Rethinking Sampling in Grounded Theory: Reflections for Novice Grounded Theorists

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Abstract:
Sampling stage for novice grounded theorists is not as well defined as for qualitative researchers. Grounded theorists use theoretical sampling to guide their research. However, theoretical sampling is an enigma for novice grounded theorists. They feel at loss when answer to their every question is theoretical saturation, and they lack the experience to realize that theoretical sampling will itself lead them to answers regarding whom, when and where. The present paper is an effort to guide novice grounded theorists by presenting a multi-layered nested sampling design developed in retrospect to bring to light steps that might be taken before theoretical saturation is achieved. Based on inductive approach, the study was conducted using grounded theory as a tool. The data was collected in 25 semi-structured in-depth interviews with professors and postdocs across Germany. The paper aims to propose a sampling scaffold for theoretical sampling to provide probable steps that novice grounded theorists could keep in mind during sampling stage

Keywords: Grounded theorists, Grounded Theory, Theoretical Sampling, and Sampling Design

Introduction
Novice researchers feel at loss when they decide to use grounded theory because all their questions are linked to theoretical saturation. However, at the beginning of research theoretical saturation seems to be an ambiguous entity, which can be achieved via a path that is unclear. Simple questions such as, how many participants should be part of the study? Or what sampling schemes should I use?, make the first steps in research process the hardest ones. It is not that novice grounded theorists are lacking in any way, it is because they do not have the experience to understand that once they start data collection, steps will start appearing before them, and the data itself will guide them towards theoretical saturation. This issue of ambiguity should be addressed because it affects the confidence of novice grounded theorists at the initial stages of research. The cause of this ambiguity is flexibility of
theoretical sampling. Novice grounded theorists work with exploratory studies, which have flexible structures to adapt to the changing needs of the studies (Denver & Frankel, 2000). Theoretical sampling provides such flexibility to the researcher, flexibility in terms of number of participants and sampling schemes to explore the emerging leads in data (Glaser, 1992). Due to this flexibility the researcher using theoretical sampling cannot know in advance what to sample for and where it will lead him (Glaser, 1978). To an experienced grounded theorist this flexibility is an advantage because he does not need to conform to predefined notions of whom, where, till when; rather he has the freedom to follow the leads emerging from the data and satisfying the emerging theory free of any confinements. On the other hand, the same flexibility becomes ambiguity and a burden for novice grounded theorists. They not only grapple with basic questions of whom, where and till when in the initial stages of their research; but also, they are baffled by the apparent ambiguity of the process they have to follow to achieve theoretical saturation.

Thus, the aim of the paper is to ease transition of novice grounded theorists from ambiguity of the process to flexibility in the process. To make the first steps easier a sampling scaffold developed in retrospect is presented in the paper to assist novice grounded theorists in the initial sampling stage. The paper proposes that novice grounded theorists may keep in mind (not replicate) the retrospective sampling scaffold while establishing the first stage of sampling.

Methodology:

Participants: The data was collected from twenty-five mentoring program participants. They were ten mentors and fifteen mentees who were part of mentoring programs of their universities. These mentoring programs were focused on promoting young female scientists in German academia with the scope of encouraging them to aspire for professorship and stay in academia. The mentee were mostly female with exception of one male mentee who was added to the group as a deviant case. The mentors were a mix of female and male professors from different German universities.

| Table 1 Participants’ Demographics |
|-----------------------------------|
| Participants | No. of participants | Male | Female | Age Range |
| Mentee | 15 | 1 | 14 | 29-48 |
| Mentor | 10 | 2 | 8 | 33-72 |

Interview process and setting: In-depth semi-structured were conducted with mentors and mentees. Twenty-two face-to-face, one Skype and two phone interviews were conducted over a period of one year. The interviews were one hour to one-and-half hour long. For face-to-face interviews the interviewer visited the participants as per their convenience. To ensure safe environments the interviews were conducted in cafes or in offices of the interviewee as per their choice.

Research question: An overarching question was investigated for this paper:

1. What is main challenge faced by novice grounded theorists while conducting theoretical sampling?

Analysis:

Using Charmaz’s (2006) constructive grounded theory approach and Glaser’s (1978) grounded theory approach, an inductive qualitative case study was conducted and the data was analysed. A combination of initial coding, Focused coding and Theoretical coding was used to conduct a tri-stage analytic process accompanied with memo writing and constant comparison technique. Multiple minor and a few major themes emerged and one of the major theme pertained to mechanics of conducting a research using grounded theory. The data from this theme was analysed using constant comparison and memoing to understand challenges faced by novice grounded theorist while conducting theoretical sampling. A major challenge was understanding and successful completion of theoretical sampling, and the concepts that emerged were; whom to interview,
when, where, and when to stop theoretical sampling. The memos and field notes of the researcher about the decision making process during theoretical sampling were analysed by rigorous constant comparison technique.

Results:
Novice grounded theorists face many challenges, however one main challenge they face during theoretical sampling is the uncertainty of the theoretical sampling process. This uncertainty coupled with inexperience of the novice grounded theorists makes theoretical sampling which is a complex process due to complex sampling scheme makes navigating theoretical sampling a challenging task.

Discussion:
Sampling scaffold and theoretical sampling: “One cannot study the universe- everything, every place, all the time” (Marshall & Rossman, 2006, p.62). To maintain their focus, qualitative researchers design sampling model at the beginning of their research project guided by their research questions to deal with topics such as participants selection and where to look for them (Tracy, 2013). Onwuegbuzie & Leech (2007) defines the sampling model as a “framework within which the sampling occurs, comprising the number and types of sampling schemes and the sample size” (p.239). Qualitative researchers plan ahead so that sampling frame and the conceptually defined population are in harmony with each other leading towards successful conclusion of research (Lawrence, 2013). Grounded theorists, on the other hand, do not need sampling model to plan ahead. They use theoretical sampling which guides them towards theoretical saturation, hence, a successful culmination of sampling stage. Novice grounded theorists, however, do need a sampling scaffold to maintain their focus on the steps they need to take, which will guide them towards theoretical saturation.

In order to facilitate novice grounded theorists imposing a sampling model, similar to ones generically used in qualitative research, on theoretical sampling without forethought would restrict the scope of research on theoretical and practical grounds. On theoretical grounds using sampling model is restricting because in theoretical sampling the data dictates ‘whom’ to invite next. As Charmaz (2014) posits grounded theorist “do not force preconceived ideas and theories on our data” (p. 32); and developing a sampling model at the beginning would be forcing preconceived notions of the researcher about ‘whom’ he should invite to participate in the study. Such preconceived notions thus affect the outcome of the research and questions regarding its validity may be raised. Glaser (1998) went a step further as he argued that “interview guides, units for data collection, samples, received codes, following diagrams, rules for proper memoing and so forth may lead to preconception of data into categories” (p. 94). Therefore, using sampling model in its entirety may cause many issues for novice grounded theorists. Moreover, on practical grounds, grounded theorists as stated by Luborsky & Rubinstein (1995) cannot give exact number of participants, exact sampling schemes, and design at the beginning of research (p.97). There could not be a single checklist or blueprint catering to qualitative sampling as every study is unique and has its own requirements (Curtis et al., 2000, p. 1012); especially in theoretical sampling where criteria changes as the theory develops. Therefore, unlike other qualitative researchers novice grounded theorists cannot use sampling models for theoretical sampling.

Nevertheless, to facilitate novice grounded theorists a sampling scaffold for theoretical sampling can be provided to novice grounded theorists. It is pertinent to understand that to integrate sampling scaffold to theoretical sampling it is best to keep in mind the role of sampling scaffold in this relationship. Sampling scaffold provides preplanned steps, which facilitate theoretical sampling’s impromptu and flexible needs. The combination of a sampling scaffold and theoretical sampling would be steps taken from the sampling scaffold and their execution, not in any fixed pattern, using theoretical sampling. The sampling scaffold would only serve as a reminder to steps
that novice grounded theorists might keep abreast with during the course of theoretical sampling. This limited role will ensure that the focus of researcher remains on theoretical sampling rather than on following some prescribed steps; that is, the focus of the researchers will not shift from ‘look for data rather that look at data’ [Coyne, 1997, p. 626; italics applied as in original text].

**Integrating sampling scaffolding for theoretical sampling in grounded theory:** Huberman (1994) stated that saying “I’ll start somewhere and take it from there, is asking for trouble” (p.33). This statement holds true for qualitative research as well as for grounded theorists; they have to start somewhere. Therefore, a sampling scaffold for novice grounded theorists is a step in that direction based on checklists of qualitative samples by Curtis et al. (2000) and Miles & Huberman (1994) which provided the conceptual framework for developing the sampling scaffold (as seen in Figure 1 below).

![Figure 1: Sampling scaffold for theoretical sampling for novice grounded theorists](image)

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A sampling scaffold is based on seven components:

**Table 1 Components of Sampling scaffold for theoretical sampling for novice grounded theorists**

| Components of Sampling Scaffold |
|---------------------------------|
| 1. Sampling Scheme/ Multiple sampling schemes |
| 2. Participant Selection |
| 3. Number of participants |
| 4. Site Selection |
| 5. Feasibility |
| 6. Constant re-evaluation |
| 7. Ethics Check |

Novice grounded theorists might keep in mind the basic components shown in the sampling scaffold while engaging in theoretical sampling. They do not need to follow the sequence of the steps per se as the role of sampling scaffold is limited, therefore, the novice grounded theorists can maneuver around these steps as per the need of their study. Keeping an eye on these steps would make theoretical sampling less ambiguous to novice grounded theorists. A review of the sampling scaffold based on the study conducted with professors and postdocs is presented below:

**Sampling Scheme:** Novice grounded theorists at the start of their research are clear that they are going to use theoretical sampling ‘to refine ideas’ (Charmaz, 2000, p. 519). They tend not to use sampling scaffolds to avoid forcing ‘preconceived ideas’ on data (Charmaz, 2014, p. 32); hence, compromising theoretical sampling (Glaser, 1978). Interestingly, Straus and Corbin (1998) presented three sampling strategies, which reflected that sampling strategies in grounded theory might not be an unusual occurrence.

A look back at the study revealed that a combination of sampling schemes was used during sampling (Hesse-Biber & Leavy, 2006). These sampling schemes were being used simultaneously (purposive-convenience sampling and theoretical sampling) and in layers (homogenous sampling, stratified purposive sampling, and snowball sampling); therefore, reflecting that sampling is a complex process in grounded theory and requires constant re-evaluation and attention of the novice grounded theorists and a sampling scaffold would provide support to them.

**Participant selection:** The next step that novice grounded theorists should keep in mind is participant selection. Morse (1991) defined a ‘good’ participant as the one who is ‘articulate, reflective and willing to share’ with the interviewer (p.127). In the study during the first wave of interview stage using the ‘logic and power’ of purposive sampling in purposive-convenience sampling ‘information-rich’ participants a professor and a postdoc were selected (Patton, 1990). However, the selection process was not as simple as it seemed, issues such as participant accessibility and unwillingness to participate arose very early in the study. Among the reasons participants took part in the study were altruism, a desire to give back, and nature of the study to name a few.

Bernard (2011) adds elite groups such as surgeons, professional athletes to the hard-to-reach population who are not interested in the research and would not...
respond to call for participation. The study found that professors and postdocs also belong to this hard-to-reach population category that are ‘hidden-by-choice’ (Noy, 2008). Seven waves of participation invitations were sent to different mentoring programs across Germany over a period of one year and only twenty-five participants responded (see Table 2 below).

**Table 2 Participant Demographics**

| Mentee Demographics | Mentor Demographics |
|---------------------|---------------------|
| Mentees             | Mentors             |
| Gender              | Gender              |
| Age                 | Age                 |
| Violet Female 34    | Verena Female 33    |
| Joan Female 29      | Angie Female 37     |
| Sandy Female 33     | Robert Male 72      |
| Alex Female 31      | Carol Female 56     |
| Tracy Female 48     | Denise Female 47    |
| Rachel Female 35    | Amy Female 42       |
| Kathy Female 38     | Kimberly Female 34  |
| Judith Female 30    | Linda Female 48     |
| Michelle Female 38  | Eric Male 57        |
| Courteney Female 30 | Jen Female 35       |
| Sarah Female 41     |                     |
| Ashley Female 35    |                     |
| Crystal Female 35   |                     |
| Patricia Female 43  |                     |
| Brad Male 36        |                     |

Miles and Huberman (1994) state that cases can be of three types Typical, deviant and negative or disconfirming cases. Out of these twenty-five participants (see Table 3) most of them were typical cases twelve mentees and nine mentors. There were two deviant cases: one of the mentee was male and one mentor was from industry. There were two negative cases: mentees not satisfied with the mentors, although many hints were given by mentees that their peers were not satisfied with their mentors but only two participated in the study to share their experiences.

**Table 3 Cases**

| Participants | Typical Case | Deviant Case | Negative Case |
|--------------|--------------|--------------|---------------|
| Mentees      | 12           | 1-Male       | 2             |
| Mentors      | 9            | 1-From Industry | -             |

The willing participants who responded were added to the study based on their similarities and differences to observe variation in the participants’ perceptions, beliefs, and practices (Luborsky & Rubinstein, 1995).

**Number of Participants:** The question, how many participants are enough, is a constant companion of novice grounded theorists. Marshall (1996) posits “a flexible research design and an iterative, cyclical approach to sampling, data collection, analysis and interpretation” makes predicting sample size in advance difficult (p. 523). Luborsky & Rubinstein (1995) state, “there is no single formula or criterion to use” (p.105). However, it can be answered in two steps; the first step is an instant reply that a growing consensus shows interviews with 10-25 knowledgeable people are enough to understand the phenomenon (Bernard, 2011; Creswell, 2002; Trotter, 2012). It is important for novice grounded theorists to know the spectrum and be aware of low and high ends. If novice grounded theorists have less than the suggested number of participants it may raise issues of credibility of their research due to lack of expertise of novice grounded theorists. And on the flip side, a large number of participants might also lead them to produce thin data (Miles & Huberman, 1994).

Furthermore, in step two, the novice grounded theorists may focus on deciding how many participants (approximately) they want to contact
keeping in mind the aim of the study (Luborsky & Rubinstein, 1995). The qualitative approach is process oriented; it is focused on saturation of concepts by interviewing participants till no new category emerges and the need to interview is redundant (Trotter, 2012). Thus, the number of participants cannot be predetermined, a researcher cannot say when theoretical saturation will be achieved or when new theoretical insights will stop emerging, no one can predict these in advance (Abrams, 2010; Onwuegbuzie & Leech, 2007).

Site selection: Creswell (2013) states selecting the site to study and gaining access to it is important for the outcome of the study. Once participant selection criteria are clear, then novice grounded theorists should decide the site they want to study and how they will gain access. For this study the participants were not contacted at a particular site rather they were contacted based on their participation in mentoring programs across Germany. Therefore, the particulars of the mentoring programs were studied before initiating the contact.

Furthermore, if novice grounded theorists need to contact organizers, they should get in touch with them before the actual data collection process starts as organizational red tape, participants’ willingness and availability could all add to delay in data collection. Creswell (2013) recommends preparing interview protocols beforehand so that the data collection, interview recording, and other miscellaneous issues are taken care of beforehand.

Constant re-evaluation, feasibility, & Ethics check: Novice grounded theorists would find themselves constantly re-evaluating their sampling schemes. It is the interactive nature of theoretical sampling that provides the novice grounded theorists the opportunity to re-evaluate and look for new participants and sites as the theory develops. This constant re-evaluation would provide them accurate and timely feasibility check.

Last but not the least, getting information rich data might be important for novice grounded theorists but far more important is respect for the institutions, organizers, participants, and those who may follow in their footsteps. Novice grounded theorists may show this respect by adhering to the rules and regulations of the institutes and site, understanding limitation of the organizers, and following the wishes and requests of the participants so that next cohort of novice grounded theorists are welcomed.

Conclusion:

In short, novice grounded theorists can navigate the sampling stage using grounded theory with ease if they employ a fusion of sampling scaffold and theoretical sampling as a reminder to keep track of their progress applied with its limited role in mind, so that it may not hinder the flexibility offered by theoretical sampling yet make the progress smooth for novice grounded theorists.

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