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Reflection and meta-reflection in doctoral studies

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Background

Qualitative studies are commonly challenged for their validity and reliability or trustworthiness due to the potential inconsistency occurred in the data analysis process. The criticism relates to the role and awareness of researcher being the core data interpreter or data analyser, regardless of their experience in doing research. Novice researchers, particularly those who are conducting doctoral research, usually face self-disagreement problem with their own interpretation of qualitative data in different timeframe of their study, as they are constantly being in the process of building knowledge and understanding of their field of study along the doctoral research journey. This problem, if left unsolved might impair the confidence of researchers and become a barrier to end their data analysis task. However, this problem of instability and inconsistency could be solved if the qualitative data analysis involves a systematic and structured reflection and meta-reflection process. This approach, in turn could make the varied analysis outcomes become strength of qualitative studies.

Research Questions

This paper aims to propose a model of reflection - meta-reflection which could be used to solve the inconsistency and instability of the outcome of qualitative data analysis in educational research. This model could make researchers be aware of the various roles they played when they analyse the same qualitative data repeatedly. The conscious recognition of these roles would help researchers to differentiate the evolution of their interpretation along the data analysis process, thus being able to identify the state of saturation when they have reached. The proposed model was developed based on an analysis of the role played by reflection and meta-reflection in two doctoral research studies in the education department of a pre-1992 UK university. The aim of the first study was to explore the experience of Asian students in the UK under a natural setting (Wu, 2008) while the second study is aimed to investigate how subject matter experts and game experts can collaborate to design and develop games for use in educational context (Tan, 2010). Both of the studies-one completed and one on-going intend to answer research questions using mixed methods, and their main approach is qualitative methods. Besides, they also shared the exploratory nature under natural settings. Based on these commonalities, the design of the selected studies were compared and contrasted to juxtapose the similarities and differences in terms of the mixed method nature, data collection methods, data analysis methods and the conduct of reflection and meta-reflection along the doctoral journeys. The juxtaposition is meant to extract the elements of reflection and meta-reflection in those studies and to map those elements into a model that could justify their value in the research process. The rationale, characteristics and implications of reflection and meta-reflection are depicted in order to capture lessons learnt which could be shared with other doctoral researchers.

Methods

Besides analysing two doctoral studies, the development of the model also gained inspiration through research methodology literature. According to Gibb (2007), the quality of qualitative analysis depends on its claimed objectivity-its freedom from bias or partiality. A constant proposal of safeguarding the quality of qualitative research is to include reflexivity components in one's research (Gray, 2009). Reflexivity is regarded as 'the awareness and acknowledgement of the role of the researcher in the construction of knowledge' (Gibb, 2007). But how such awareness and acknowledgement could contribute to the above mentioned data analysis problem, is a question that always left for the researchers to ponder. In fact, Patton's (2002) triangulated inquiry model could be seen as a solution to this problem. This model directs the interpretation of qualitative data to be done repeatedly from three perspectives: the inquirer or the researcher, the inquired participants, and the key stakeholders

of the research. While these directions may assist researchers to increase the number of perspectives targeted to the research issues, they may not help the researchers' interpretation reach saturation state over time. Hence justifying the need for a mechanism that focuses on how the reflexivity components in research could be structured to make interpretation stable, consistent, persistent if not saturated.

Frame

Data are raw materials collected in a research to be processed-normally through analysis, to become information. So information is processed data. When information is interpreted to become meaningful, knowledge is constructed. So knowledge is meaningful information, which could be used to answer research question. In analysing qualitative data, one can either analyse raw data or processed data. Analysing raw data should include the reflection of one's role played as the data collector and the investigator; while revisiting the processed data, one should involve meta-reflection, which encompasses the role played as the data processor and information interpreter in the past analysis process. Discrepancy occurs in the roles played by one researcher in two different timeframes. This discrepancy leads to the self-disagreement faced by researchers upon the outcomes of reflection and meta-reflection. To generate stable, consistent and persistent outcomes of qualitative data analysis, data should be analysed repetitively at reasonable, predetermined time interval using the same method of analysis. Once the analysis reaches the saturation state, third party, preferably experienced researchers should be requested to review the final outcome, especially to challenge the fairness of data analysis.

Research findings

The reflection-meta-reflection model of qualitative data analysis could be used to guide doctoral researchers to recognise the various roles they played in their research. This in turns, solve the constant self-disagreement problem they faced when revisiting analysed qualitative data.

The appreciation of the value of the reflection and meta-reflection presented in this paper is set to highlight the need to include systematic reflection and meta-reflection in research methodology courses offered to doctoral or early-career researchers, particularly in the educational research setting.