Elements of Research Questions in Relation to Qualitative Inquiry

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Abstract

Research denotes the importance of quality research questions and their role in guiding methodology, data collection methods, and interpretation of results. Research questions, living at the base of methodology, play a key role in quality inquiry. This article addresses common themes of research questions in qualitative inquiry and the factors impacting question development. The importance of driving questions and the use of a question map are discussed as useful tools in developing probing, quality research that directs effective qualitative research.

Keywords

Research Questions, Qualitative Inquiry, Driving Questions, Question Map

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Research denotes the importance of quality research questions and their role in guiding methodology, data collection methods, and interpretation of results. Research questions, living at the base of methodology, play a key role in quality inquiry. This article addresses common themes of research questions in qualitative inquiry and the factors impacting question development. The importance of driving questions and the use of a question map are discussed as useful tools in developing probing, quality research that directs effective qualitative research. Keywords: Research Questions, Qualitative Inquiry, Driving Questions, Question Map

The research endeavor denotes the importance of quality research questions and their role in guiding methodology, data collection methods, and interpretation of results (Agee, 2008). Agee (2008) argues that the importance and development of the research question is often underestimated in qualitative research studies. The literature on research questions is limited, and there is little to no discussion on the research questions specifically in qualitative inquiry (White, 2012). Research questions, lying at the basis of methodology, play a key role in the research design process. The post-positivist perspective recognizes that qualitative research methods can be impacted by the background and values of the researcher (Ryan, 2006). In this concept paper we will address common themes of research questions in the qualitative research studies and the factors impacting question development using a post-positivist lens.

Research Questions Impact on Qualitative Research

Research questions, data collection methods and interpretation results are all interrelated in research. Therefore, it is imperative that researchers create a plan prior to the study and design the research according to that plan (Newman & Covrig, 2013). Qualitative research can enable the researcher to generate quality data and questions that explore the real-life behavior of participants (Kuper, Reeves, & Levinson, 2008). Observations combined with the participant's descriptions of "how the participant lived the experience that is being described" (Cashman & McCraw, 1993) determine the types of open-ended questions that must be asked to enrich the researchers understanding of the phenomenon.

Considerations for Research Question Development

Research questions narrow the focus and provide a structure to the research. "The research question is an unambiguous statement that clearly articulates the phenomenon you plan to investigate" (Kivunja, 2016, p. 167). Open-ended questions requiring complex answers allow the researcher to examine the answers in depth. One way to structure the question is to have an overarching question followed by subsidiary questions that address specific components of the original research question. This allows clarification of the original answer and helps to eliminate misinterpretation of the respondent's answers. Driving questions, or

questions that are probing, drive the activities and methods used in research. Aydin (2016) suggested that these driving questions are created using defining strategies. The defining strategies are exploring the phenomenon that will be questioned, conducting a literature review about the subject of the questions, and using experiences and trial questions to determine which questions best address the topic that the question is designed to investigate (Aydin, 2016). Coe (2012) narrows this down further by determining if the aims of the questions are clearly stated, relevant, and important. Questions that fail these tests can be discarded until the questions meet the criteria of driving questions, namely they will move the research in the direction the researcher wishes to probe.

It has been suggested that a "question map" (Strangman & Knowles, 2012) can assist in diagramming potential research questions and then eliminating questions that are peripheral or do not lead to data that answers the primary question. A question map utilizes prompts to narrow down a broad research question. Example questions may include: (a) What is the broad question? (b) Who are the decision-makers? (c) Who are the stakeholders? and (d) Are there any themes between the questions asked? Hypotheses about the remaining questions are then developed and analyzed to determine if they do not move the researcher closer to the overall problem and goal of the research. If the information generated from the question does not lead to pertinent data or information about the subject of inquiry, the hypotheses must be discarded. The remaining hypotheses can be formed into questions that become the guiding force in determining the appropriate method of research design and become driving questions (Strangman & Knowles, 2012).

Bias and Effects on Research Questions in Qualitative Research

To further explore a phenomenon in the social sciences, researchers use descriptive, interpretative forms of qualitative research (e.g., phenomenology; Cashman & McCraw, 1993). Qualitative researchers use research questions to thoroughly explore phenomenon through first-hand experiences and through the relating of personal stories of the participants (Howard, Thompson, Nash, & Rodriguez, 2016). It can be argued that methods used in qualitative research are "a never-ending intervention in everyday social and political life" (Friberg, 2016, p. 351). Therefore, it becomes necessary for the researcher to be aware of personal bias, the role and position in relation to the subject of study, and the underlying theoretical assumptions.

These biases affect every aspect of qualitative research including how a researcher comes to asking the driving questions that lead to research. For example, a researcher that is also a clinical psychologist seeking an intervention strategy in the field of psychology may have monetary interest that is driving the research questions. If researchers are unaware of these biases or research agendas, they may inadvertently skew the research. Using an ethnographic approach includes studying thoughts and how culture shapes thoughts, personal identity, personal history, and ultimately social groups (Friberg, 2016). These underpinnings, subtle or otherwise, play a role in all of society, including the researcher perspective.

Considerations for Minimizing Researcher Bias

Strategies to minimize bias have been noted and should be taken from the beginning of the research to the end. The introduction of a study serves as the justification or rationale for conducting research (Newman & Covrig, 2013). Maxwell and Loomis (2003) suggest that the purpose for a study falls into one of three categories: personal, practical, or intellectual. Formulating a well-organized introduction section can assist researchers in determining which category their research falls and what implications that has on the research design.

Recognizing the impossibility of completely objective qualitative research, a strategy to identify researcher bias is to use reflexive journaling throughout the research process. Reflexive journaling is a process in which the researcher reflects on the outcomes of the study as well as on the research process itself. This practice can help promote self-awareness as well as maintain credibility (Smith, 1999). It also allows the researcher to state any considerations up front regarding the choice in methodology, assumptions and beliefs, or other background information that could have affected the research process (Coe, 2012; Kline, 2008).

An additional strategy that can be used is having peers not involved in the research process provide feedback. There are many ways to inquire for feedback, but Chenail (2011) suggests an "interview the interviewer" strategy which entails the researcher being interviewed as a subject prior to conducting research. This process is twofold as it allows the researcher to see the study from a different point of view while also having an outsider critique the interview questions.

Common Themes of Research Questions in Qualitative Research

Although the question is not always explicitly stated in qualitative research, it is found embedded in the problem and purpose of the given research in the introduction, description, and analysis of results. To identify common themes in qualitative research questions, three examples of articles in the social sciences analyzing the same topic have been presented in Table 1. This table outlines possible driving questions behind the stated purpose statements in these qualitative studies. These examples were selected to highlight commonalities while also presenting the various ways questions can be presented and used to drive research. Though the researchers utilized different methodologies based on research interest and anticipated outcome, the research questions display similarities.

Table 1. Driving Questions in Qualitative Research Examples

Research Examples	Driving Questions
Examining daily school practices affecting sex-gender-sexualities through the lens of insuperability of gender and sexuality. (Youdell, 2005)	How is Butler's (1997) theory regarding performative resignification present in daily school routines? In what ways are sex-gender-sexualities constituted, resisted, and reinscribed during school practices?
Examining parent-child communication about sexuality with parents of children with ASD (Ballan, 2012)	How do parents of children with ASD communicate with their child about sexuality? How can we use this information to develop a psychoeducational intervention for parents of children with ASD?
Exploring the meaning behind sexual experiences of women with Intellectual Disabilities (Bernert & Ogletree, 2013)	What are the perceptions of sex in women with ID? How do women with ID understand and assign meaning to sexual experiences? How does that meaning relate to their sexual expression?

One commonality is the complexity of the research questions and the relationships between them. Questions in qualitative research can be described as an inverted pyramid, beginning with a broad, overarching question and narrowing down to focus on the "why" and "how" of the specific phenomenon (Agee, 2008). In order to fully understand a lived experience of identity, more than one question is typically embedded in the research design.

The examples in Table 1 outline driving questions in each study with each question being dependent on the previous one. The dependent questions, or subsidiary questions, can be pre-defined or emerge as the study continues. Emergent research design in qualitative research is one that may "evolve over the course of a research project in response to what is learned" and may be used to get accurate data (Morgan, 2008, p. 245). For example, in Bernert and Ogletree (2013), the broad research question becomes the base of the inverted pyramid and examines the perception of sex in women with intellectual disabilities. The next level of the pyramid allows the researcher to investigate how these women define sex. The final level of the inverted pyramid uses questions to experience how these women experience sex. This question structure allows the researcher to pinpoint the "how," "why," and the meaning of these participants' lived experiences. The data collected can lead to additional research questions rather than having a single set of research questions that are pre-determined and consistent throughout the course of the study. As an example, Ballan (2012) explained the choice of an emergent design: "the interviews were structured to allow for the emergence of new content and ideas beyond the theoretical framework that was imposed by the study design" (p. 677).

Another common theme involves research questions being embedded in a theory or a clarifying lens. A researcher may ask a broad question regarding the theory and then use the dependent question to situate the theory into a particular context where it can be examined. As an example, Youdell (2005) identified the theoretical lens and frame; "the paper takes up Butler's (1999) theorization of the inseparability of gender and sexuality in the contemporary discursive frame" (p. 250). The author goes on to situate the theory into a specific context (every day school practices that relate to sex-gender-sexualities). These multi-faceted theoretical and contextual questions are a key component of the research question as a tool to gather in-depth data.

Implications for Research

Quality questions are critical to provide accurate research and findings in qualitative research. Choosing the appropriate research questions drives both the method and findings of research. Utilizing complex research questions can help to clarify theoretical frameworks and determine the direction the research will take. In order to form a complex research question, identify an overarching question and the basis of the inquiry. Kline (2008) suggested presenting the central research questions to identify what the researcher is wanting to accomplish by performing the research. Stating research questions outright can also assist novice researchers in guiding their research design. Refer to Figure 1 for an illustration of the question development process.

Figure 1. The Process of Forming Research Questions in Qualitative Research
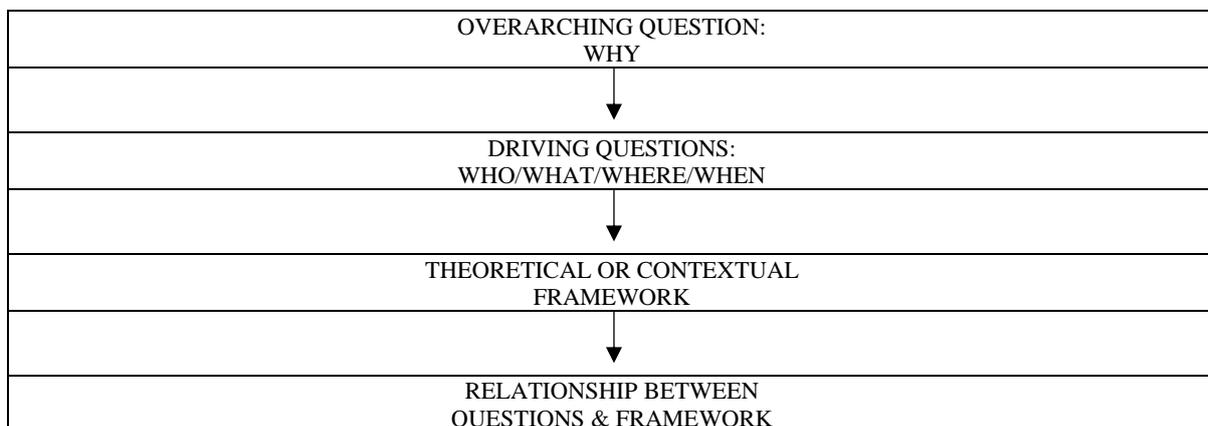
Once the overarching questions have been established, driving questions should be added to serve as clarifiers of the purpose of the research (Morgan, 2008). The focus of the questions allows the emergence of the theoretical context to become clearer to the researcher. Determining the population and purpose of the research establishes the framework for the questioning to become specific in its inquiry. Thus, establishing the relationship between the questions and the framework.

Once the research questions have been developed, the researcher must organize the introduction accordingly. Regardless of whether the questions are directly stated in the research article, the background to the problem, problem statement, and purpose of the research should be organized in a manner that explains the direction the research has chosen and keeps the research study narrowly focused.

The final implication for qualitative researchers is to utilize strategies to minimize researcher bias, beginning with the development of research questions. There are three main sections during research in which bias can occur: before conducting the study, while conducting a study, and after conducting a study (Cook, 2014). When dealing with social change, a researcher must examine bias from as early as the thought that leads to the research question. Ioannidis (2008) outlined several questions to ask when identifying subtle pre-study bias or hidden research agendas. These include asking questions such as, "Are both benefits and harms appropriately considered?" and "Are there any obvious or possible conflicts of interest (not only financial)?" (p. 164).

Conclusion

The development of effective research questions in ethnographic studies is necessary to determine the correct method of research, the direction, and lens through which to view the results of the research and to minimize researcher bias. Using emergent design to develop questions by eliminating questions that do not move the research in the direction the research wishes to explore, helps to clarify the most effective method of research. Specifying the process in the introduction section of the research results allows the transparency necessary for the reader to see the process used for question development. The use of a question map aids this elimination process and can be used to minimize bias when determining the direction of the research. Journaling during this research process allows the researcher to track their movement throughout the research and develop insight into their motivation toward specific questions. Interviewing the interviewer is a useful tool for testing the effectiveness of the question to move the research forward and to utilize peer review to minimize bias. The use of these techniques will allow the researcher to develop bias controlled, effective research which allows the subject of the study to tell their story and have the data it provides analyzed with a method appropriate for the research leading to thorough insights as a result.

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