grounded theory, because of the nature of theoretical sampling, theory generated from the data actually guides the decision about what kinds of data are appropriate for subsequent data collection.

Another difference is that qualitative content analysis entails a data reduction process by focusing on selected aspects of data. Data reduction is achieved by limiting "analysis to those aspects that are relevant with a view to your research question" (Schreier, 2012, p. 7). This difference relates to the nature of grounded theory, which requires a high degree of interpretation and transformation of data. Sandelowski (2000) argued that qualitative content analysis entails analyzing qualitative descriptive studies that are data-derived and the least interpretative compared to other approaches to qualitative analysis because "there is no mandate to re-present the data in any other terms but their own" (Sandelowski, 2000, p. 338). Sandelowski also argued that qualitative descriptive studies require researchers to "stay closer to their data and to the surface of words and events" than grounded theory (p. 336).

In a brief explanation, the analysis process in grounded theory involves concept labelling, categorizing, identifying core categories, finding relations among categories, and generating a theory from such relationship. The analysis process in qualitative content analysis comprises selecting the unit of analysis, categorizing and finding themes from categories.

Grounded Theory

Data analysis in grounded theory was originally introduced by Glaser and Strauss (1967) as a method of constant comparative analysis; they proposed that constant comparative analysis consists of "explicit coding and analytic procedures" (p. 102) and suggested the following four procedures of data analysis:

1) comparing incidents applicable to each category,
2) integrating categories and their properties,
3) delimiting the theory, and
4) writing the theory (p. 105).

Corbin and Strauss (1990) explained coding as the process of concept labelling and categorizing. They considered the concept as a "basic unit of analysis" (p. 7). Concepts with the same phenomena can be grouped into a category (Corbin & Strauss, 1990). Coding is also described as "categorizing segments of data with a short name that simultaneously summarizes and accounts for each piece of data" (Charmaz, 2006, p. 43) and as "the pivotal link between collecting data and developing an emergent theory to explain these data" (p. 46). Through coding, the researcher seizes the meaning of the data.

Along with the evolution of grounded theory, different versions of coding processes were proposed. Glaser (1978, 1992) suggested two stages of coding as substantive coding (consisting of open coding and selective coding) and theoretical coding. Corbin and Strauss (1990) suggested three stages of coding: open coding, axial coding, and selective coding. Charmaz (2006) also proposed three stages: initial coding, focused coding, and theoretical

coding. Harry, Sturges, and Klingner (2005) summarized the following six stages as the analysis level of grounded theory approach: open coding, conceptualizing categories, developing themes, testing the themes, interrelating the explanations, and delineating the theory.

Open coding is "the initial step of theoretical analysis that pertains to the initial discovery of categories and their properties" (Glaser, 1992, p. 39). It is "the interpretive process by which data are broken down analytically" (Corbin & Strauss, 1990, p. 12). Open coding includes comparison of incident with other incidents in terms of similarity and differences, giving conceptual labels to incidents, and grouping those concepts together into categories (Corbin & Strauss, 1990).

Axial coding is a process of exploring the relationships among categories (Strauss, 1987). In axial coding, researchers relate categories with their subcategories, test the relationships against data, and test the hypothesis (Corbin & Strauss, 1990). Selective coding refers to the process by which researchers select one or more core categories intended to generate a story that connects the categories. Glaser's (1978) theoretical coding is a process of theorizing the relationships among substantial codes. At the end of the analysis, a theory, a set of theoretical propositions, is generated (Corbin & Strauss, 1990).

In Charmaz's (2006) coding process, initial coding is similar to open coding, during which the researcher develops categories of information. Focused coding is a process designed to narrow initial codes down to frequent and important codes. Theoretical coding, a process used to find relationships between codes and categories, has the potential to result in a theory (Charmaz, 2006).

Study 1: Using Grounded Theory

In Study 1, data collection and analysis were parallel. During observation, Cho wrote memos of her impressions of important discussions and issues. As soon as she obtained a certain amount of data, she transcribed and read them. Data analysis in Study 1 followed Corbin and Strauss' (1990) coding processes.

First, Cho transcribed observation and interview data throughout the data collection period, rereading the transcribing data until acquiring a sense of the direction for analysis. Second, she coded the transcription of incidents line by line and labelled certain concepts common to them (open coding). She set aside codes unrelated to her research questions as well as those that appeared infrequently, and then she tried to find relationships among codes (axial coding). Through those processes, she identified the most significant and frequent codes (selective coding). Using the multisourced data, she coded interviews with students, interviews with instructors and administrators, and observations separately.

Third, Cho carried out visual material analysis of students' design outcomes, such as drawings, sketches, and models, to understand the interaction between instructors and students as related to students' design development in terms of aesthetics. The visual material analysis was conducted to develop, revise, and verify already found codes and categories from interviews and observations.

Fourth, once she found codes and categories from each design studio, she conducted a cross-case analysis among the three studios. The three cases were analyzed to determine whether any common features of pedagogy of aesthetics arose among the three studios. Searching for common patterns and themes, Cho discovered seven categories from instructor interviews, six from student interviews, and six from observations.

Fifth, the discovered codes and categories were compared with one another to determine the relationships among the different data types. Comparisons of the observation

data with the visual material as well as the interview data with observations were conducted. Through this process she modified and finalized the categories. Finally, Cho developed core themes and relationships into a theory that explains the process and the pedagogy of aesthetics in the architectural design studio.

Because Study 1 was a multicase study consisting of three cases, different levels of analysis emerged: within case analysis, within same data source analysis, and cross-case analysis. Figure 1 shows the data analysis procedures of the grounded theory approach. Figure 2 shows data analysis procedures within and cross case analysis applied to Study 1.
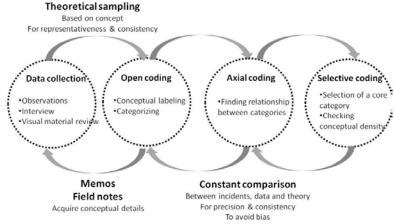

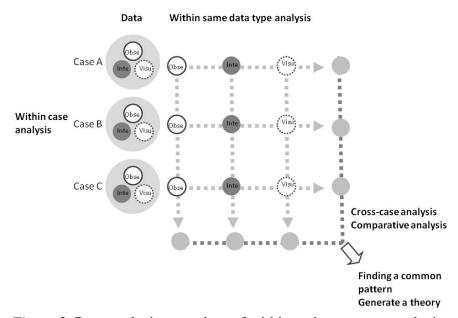*Figure 1.* Data analysis procedure of grounded theory method.

Figure 2. Data analysis procedure of within and cross-case analysis.
Note: *Int* means interview, *obs* means observation, and *vis* means visual material reviews.

Qualitative Content Analysis

Compared to grounded theory, the procedures required in qualitative content analysis have not been well articulated in the literature (Cavanagh, 1997); however, Mayring's (2000) steps have provided clarification. Mayring proposed two different procedures for qualitative content analysis according to researchers' approaches: inductive category development and deductive category development. Inductive category development consists of

a) the research question,
b) the determination of category and levels of abstraction,
c) the development of inductive categories from material,
d) the revision of categories,
e) the final working through text, and
f) the interpretation of results.

In deductive category development, the second and third steps are different:

b) theoretical-based definitions of categories, and
c) theoretical-based formulation of coding rules (Mayring, 2000, pp. 4–5).

Overall, the process of data analysis includes the following core steps: selecting the unit of analysis, creating categories, and establishing themes. Selecting the units of analysis is an important initial step as a means to reduction. Researchers should decide which data will be analyzed by focusing on a selected aspect of material depending on the research questions. They may be a part of or all the text data, such as transcripts of interviews, observation, and drawings.

Creating categories is a means to compress a large number of texts into fewer content-related categories. A category refers to items "with similar meaning and connotations" (Weber, 1990, p. 37). It must be "mutually exclusive and exhaustive" (Crowley & Delfico, 1996, p. 20), and no data should fall between two categories or be placed in more than one category. In addition, enough categories to accommodate important contents must be created. Researchers should determine how best to categorize data because data often lack a single meaning or interpretation (Cavanagh, 1997).

Establishing a theme is "a way to link the underlying meanings together in categories" (Graneheim & Lundman, 2004, p. 107). The concept of a theme has multiple interpretations: It is a way to describe a structural unit of meaning essential to present qualitative results (Streubert & Carpenter, 1995); a recurring regularity identified within or cutting across categories (Polit & Hungler, 1999); and "an expression of the latent content of the text" (Graneheim & Lundman, 2004, p. 107).

Study 2: Using Qualitative Content Analysis

In Study 2, to answer the first research question—What are the overall features of the physical, social, and organizational environments of Korean American nursing homes for residents with different cultural backgrounds?—Lee used a deductive approach to qualitative content analysis. She began by selecting units of analysis, which included whole interview transcripts, field notes, documents, and floor plans of the facilities.

Next, she determined and defined three main categories—physical, social, and organizational features—derived from the Integrative Model of Place (IMP) proposed by Calkins and Weisman (1999), a proper model to examine the environment of long-term care facilities. According to the IMP, "a setting is composed of a complex system of relationships among four distinct dimensions: individual, social context, organizational context, and physical setting" (Calkins & Weisman, 1999, p. 133). Among the four, three were used in Study 2 (social, organizational, and physical setting). The three categories were divided into subcategories (e.g., public spaces, interaction/relationship with staff, and services). She coded all text that appeared to describe the physical, social, and organizational features according to the predetermined categories. Some categories were revised, removed, and added during this

procedure. Data that could not be coded into one of the predetermined categories were coded with new categories. Finally, she compared the contents of the categories across all the nursing homes. Figure 3 shows the procedures of deductive qualitative content analysis for the first research question of Study 2.
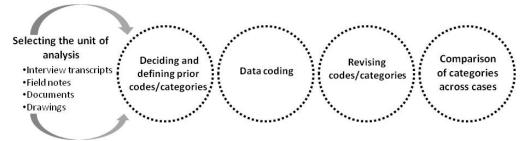

Figure 3. Procedure for a deductive approach to qualitative content analysis.

To answer the second research question — what are the particular needs, preferences, and levels of satisfaction of Korean American residents regarding the physical, social, and organizational environments of nursing homes?—Lee used an inductive approach to qualitative content analysis. She extracted text from interview transcripts and field notes to identify needs, preferences, and levels of satisfaction of Korean American elders in nursing homes, and then synthesized that text to establish the units of analysis. She started open coding by reading each transcript word by word and line by line. After completion of the open coding, she determined the preliminary codes that emerged from the text and then coded the remaining transcripts with those codes. When she encountered data that did not fit an existing code, she added new codes.

The next steps were to group similar codes and place them into categories. Lee reorganized categories into broader, higher order categories, then grouped, revised, and refined, and finally checked to determine whether the categories were mutually exclusive. At that point she could form final categories. She identified nine subthemes both within and across the categories and then organized the subthemes into two main themes. Figure 4 shows the procedure of inductive qualitative content analysis used for the second research question of the research.
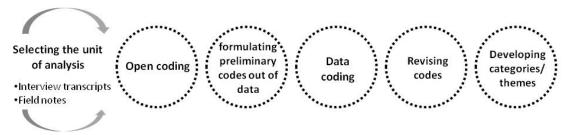

Figure 4. Procedure used in an inductive approach to qualitative content analysis.

Research Outcomes

The research outcome of grounded theory is a substantive theory that is "suited to its supposed uses" (Glaser & Strauss, 1967, p. 3). Substantive theory is developed and generated through interplay with data collected in actual research. It is different from higher level general theory because general theory is achieved from deductive approaches (Strauss & Corbin, 1994). It consists of plausible and conceptually dense relationships among concepts and sets of concepts. The nature of a substantial theory is provisional and has the potential to

be extended "to a more elaborative substantive theory or to formal theories" (Strauss & Corbin, 1994, p. 282).

The research outcome of qualitative content analysis is the meaning of qualitative material formatted as categories or themes that answer the research questions. The use of qualitative content analysis yields a set of priority categories that cover the data instead of developing a new theory by identifying the relationships among codes and categories.

In research on classifying the findings in qualitative studies, Sandelowski and Barroso (2003) argued that the findings of grounded theory require a greater transformation of the data and that qualitative content analysis is less transformative. They argued that qualitative descriptive study, which uses qualitative content analysis strategy, has lowest level of abstraction as a topical survey and that grounded theory has one with highest levels of transformation of the thematic description of the original data. They defined the main characteristics of topical survey as "the reduction of qualitative data in ways that remained close to those data as given" (pp. 910–911); but in thematic description, authors "imported concepts or themes to reframe a phenomenon, event, or case" (p. 911).

Study 1: A Theory of the Process of Aesthetic Education

A final result of Study 1 was Cho's proposal of a theory of "process of aesthetic education." This theory took the form of a diagram of the process of aesthetic education and the relationships among its components (see Figure 5).
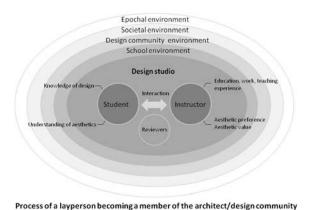

Figure 5. A theoretical diagram of the process of aesthetic education (adapted from Cho, 2011, p. 216).

Cho argued that aesthetic education in design studio is a process by which a layperson becomes a member of the architecture and design community. Students come to design studios with aesthetic attitudes similar to laypersons and become open to new aesthetics through instructor–student interaction and instructor criticism of student design development. Through such a process, students acquire knowledge and attitudes and discover the aesthetics prevalent and accepted in the design community. Thus, aesthetics education is a process whereby a layperson is acculturated to the community of architects and designers.

Eight components influence and shape the process of aesthetic education:

a) the epochal environment that frames the society with the spirit of the era,
b) the societal environment that embodies the agenda of the society overall,
c) the design community environment as a professional society,
d) the school environment,
e) instructors' past education and experience,

f) instructors' aesthetic preference and aesthetic value,
g) students' knowledge of design and understanding of aesthetics, and
h) reviewers' comments.

Thus, the theory includes the argument that aesthetic education is the sum of all these elements; if one element changes, the approach to education will change, too.

The theory proposed by Cho is a substantive theory grounded in a particular substantive area (architectural design studios) and explains the process of aesthetic education in the observed three design studios; however, it has important implications to the development of general theory through the accumulation of multiple studies or through comparison with the studies of other researchers.

Study 2: Categories and Themes in Nursing Homes for Korean American Elders

The outcome of Study 2 took the form of categories and themes identified through qualitative content analysis. By means of a deductive approach, the physical, social, and organizational features that were identified describe the overall features of nursing homes for Korean American elders (Table 1). Through an inductive approach, two main themes regarding the particular needs, preferences, and levels of satisfaction of Korean American elders emerged. They are

a) "I want to maintain the Korean way of life in the nursing home" and
b) "Where do I receive care like here? But. . . ." (Table 2).

Table 1:
Subcategories and Categories Used a Deductive Approach to Qualitative Content Analysis

Category	Physical Features	Social Features	Organizational Features
Subcategory	Private or semiprivate spaces	Interaction/relationships with other residents	Services
	Public spaces	Interaction/relationships with the staff	Activities
	Exterior spaces	Interaction/relationships with family and friends outside the nursing home	Rules/policies

Table 2:
Themes and Subthemes Using an Inductive Approach to Qualitative Content Analysis

Main theme	I want to maintain the Korean way of life in the nursing home	Where can I receive care like here? But…
Subtheme	Korean food	No freedom
	Sharing foods with neighbors	Nobody to converse with
	Asian herbal remedies	
	Ondol room	
	Korean cultural activities	
	Church services in the nursing home	
	Korean staff	

Evaluation of Trustworthiness and Quality of Research

Grounded Theory

Corbin and Strauss (1990) suggested the following as evaluation criteria for grounded theory: rigor in the coding and research process, quality of concepts, systematic relatedness among concepts, conceptual density, range of variations and specificity, significance of theoretical findings, and theoretical sensitivity (pp. 18–19).

Findings using grounded theory should have conceptual density; that is, categories should be theoretically dense, richly dimensional, and tightly linked with one another (Corbin & Strauss, 1990). Developed theory from research using grounded theory should be judged in terms of "the range of variations and the specificity with which they are analyzed in relation to the phenomena that are their source" (p. 18). Theoretical sensitivity denotes the researcher's sensitivity to the theory and to "the subtleties of actions/interactions" (Corbin & Strauss, 1990, p. 19).

In addition to these criteria specific to grounded theory, criteria for overall qualitative research methodology can be also used for enhancing the quality and trustworthiness of the research. Triangulation via the use of multiple and different data sources, perspectives, sites, and theories is one of the basic strategies. In Study 1, Cho employed data triangulation, theory triangulation, and methodological triangulation. She used a variety of data sources from observation, interviews, and visual material evidence. Because of the lack of an established theory on the pedagogy of aesthetics, she brought multiple theories from architectural history and theory, philosophy, psychology, and education to interpret the observed phenomena. She also used multiple case studies with the grounded theory approach.

From among Maxwell's (1996) proposed methods for validity testing, Cho used intensive, long-term involvement in the research site, thick and rich description of phenomena, presentation of negative or discrepant information, and use of peer debriefing. Long-term participants help researchers "rule out spurious associations and premature theories" (Maxwell, 1996, p. 110). Her research involved one year of data collection, consisting of weekly observations of the research site; and as a result, a thick and rich description was achieved. She also reported the reality without distortion, including conflicting views ascertained through interviews of students and instructors.

Qualitative Content Analysis

No evaluation criteria have been specifically designed for qualitative content analysis, but overall qualitative research criteria can be applicable. Credibility (truth value), transferability (applicability), and dependability (consistency) have been used to evaluate the trustworthiness of the qualitative inquiry (Guba, 1981) and are applicable for both grounded theory and qualitative content analysis. To measure trustworthiness of qualitative content analysis, these concepts are still validly used (Graneheim & Lundman, 2004).

In order to increase the credibility of the findings of a study, several strategies can be used, such as triangulation, member checking, showing representative quotations, and peer debriefing. In Study 2, Lee employed multiple methods for triangulation, such as interviews with residents, family members, and staff members as well as observation, document reviews, and drawings. The objective of triangulation is to diminish researcher bias in the data and the likelihood of misinterpretation when checking the findings against various data sources and perspectives. Graneheim and Lundman (2004) suggested the selection of "the most suitable meaning unit" (p. 110) and the capacity of categories and themes to cover data as the other strategies for credibility.

To facilitate transferability, researchers provide "background data to establish [the] context of [the] study and detailed description of [the] phenomenon in question to allow comparisons to be made" (Shenton, 2004, p. 73). Dependability can be enhanced via an audit trail that includes all records, notes on methodology, and documents produced and corrected during the research procedure.

Summary of Comparison of Grounded Theory and Qualitative Content Analysis

Table 3 provides a summary of the comparison of the two methods in terms of philosophical basis, characteristics, research goals, data analysis, research outcomes, and evaluation criteria, and strengths and weaknesses of each method.

Table 3: *Summary of Comparison of Grounded Theory Approach and Qualitative Content Analysis*

Similarities		
Based on naturalistic inquiry Flexibility of using multiple sources of data Systematic steps in analysis Seeking themes through coding process Text to be coded into categories or themes Follow qualitative analysis trustworthiness method		
Differences	**Grounded theory**	**Qualitative content analysis**
Philosophical basis	Social interactionism Reaction to positivism	Reaction to quantitative content analysis
Characteristics	Constant comparative analysis Theoretical sampling Requiring high degree of transformation and interpretation of data	Flexibility of using both the inductive and deductive approaches in data analysis; Allowance for analyzing the manifest or/and latent content meaning of communications
Research goals	Generate a theory	Describe meaning of materials Develop categories or themes
Data analysis process	• Open coding • Axial coding • Selective coding (Corbin & Strauss, 1990) • Substantive coding • Theoretical coding (Glaser, 1978; 1992) • Initial coding • Focused coding • Theoretical coding (Charma, 2006)	Inductive approach: • Selecting the units of analysis • Open coding • Creating categories • Data coding • Revising categories Deductive approach: • Selecting the units of analysis • Deciding and defining categories derived from prior theory • Data coding into the predetermined categories • Revising categories
Research outcomes	Substantive theory	List of categories or themes Meaning of qualitative materials
Evaluation method	Conceptual density Theoretical sensitivity	No specific evaluation methods only for content analysis Follow qualitative analysis trustworthiness
Strengths	Flexibility and creativity in approach to inquiry Openness in creating a new theory Holistic understanding Well-defined analysis procedure	Understand the meaning of social reality or phenomena through verbal or written communication materials Large quantities of data can be treated Coding categories can be derived from the data or relevant existing theory or previous research.
Weaknesses	Requires knowledge in exact version of grounded theory approach Stringent saturation process Risk of not generating significant theory despite of time and energy devoted Difficulty in anticipating the research time frame	Inappropriate for open explorative or descriptive research Labor-intensive and time-consuming procedure Less established analysis process

In terms of similarities in grounded theory and qualitative content analysis, both methods are based on naturalistic inquiry. Data can be collected from multiple channels, such as interviews, observations, documents, and visual materials. In addition, both methods follow the systematic procedure of data analysis. By means of the coding process, the researcher seeks codes and categories. Especially in inductive content analysis and grounded theory, researchers seek themes from data analysis; moreover, to enhance the trustworthiness of research, criteria for measuring the quality of qualitative research methods can be used in addition to specific criteria for each method.

In terms of differences, grounded theory emerged from the field of sociology, but qualitative content analysis originated in communication and linguistics. The philosophical basis of grounded theory lies in social interactionism and a reaction to positivistic view of science, but qualitative content analysis is the result of a reaction to quantitative content analysis to understand the meaning of the context. Their characteristics and data analysis procedures differ. The final result of a grounded theory study is a substantive theory, and that of qualitative content analysis is a list of categories and themes. In grounded theory, a substantive theory that surpasses a list of codes is highly important. Grounded theory analysis yields more than data reduction, abstraction, and core categories; it generates a substantive theory that can explain the phenomenon. Use of qualitative content analysis yields a set of priority categories that cover the data instead of a new theory developed by identifying the relations among codes.

Strengths and Weaknesses of Grounded Theory and Qualitative Content Analysis

Several strengths and weaknesses in the use of grounded theory and qualitative content analysis were identified from literature and critical reflection of the authors' research processes.

The strengths of utilizing grounded theory are as follows:

(1) When the researcher makes an inquiry when no relevant theory exists, grounded theory gives the researcher a creative approach without confining him or her to an already existing realm of theory (Suddaby, 2006).
(2) It allows the researcher to look at phenomena with new eyes and from new perspectives without restriction within already existing hypotheses.
(3) It allows the researcher to understand phenomena holistically.
(4) Compared to other qualitative research method, it has a better defined procedure in the coding process.

The weaknesses of grounded theory are as follows:

(1) Because of the number of variations in the original grounded theory text, novice researchers experience confusion in conducting their research. Researchers need to conduct their research with understanding of different coding processes from different versions.
(2) It does not provide a predefined research sampling process. In order to achieve saturation in theoretical sampling, the researcher must exercise stringent theoretical sensitivity in the data analysis process.
(3) It is not an effective process in terms of time and energy because of the labor-intensive coding process. Although the researcher follows a rigorous coding process, he or she may not find any substantial theory.

(4) Because of theoretical sampling and saturation, anticipating the length of the research period is difficult (Goulding, 2002).

The strengths of qualitative content analysis are as follows:

(1) It leads to understanding of social reality or phenomena through interpretation of a variety of verbal or written recorded communication materials.
(2) It allows the researcher to process large quantities of data.
(3) It is flexible in that the data can be verbal or visual and sampled from other sources as well as collected by the researcher (Schreier, 2012)
(4) If the main sources of data are written text, it is an unobtrusive method because no unwanted interaction effects occur between participants and researchers (Kondracki et al., 2002).

The weaknesses of qualitative content analysis are as follows:

(1) It may not be appropriate for open explorative research (Ehnert, 2008).
(2) It can be a labor-intensive and time-consuming process, and the coding scheme becomes quite complex (Kondracki et al., 2002).
(3) Because of a lack of established analysis procedure, novice researchers experience confusion in conducting their research.

Conclusion

We discussed the unique characteristics of grounded theory and qualitative content analysis and suggested the following six differences:

a) background and philosophical basis;
b) unique characteristics of each method;
c) goals and rationale for using one or the other research method;
d) data analysis processes;
e) outcomes of the research; and
f) evaluation of trustworthiness and quality in grounded theory and qualitative content analysis.

We also illuminated the advantages and limitations of each method. A researcher should be sensitive to these characteristics as she or he selects a research method.

Various debates, suggestions, and the existence of different versions of the grounded theory approach may cause novice researchers to become confused in conducting their research, but those debates also have caused grounded theory to develop further as a well-established research method. In contrast, qualitative content analysis is underrepresented in the literature. Fewer debates and suggestions on how to use qualitative content analysis are available, and systematic guidelines or rules for its analysis procedures are lacking. Little consensus exists in what qualitative content analysis is. Qualitative content analysis has not been introduced in many qualitative method books as a result of the dominance of quantitative content analysis (Schreier, 2012).

Because researchers lack a comparative guide to these two approaches, we hope that this paper can assist novice and inexperienced researchers and students in the selection of research method appropriate for their studies and provide insights for qualitative researchers.

Explicating research methods and detailing their characteristics can enhance further discussions of research methodology and the rationale for using a specific method.

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Article Citation