



Research Paper

Qualitative data collection, analysis and interpretation in research paradigms: The case of library and information science research

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ABSTRACT

Scholars base their research on certain philosophical paradigm. There is a close-fitting connection between interpretative research paradigm and qualitative methodology. Many novice scholars are experiencing difficulty in understanding the interconnection between interpretative research paradigm and qualitative methodology. Understanding this interconnection provides directions or guide for data collection, analysis and interpretation of findings. This article discussed the interconnection between interpretative research paradigm and qualitative methodology within the broad field of library and information science research. The article also discussed the position of interpretative paradigm in relation to ontology and epistemology in order to provide a guide for data collection, data analysis and data interpretation.

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INTRODUCTION

Scholars in many disciplines conducted a research on, and discuss the importance of interpretative research paradigm and qualitative methodology in their research inquiries (Dick, 1995; Creswell, 2003). Therefore, Library and information science scholars are encouraged to understand the interconnection between interpretative research paradigm and qualitative methodology. This is because it provide a guide for data collection, analysis and interpretation of findings. However, in spite of the importance of understanding the interconnection between interpretative research paradigm and qualitative methodology, many novice scholars in library and information science (LIS) are undergoing difficulty in understanding the interconnection between interpretative research paradigm and qualitative methodology to guide their data collection, analysis and interpretation of findings in their investigations. More so, limited research exist in regard to understanding the interconnection between interpretative research paradigm and qualitative methodology as a guide for data collection, analysis and interpretation of findings (Kamba, 2010). This study attempts to discuss the interconnection between

interpretative research paradigm and qualitative methodology. In addition, the study will discuss the position of interpretative paradigm in relation to ontology and epistemology in order to provide a guide for data collection, analysis and interpretation within the broad field of library and information science research.

Interpretative research paradigm

Scholars base their research on certain philosophical paradigm. There are several competing philosophical paradigm(Denzin and Lincoln, 2003). The philosophical paradigm underlying this study is interpretative research paradigm, the purpose is to discuss the importance and understand the intersection between interpretative research paradigm and qualitative methodology in library and information research. Interpretive research paradigm is underpinned by perception and interpretation, therefore to perceive is to collect information or data about events, while to interpret is to make meaning out of that information (Cohen and Crabtree, 2008).

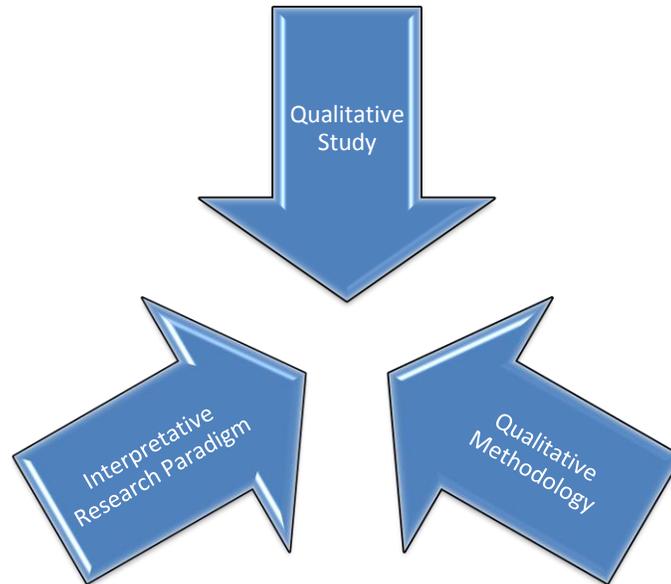


Figure 1: Interconnection between the interpretative research paradigm and qualitative methodology.

Interpretative researcher remains open to new knowledge throughout the study and it is developed with the help of informants. From the epistemological and ontological point of view, researchers using interpretative paradigm believe that reality is socially constructed through social constructions such as language, consciousness, and shared meanings (Cohen and Crabtree, 2008). Interpretative paradigm try to understand phenomena through the meanings that people assign to them (Berg, 2001). The interpretive paradigm is concerned with understanding the world as it is from subjective experiences of individuals. Guba and Lincoln (1994) stated that interpretative research paradigm is basically associated with the concepts of ontology, epistemology and qualitative methodology. The concept of ontology is all about the nature of reality, that is, the way the investigator defines the truth and reality. While the concept of epistemology is all about the relationship between the researcher and the reality, meanwhile how this reality is known, that is the process in which the investigator comes to know the truth and reality. Lastly, the concept of qualitative methodology is all about learning from participants about their experiences in their own settings and interpretations attach to these experiences (Hudson and Ozanne, 1988).

However, there is a relationship or connection between interpretative research paradigm and qualitative methodology (Musa, 2013). Analytically, every qualitative study is guided through interpretative research paradigm (Dick, 1995). More so, qualitative methodology is generally based on interpretative research paradigm. Scholars using interpretative research paradigm must adopted qualitative

methodology (Musa, 2013). LIS scholars are therefore encouraged to understand significant and interconnection between the interpretative research paradigm and qualitative methodology to research inquiries (Figure 1).

Qualitative methodology

Qualitative methodology is basically design to study people and understand their social and cultural phenomena. It also involves an interpretive and naturalistic approach to its subject matter and attempts to make sense, interpret the phenomena in terms of the meaning given by the people (Denzin and Lincoln, 2003). It is also naturalistic, meanwhile it attempts to study the everyday life of different groups of individuals and societies in their natural background. According to Thomas (2003), qualitative methodology are usually supported by interpretative research paradigm that portrays a world in which reality is socially constructed as researchers interact with participants by seeking their perception or experience on a particular problem. In this sense, the role of the researcher is to expose the opinions of participants and collect qualitative data (Musa, 2013). Interpretative research paradigm is relevant to qualitative inquiries and applicable to LIS discipline (Musa, 2013; Kamba, 2010). LIS scholars are therefore encourage to adopt interpretative research paradigm and qualitative methodology, for a study whose purpose is to learn from participants about their perceptions or experiences in their own settings. However, interpretative tend to favour qualitative methods (Cohen et al., 2007). There are

Table 1: The differences between six qualitative methods.

Method	Focus	Data Collection	Data Analysis
Ethnography	Context or culture	Observation and interviews	Thematic Analysis
Narrative	Individual experience and sequence	Interview, Stories from individuals and documents	Narrative Analysis
Phenomenological	People who have experienced a phenomenon	Interviews, focus group discussion	Thematic Analysis
Grounded Theory	Develop a theory from grounded in field data	Interviews, then open and axial coding	Grounded theory
Case Study	Organization, entity, individual, or event	Interviews, documents, reports, observations	Thematic Analysis
Action Research	Collaboration between researchers and participants	Conferences, interview, field note, observation,	Discourse, Framework analysis

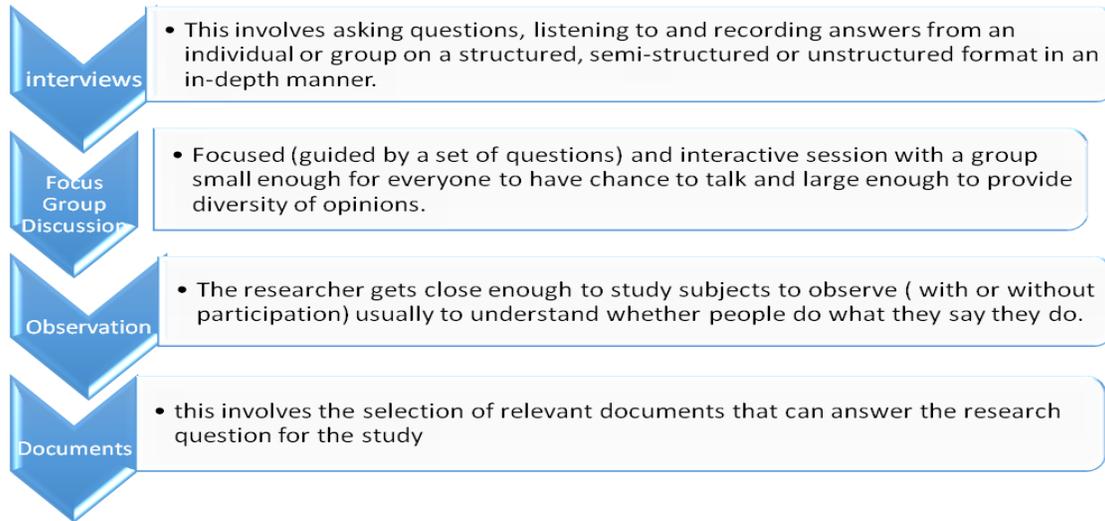


Figure 2: Methods of qualitative data collection.

actually many varieties of qualitative methods and is applicable to LIS research (Willis, 2007). The most popular and useful qualitative methods have been categorized into six groups: phenomenological, ethnographic, grounded theory, Narrative, case study, and action research (Jeff, 2015). However, the six methods usually use similar data collection methods (observation, focus group discussion, interviews, and reviewing text). Table 1 summarizes the differences between the six qualitative methods.

Qualitative data collection

The techniques adopted by interpretative scholars to collect qualitative data is relevant to LIS scholarly inquiries. Interpretive scholars attempt to derive their data through direct interaction with individuals on a one to one basis or direct interaction with individuals in a group setting or phenomenon being studied (Milanzi, 2009). Data collection in qualitative studies are any form of information, observations, or facts that are collected or recorded to represents the opinion and experience of its participants (Domegan and Fleming, 2007). However,

there are different techniques used to collect qualitative data in interpretative research and is applicable to LIS research, depending on the research focus and methods adopted in the study as summarizes in Table 1 (Patton, 2002). Qualitative data collection methods vary using unstructured or semi-structured interview techniques. Some common methods include focus groups (group discussions), individual interviews, and participation/observations, literature reviews (documents) (Budd et al., 1967). Nonetheless, qualitative research data collection methods are time consuming, therefore data are usually collected from a smaller sample unlike quantitative approaches and consequently this makes qualitative research more costly and unique (Creswell, 2003). The advantage of the qualitative research is that the information is richer and has a deeper insight into the phenomenon under study. LIS researchers are therefore advise and encouraged to understand the methods use on or before data collection. Figure 2 shows a brief explanation of the methods for data collection in LIS research.

The brief explanation of the different methods used in data collection in Figure 2, could provide a guide to LIS

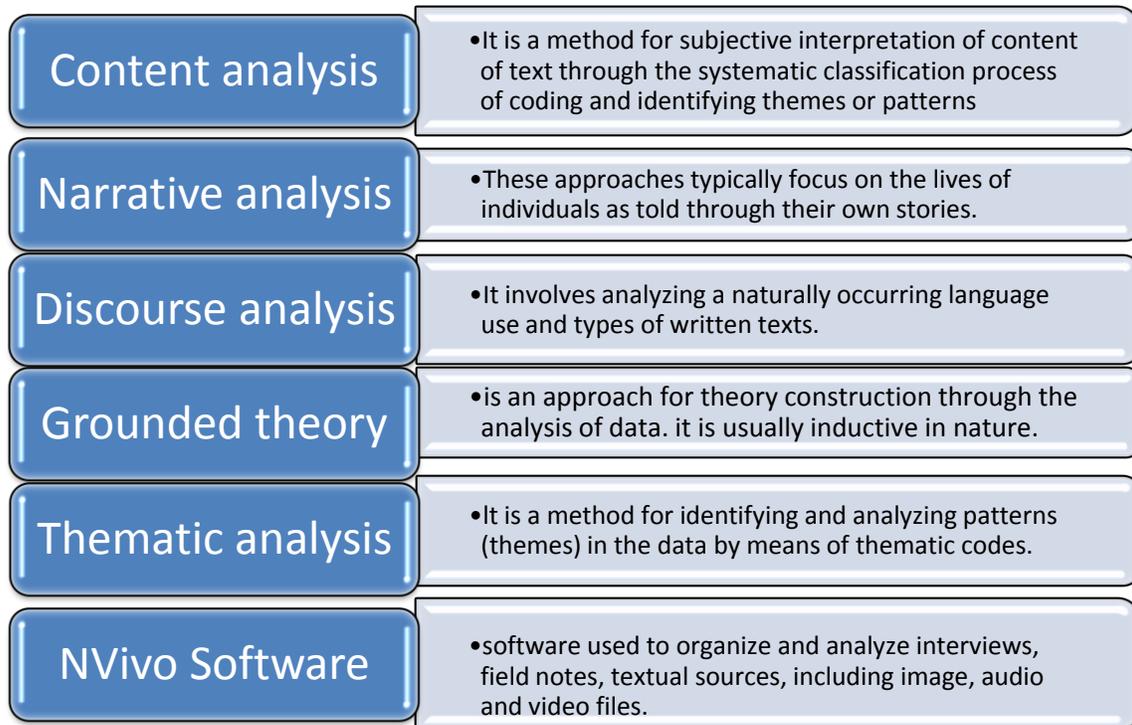


Figure 3: Methods of qualitative data analysis.

scholars in choosing the method that is suitable for their study and use it for data collection.

Qualitative data analysis

Qualitative data analysis is a systematic process of searching, arranging and organizing the interview transcripts, observation notes, or other non-textual materials that the investigator gathers to increase the understanding of the phenomenon (Wong, 2008). The process sometimes referred to as “open coding”. The goal is to reduce or condense the data into a manageable manner by identifying significant patterns, and finally drawing meaning from data and subsequently building a logical chain of evidence (Patton, 2002). Qualitative data analysis involves inductive reasoning processes to interpret and structure the meanings that can be derived from data. Qualitative data analysis is generally based on an interpretative paradigm. The idea is to examine the meaningful and symbolic content of qualitative data (Domegan and Fleming, 2007). This involves reducing the volume of raw information or sifting significance from trivia, identifying significant patterns and constructing a framework for communicating the essence of what the data reveal (Finch and Lewis, 2003). There are different methods used to analyze qualitative data, but these are most widely used: Content analysis, Narrative analysis,

Discourse analysis, Grounded theory, and thematic analysis (Gillham, 2000). LIS researchers are therefore advise and encouraged to understand the methods that are suitable for their study and adopt them. Figure 3 shows a brief explanation of the methods for data analysis in LIS research.

The brief explanation of the different methods used to analyze qualitative data in Figure 3, could provide a guide to LIS scholars in choosing the method that is suitable for their study and use it to analyze data collected.

Data interpretation in qualitative research

Interpretation of data is the act of identifying and explaining the core meaning of the data. Qualitative scholars interpret their data base on the categories, sub-categories and quotations that emerged from the open codes (Mayring, 2000). This is also relevant to qualitative inquiries applicable to library and information science discipline (Musa, 2013; Bates, 2006). In LIS, interpretation of data must be supported by the data collected, arranged and presented to provide the reader an opportunity to draw on the reflection of thoughts (reality) given to the participants’ responses. During interpretation of qualitative data, negative/deviant cases that do not fit with the data are also interpreted and presented in the study (Mason, 2002). However, qualitative scholars interpret

and present their data in the context of any similar previous research and social theories (Creswell and Plano, 2006). LIS scholars are therefore encouraged to understand and apply the way qualitative scholars are interested and present their data from philosophical point of view or paradigm.

CONCLUSION

There is interconnection between interpretative research paradigm and qualitative methodology. Clear understanding of the interconnection between interpretative research paradigm and qualitative methodology provides a guide in data collection, data analysis and interpretation of data in qualitative approach. The approach adopted by qualitative researchers tends to be inductive which means that they develop a theory or look for a pattern of meaning on the basis of the data that they have collected. Scholars who adopted interpretative paradigm must collect qualitative data using interview techniques (structure, unstructured, semi-structure, focus group interview or observation or documents) and analyze it using qualitative methods of data analysis such as: Content analysis, Narrative analysis, Discourse analysis, Framework analysis, thematic analysis and Grounded theory etc. There is a critical need for the LIS scholars to understand the interconnection and apply it in their research inquiries in order to add value to the existing body of knowledge.

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