Facilitating research students in formulating qualitative research questions

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Summary One of the initial and challenging processes that research students and students undertaking research modules encounter is the formation or appraisal of the research question. Research questions acquire significance as the rigor and validity of the research project rests on the extent to which the conclusions of the study have answered the research question. For qualitative studies the research question acquires even greater significance since the notions of audit trail, which commences from the research question is considered as an indication of a valid or not research. Hence, the formation of a qualitative research question requires to be based on a framework as to have specific content, coherence and structure. The content takes the form of a declarative statement that provides focus on a specific issue, but at the same time allows enough flexibility as for variables to emerge from the data. The coherence should smoothly bridge the philosophical/theoretical propositions of the qualitative paradigms with the practical execution of the study and this is achieved by the use of specific verbs, nouns and phrases. Lastly, the structure needs to adequately answer to the who, when, where, what, how and why of the study.

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Introduction

One of the initial challenges that research students encounter in the early stages of a research project is the formation of the research question. Similarly, students that undertake research modules such as skills for critical appraisal or evidence based practice are confronted with the task of appraising the research question as part of the critical process in order to establish the validity and relevance of the study. Hence, the research question for any research project acquires significance by the very fact that it provides brief, but nevertheless, important information on the re-

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search topic that allows the reader to decide if the topic is relevant, if it is researchable and if it is an issue of significance (Gaberson, 1997; Cormack and Benton, 2000; Holloway and Wheeler, 2002).

Furthermore, for qualitative studies the research question has an additional significance as it determines the manner by which the study will be conducted. The researcher of a qualitative study in the research question delineates the procedures by which the study will be executed and provides to the readers a map that they can use to trail the researcher’s intentions and actions in the study. Hence, research students, either conducting a qualitative study or reading one will need to clearly identify in the research question the methodology/methods that will be used to carry out the study. Moreover, students undertaking research modules will need to judge if the researcher has actually followed the stated trail at the end of the study. Therefore, the research question and in specific the qualitative research question needs special attention in the way it will be structured, organised and formed as to convey the necessary information and all those elements that would allow the reader to assess and evaluate the study.

The aim of this article is to provide research students undertaking a qualitative research project or undertaking a research module with a critical analysis on the significance of research questions and their role in determining the validity and rigor of qualitative studies. Consequently, the characteristics and elements of a well-formed qualitative research question will be developed. These characteristics and elements will be defined in terms of content, coherence and structure. Each of these elements will be analysed and supplemented with a real example from my own research project demonstrating the techniques of incorporating these elements in a qualitative research question. Eventually, these elements will function as a framework for formulating qualitative research questions and function as the criteria for judging the value and validity of qualitative studies.

The role of qualitative research questions

Researchers and readers of research studies sometimes underestimate the value of research questions and attribute greater importance to the conclusions of research studies were recommendations and applicability of the findings are drawn (Gaberson, 1997). Whilst the conclusions of a study offering recommendations or inferring judgements on the application of findings are important, nevertheless the value of any research conclusion cannot be inferred or judged out of context. Research conclusions have value, applicability, integrity and plausibility only if they answer in a coherent, consistent and reasoned manner to specific research questions (Giacomini and Cook, 2000; Watson and Girard, 2004).

In other words, research conclusions or findings are nothing else, rather than answers to research questions. The fuller and more coherent the answers of a study to the research question, the more plausible, integral and applicable the results will be. If the research question is too broad, too narrow, too simplistic or not sufficiently focused this would possibly yield trivial or insufficient results that lack direction or impact (Morrison, 2002; Borage and Dawson, 2003). In simpler terms, if the research question is not properly formed, than the researcher cannot be sure when saturation of data is achieved as to sufficiently answer the research question and the readers cannot be sure if the researcher is actually answering in a meaningful manner the specifics asked by the research question.

Hence, research questions that lack adequate focus, structure and organisation often produce results that render the conclusions of the study insufficient and introduce a degree of scepticism regarding their validity. In fact, Parahoo (2006) asserts that research projects produce meaningful, insightful and sophisticated answers, only when explicit research questions are posed. Similarly, Morrison (2002) considers the formulation of a good research question to be an art in itself, which should be clearly understood and precisely expressed as to produce more useful answers.

Perhaps more importantly, is the fact that research questions constitute a type of guide as to how the research project will be conducted. Once formulated by the researcher, research questions should provide information on who will take part in the study, where will the study take place, how will the study be conducted, when will the study be conducted and what will be studied. In short, research questions become the signposts that indicate the concepts that will be studied, the population and the context of the study, and the methodology/methods that will be used (Gaberson, 1997; Strauss and Corbin, 1998).

Hence, the research question serves as a kind of sign with a threefold role, firstly it serves the role of the signifier by its’ visual appearance as a
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Qualitative research questions do not need to display the syntactic format of a question. In other words, the content is not presented in an interrogative fashion and the sentence does not end with a question mark. Instead qualitative research questions take the form of declarative statements that state the area of interest that would be researched (Cormack and Benton, 2000; Holloway and Wheeler, 2002). Even in those cases where the qualitative project intents to provide thick descriptions and not interpretations of the phenomena under study.
the research question will maintain the form of a declarative statement declaring the area of interest or the phenomena of which it intends to provide in-depth descriptions (Holloway and Wheeler, 2002).

Qualitative research questions seek to interpret and/or describe "how" or "why" something occurs and not "how much" is the effect of a specific variable or "what" is the relationship between two specific variables (Rolfe, 1994; Holloway and Wheeler, 2002). Therefore, variables in a qualitative study cannot be pre-determined, but the variables must emerge from the study and they take their shape in the process of data collection. Even in the case, where the prime aim is to provide a thick description of a phenomenon not all variables are known beforehand and the qualitative researcher can never be sure what will be described, before it actually has been described by the researcher in the text (Van Manen, 1990). Furthermore, it is largely argued that pure descriptive studies in qualitative research do not exist, since the mere description of a phenomenon under study is usually an indication of an unfinished study. The role of the researcher in the data analysis phase is to provide some sense-making of the descriptive data and to connect seemingly unconnected issues by providing tentative and interpretive explanations (Morse and Field, 1996; Mantzoukas, 2005; Rolfe, 2006).

Hence, specific questions cannot be formed about specific variables beforehand, but only the intention to describe variables and identify the potential relationships of these variables. Thus, the qualitative research question will take the form of a declarative statement indicating the intent to provide descriptions and interpretations of a certain phenomenon.

However, it must be cautioned that a qualitative research question cannot be very concise and highly focused as this would restrict flexibility and stifle the freedom of variables emerging from the study (Strauss and Corbin, 1998; Burns and Grove, 2001; Holliday, 2002). In other words, qualitative researchers need to strike a balance when forming research questions. On one hand, the research question needs to have adequate focus as to allow readers at the end of the study to make a value judgement with regards the degree to which the research question has been answered and on the other hand, the research question needs not be too focused as to avoid imposing ready made variables and restrict potential variables emerging from the study.

To make this crucial point somewhat clearer, it may be worthwhile to discuss qualitative research questions in terms of abstraction and provide a relevant example. Qualitative research questions are considered to be less abstract than the research topic and the research problem, but more abstract then the specific questions that the researcher will ask the participants or the ones the researcher will reflect upon (Burns and Grove, 2001; Parahoo, 2006).

For example, I was interested in the research topic of utilising portfolios for assessing students. This research topic was highly abstract and emanated from my personal and professional interest with portfolios as a lecturer and from the lack of research the literature supporting their use as an assessment tool. The abstractness of the research topic was narrowed to a less abstract form by developing a research problem that referred to the need of justifying to my peers, to the assessors of the module and to the students the value of portfolios as an assessment tool. These research problems were less abstract than the research topic, but more abstract than the research question that had the following form "understanding through interpretative phenomenology students' experiences in completing a portfolio as a formal assessment method for a contemporary university course in the UK".

In order to develop this research question I had asked myself a series of more specific and less abstract questions such as "how module lecturers value portfolios when used as an assessment tool", "how students view portfolios when used as an assessment tool" and "what is it like to compile and complete a portfolio". These questions are much more focused and less abstract when compared to the research question of the study and are useful for forming the eventual research question, but should not be confused with the research questions per se as they are very specific and intend to clarify the researcher's mind on what needs to be researched.

In summation, the content of a qualitative research question should be presented in the form of a declarative statement. Also, a good qualitative research question should be focused and expressed in a concise manner as to be workable and researchable. However, an extremely focused and concise qualitative research question can become unworkable and un-researchable as it can stifle the freedom of variables emerging from the study. Thus, the researcher has to balance the research question in terms of abstractness and make sure it is less abstract than the research topic and research problem, but more abstract than the specific questions the researcher asks himself or intends to ask his participants.
The coherence of qualitative research questions

Another important element of a good qualitative research question is the coherence of the research question with the research paradigm. Gaberson (1997) considers the research question to be the intermediate that bridges the gap between the research problem and the research design, whereas Cormack and Benton (2000) view the research question as the thread unifying the entire research project. To put it in another way, a good research question requires that it brings together in a coherent manner the philosophical and theoretical assumptions that underpin the research project with the practical element of actually conducting the study.

Hence, a good research question needs to reflect the ideas of the paradigm underpinning the research and link them to the research design and tools that will be used in the study. The paradigms usually associated with qualitative research are the non-positivist paradigms (constructivism, critical theory, participatory paradigm) that, broadly speaking, consider reality to be constructed by the way each individual experiences, interprets and expresses their lived worlds (Lincoln and Guba, 2002; Weaver and Olson, 2006). This implies that there cannot be a single, absolute and generalised answer to problems or phenomena. Answers would always be multiple, as many as the participants’ of the study and the criteria of correct or incorrect answer is substituted by the criteria of a more elaborated answer. Equally, the reductive process of generalisation is exchanged for a sophisticated and in-depth explanation of unique cases.

Furthermore, the underpinning paradigm of the research should be linked by the research question to a certain qualitative approach that has specific focus and follows certain processes, such as phenomenology, ethnography, grounded theory, etc. This will connect in a coherent manner the philosophical frameworks of non-positivist paradigms to the practicalities of methodologies/methods that would be used to conduct a qualitative study. In the case where the qualitative researcher decides that it is not appropriate to use one of the above qualitative approaches the research question should then be linked to the research intentions of the study, such as interpretive, descriptive, exploratory, etc. connecting, again, in a coherent manner the philosophical frameworks of non-positivist paradigms to the practicalities of conducting the study.

It becomes obvious that a good qualitative research question requires that it coherently reflects and links the philosophical and theoretical underpinning of qualitative studies with the practicalities of actually conducting such a study. Thus, qualitative questions need to incorporate active verbs such as understanding, exploring, interpreting, constructing, explaining, describing, etc., which mirror the fundamental intentions of the non-positivist paradigms. Furthermore, nouns such as experiences, feelings, views, perspectives, knowledge, etc. should be included in the formation of qualitative research questions, which represent the core issues that can be studied by non-positivist paradigms and qualitative methodologies. Lastly, a good qualitative research question should incorporate phrases that indicate the processes that would be used to practically carry out the study, such as interpretive phenomenology, critical ethnography, reflective case study, exploratory study, etc.

Therefore my research question “Understanding through interpretative phenomenology students’ experiences in completing a portfolio as a formal assessment method for a contemporary university course in the UK” incorporates the active verb, noun and phrase that mirrors the intentions of my paradigm, the core issue that I will be studying as dictated by the underpinning paradigm and the phrase indicating the research approach that I will be using to conduct the study.

The structure of qualitative research questions

Finally, a good qualitative research question requires to be structured in such a manner as to successfully convey sufficient information about the topic of the study, the participants of the study, the context of the study, the time of the study and the way the study will be conducted. Freshwater (2004) considers that the evaluation of any research project commences by unpacking the structure of the research question and revealing if the research question provides enough information about what has been researched, the context of the research, how it has been researched and why the research was worthwhile. Similarly, Morrison (2002) asserts that the structure of a good research question ought to examine and sufficiently answer to the who, when, where, what, how and why of the study. Morrison (2002) succinctly summarises the qualities of a good structure for research questions by denoting that they should address five of the above six elements and suggests that the entire question will address the sixth element.
Hence, my research question satisfies the above structure: "Understanding through interpretative phenomenology (how) students’ (who) experiences in completing a portfolio as a formal assessment method (what) for a contemporary (when) university course in the UK (where). The research question addresses the how, who, what, when and where of the research and the entire research question addresses why the research is conducted, which is the understanding of students views on portfolios as an assessment tool. Eventually, the degree to which I would achieve all these will determine the validity or not of the entire research project.

Conclusion

In conclusion, the formation of research questions in qualitative studies acquire a pivotal role in the conduct of the study and a fundamental function in developing an audit trail that would enable the reader to judge the value, rigor and validity of the entire research project. Therefore, special attention needs to be devoted by researchers not only in developing an important and relevant question, but also to properly formulate the research question. The qualitative research question needs to be formed in such a way as to convey, reflect and link the theoretical and abstract assumptions of the research project with the practical and pragmatic means of achieving them.

In simple terms, a good qualitative research question requires specific phrasing, where the ordering of words will be done in such a way as to make the topic of interest amenable to qualitative inquiry. Hence, the current article has argued that researchers and readers of qualitative studies can be facilitated in developing and critiquing qualitative research questions by using a framework based on content, coherence and structure. In specific, when phrasing qualitative research questions the attention of the researcher should be focused on the manner by which the content of the research topic is conveyed, on the coherence of the topic with the philosophical/theoretical propositions of the study, and on the structure, which needs to incorporate certain important elements.

The content of a good qualitative research question takes the form of a declarative statement, rather than an interrogative one. Also, the content provides a concise focus on the issue that will be studied, but the relationships of the variables are not strictly defined as to enable flexibility for these relationships to emerge from the study as required by the qualitative research theory. Furthermore, a good qualitative research question needs to coherently reflect and link the philosophical and theoretical propositions of qualitative inquiry with the practical conduct of the study. This coherence between theory and practice of qualitative inquiry is mirrored in specific words that should be part of the qualitative research question. The qualitative research question needs to commence with an

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**Table 1** A framework for formulating qualitative research questions

| CONTENT | 1. A declarative statement with a full stop at the end and not an interrogative one with a question mark
| 2. Should provide focus on the issue that will be studied
| 3. Should not strictly define relationships between variables |
| COHERENCE | Commence with active verb |
| - Understanding |
| - Exploring |
| - Interpreting |
| - Constructing |
| - Explaining, etc. |
| Incorporate relevant nouns |
| - Experiences |
| - Feelings |
| - Views |
| - Perspectives |
| - Knowledge, etc. |
| Indicate the methodology |
| - Interpretative phenomenology |
| - Transcendental phenomenology |
| - Critical ethnography |
| - Classical ethnography |
| - Grounded theory |
| - Action research |
| - Exploratory study, etc. |
| STRUCTURE | Address five of the following six elements: |
| 1. Who will be studied |
| 2. When will they be studied |
| 3. Where will they be studied |
| 4. What will be studied |
| 5. How it will be studied |
| 6. Why it will be studied |
active verb reflecting the paradigm/philosophy underpinning the qualitative study such as; understanding, exploring, interpreting, constructing, explaining, describing, etc. Consequently, specific nouns should be used that represent the aims of qualitative studies such as experiences, feelings, views, perspectives, knowledge, etc. Finally, the methodology or method should appear in the research question that is coherent with qualitative methodologies/methods, i.e. interpretative phenomenology, critical ethnography, exploratory study, etc. Lastly, the structure of a good qualitative research question should address five of the six following elements; who, when, where, what, how and why, and the sixth element should be addressed by the entire research question (Table 1).

References


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