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The thematic analysis of interview data: an approach used to examine the influence of the market on curricular provision in Mongolian higher education institutions

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Abstract

This article describes how thematic analysis was used in the analysis of the qualitative interviews in a doctoral study that was designed to examine the changes taking place in the higher education market in Mongolia in terms of undergraduate curricular provision. The paper presents a rationale for using thematic analysis demonstrating analytical rigour in the stages of coding and the identification of emergent themes through the use of NVivo.

Context of the research

According to the 2010-2011 education statistics issued by the Ministry of Education and Science of Mongolia, there were 113 HE institutions for a population of 2.7 million people. The student population was not large: 155801 students studying at HE institutions for Bachelor degrees. Of all new entrants to HEIs in the 2012 academic year, 80.6% completed their general education schooling in the same year.

The aim of the study was to examine the changes in Mongolian higher education in the context of the market and to assess their influence on institutions of higher education, in particular on curricular provision at undergraduate level. The primary method chosen for this multi-site case study was chosen as interviews to get multiple perspectives, augmented by documentary sources of evidence. A sample of five universities was selected on the basis of both convenience and representation: two of the country's four private universities and three of the eight civil universities, one of which had been selected for a pilot study. The data collection was based on interviews with 50 respondents including both university administrators and decision making officials. In addition, document review was carried out.

Why use thematic analysis for this study?

Qualitative interviews were the main method in the study to obtain various perspectives on the research questions related to the nature of the changes in curricular provision in the context of the emerging market in Mongolia. Qualitative interviews give a new insight into a social phenomenon as they allow the respondents to reflect and reason on a variety of subjects in a different way (Folkestad, 2008, p.1). Consequently, conducting interviews with policy makers and educational administrators were seen as an option within many that gives insight into the phenomenon under investigation because 'key informants' - the sampling strategy in the study - are often critical to the success of a case study, as 'such persons not only provide with insights into a matter but also can suggest sources of corroboratory or contrary evidence' (Yin, 1994, p.90). Since the interviews were the primary technique of the data collection, it was therefore important to be mindful of the kind of the data analysis in the earlier stages.

The method of analysis chosen for my study was a qualitative approach of thematic analysis. Generally, thematic analysis is the most widely used qualitative approach to analysing interviews. The conceptual framework of the thematic analysis for my interviews was mainly built upon the theoretical positions of Braun and Clarke (2006). According to them, thematic analysis is a method used for 'identifying, analysing, and reporting patterns (themes) within the data' (2006, p.79). The reason I chose this method was that 'rigorous thematic approach can produce an insightful analysis that answers particular research questions' (Braun and Clarke, 2006, p.97). In addition, this approach complemented the research questions by facilitating an investigation of the interview data from two perspectives: first, from a data-driven perspective and a perspective based on coding in an inductive way; second from the research question perspective to check if the data were consistent with the research questions and providing sufficient information.

The next important consideration was identifying themes in the interview data I collected. What counts as a theme is that it is something which captures the key idea about the data in relation to the research question and which represents some level of patterned response or meaning within the data set (Braun and Clarke, 2006, p.82). Here the main requirement is to be consistent throughout the process of determining themes. As Bazeley (2009, p.6) claims themes only attain full significance when they are linked to form a coordinated picture or an explanatory model: 'Describe, compare, relate' is a simple three-step formula when report the results. As Braun and Clarke (2006) explain themes or patterns within data can be identified either in an inductive 'bottom up' way (citing Frith and Gleeson, 2004), or in a theoretical, deductive 'top down' way (citing Boyatzis, 1998 and Hayes, 1997). According to Thomas (2003, p.2), the primary purpose of the inductive approach is to allow research findings to emerge from the frequent, dominant or significant themes inherent in raw data, without the restraints imposed by structured methodologies. Thomas (2003) points out three main purposes for using an inductive approach: (1) to condense extensive and varied raw text data into a brief, summary format; (2) to establish clear links between the research objectives and the summary findings derived from the raw data; and (3) to develop a model or theory about the underlying structure of experiences or processes which are evident in the raw data. However, I acknowledge that top-down and bottom-up process are interactive in some way because the research keeps a specific interest in identifying themes influenced by the theoretical framework.

Demonstrating rigour using thematic analysis

The data collected through interviews with policy makers and higher education administrators were analysed in a similar way based on a three-stage procedure suggested in the literature (Creswell, 2007; Miles & Huberman, 1984): preparing the data for analysis by transcribing, reducing the data into themes through a process of coding and representing the data. Braun and Clarke (2006) point out that patterns are identified through a rigorous process of data familiarisation, data coding, and theme development and revision. I chose to work on NVivo software to analyse the interviews as there was a large amount of interview data to manage. The process was also efficient and time-saving. The procedures used for the analysis largely followed the approach proposed by Braun and Clarke (2006).

First, familiarisation with data was internalised through transcription and translation of the interviews. The audio recordings of the interviews of 50 respondents were listened to a number of times for their accurate translation and transcription. All interviews were directly translated into English, verbatim, by the researcher. The importance of translating the interviews as they were transcribed was first to understand the meaning rather than the language, or linguistic features first. Second, the pre-translated transcriptions helped me to communicate with my supervisors during the process of soliciting advice on coding and theme development. Most of the translated transcriptions were carried out straight after the interview to consider any clarification. This process was carried out on Microsoft Word Office.

Second, the transcripts and audio recordings were imported into the NVivo. The transcripts were coded on it while I listened to recordings as and when necessary. On NVivo, I created the analysis of data in two ways to begin to generate codes. The purpose was to look at transcripts from two perspectives described earlier. In the beginning the coding process was guided by the conceptual framework of the study, which is related to Jongbloed's (2003) market model for HE and Clark's (1983) concept of the triangle of coordination. When satisfied that the codes generated from five of the transcripts were aligned with the research questions examining the above mentioned concepts and therefore fit for the purpose, the data-driven coding followed with a focus on identifying patterns of meaning. Working through the data, more nodes and sub-nodes were developed that explained the patterns of the market model and the three forces of HE coordination from the interviewees' perspectives. For example, there was a node labelled *Power* under which there was a sub-label *State Involvement*, and under this sub-label there was a sub-sub-label *Admission quota*. In this sub-sub-label *Admission quota*, there were two references coded from Senior Administrator2, State University West (Narantuya, 2014, pp.78-82).

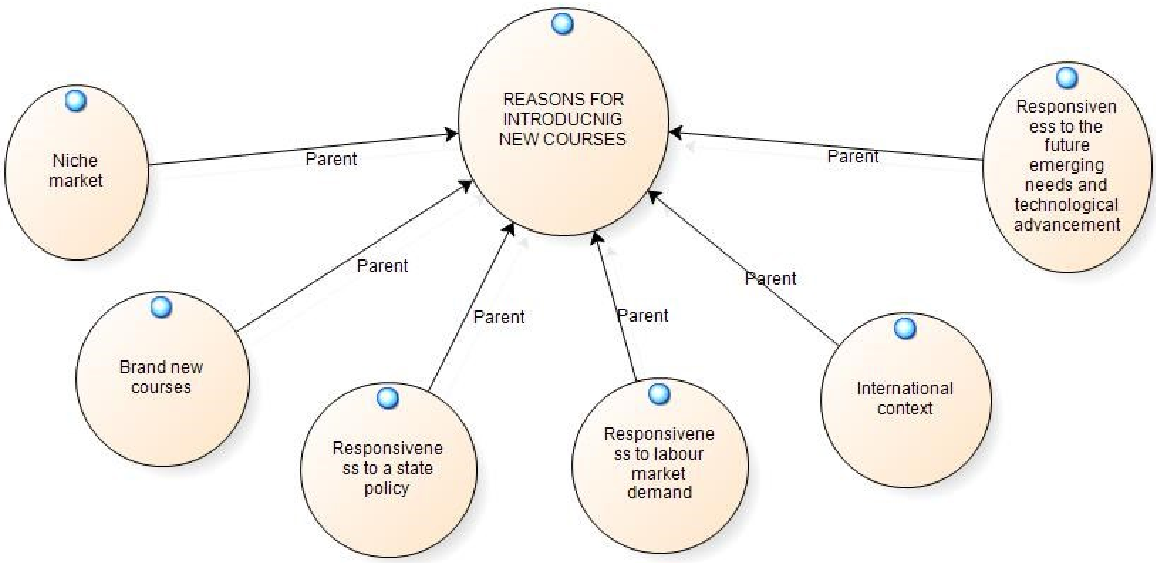
The third stage was the theme development. At this stage, coded nodes on NVivo were read and reread to identify significant broader patterns of meaning (potential themes). The preliminary analysis came up with 13 main categories with their subcategories such as changes in HE, competition, consumers, institutional image, market demand, power, quality, reasons for introducing and withdrawing courses, the country's development and international comparison. NVivo automatically counts the number of times sources refer to each category and subcategory. For example, the category most referred to was 'power' (424 times), and the least referred to were 'the country's development' (36 times) and 'international comparison' (65). The category 'reasons for introducing new courses' was referred to 305 times, whereas the categories 'consumers' and 'competition' were referred to 261 and 246 times respectively. Part of the flexibility of thematic analysis is that it allows the themes and their prevalence to be determined in a number of ways (Braun Clarke, 2006). Although the stages used in the analysis of the data looked sequential, they were very repetitive while being built up on the previous stage.

Fourth, these 13 categories were aggregated into 11, then into 7, and were further reduced into the 5 most referred to categories: university context, institutional autonomy (power), competition, consumers and changes in curricular provision (curricular responsiveness).

Thomas (2003) points out that 'Most inductive studies report a model that has between 3 and 8 main categories in the findings.' Moreover, as the researcher becomes more experienced he or she will find several "buttons to push" in order to get the final results – information – that he or she is searching for (Folkestad, 2008, p.4)

Of the five categories of the emerged themes, here I present the model that demonstrates the theme on **Curricular Responsiveness** as an illustration**.** Forty-nine sources addressed this issue. General evidence is that in response to the socio-economic and political changes in the country, higher education institutions faced the necessity of transforming their academic content. For HEIs it has become crucial to have more flexibility to adapt curricula to changing external needs and to introduce a wider variety of courses. New concepts, new terms, new sectors, new industries and new attitudes have emerged. There are two distinctive phenomena in terms of curricular responsiveness. Firstly, the emergence of new courses and new fields. Secondly, conceptual changes in delivering knowledge. In NVivo the nodes and sub-nodes can be modelled using the Models. Based on the respondents' accounts, the change in provision at one of the state universities was achieved by introducing new courses and subjects. The major reasons were related to meeting the demand and student needs as well as with the university expansion policy. The main reasons were classified as shown in Figure1:

Fig. 1



Later, during the case analysis, the respondents' transcripts were manually blind re-coded again for each case university. This last stage of procedure was carried out to double check the themes developed. Although NVivo was useful and helpful, however, any form of data analysis has limitations. Ishak and Bakar (2012, p.102) state,

> NVivo is just another set of tools that will assist a researcher in undertaking an analysis of qualitative data. However, regardless of the type of software being used, the researcher has to dutifully make sense of all the data him or herself, without damaging the context of the phenomenon being studied. Inevitably, the software cannot replace the wisdom that the researcher brings into the research because at the back of every researcher's mind lies his or her life history that will influence the way he or she sees and interpret the world.

Consequently I decided to use an alternative method to double check the data analysis with manual checks during my case analysis. By using both the computer-assisted data analysis coupled with manual checks, it improved trustworthiness, credibility and validity of the findings. In order to check, I selected a sample including some of the earlier coding and did blind recoding to satisfy myself of the accuracy of the coding. If the sample gave a cause for concern I would have repeated the coding process. This manual re-coding check did not take much time as I was already familiar with the content of the transcripts.

Conclusion

Using the thematic analysis of interview data served the purpose of this study as it enabled the effective categorisation of changes in curricular provision. This study confirmed the notion by Braun and Clarke (2006) that it is appropriate to choose a method of analysis that is driven by both research question and broader theoretical assumptions.

Braun and Clarke (2006, p.85) also claim that using the data collection questions (such as from an interview schedule) as the 'themes' are the 'worst examples of thematic analysis', because they are entirely deductive and fail to take account of emergent themes based on a process of induction. The questions employed in the interviews were always more open-ended to begin with, followed by some semi-structured questions keeping the key points relevant to the research questions ready appropriate to respondents' posts and positions. The main categories and themes were identified from the data. Although the stages used in the analysis of the data look sequential, they iterative and built up on the previous stage as Braun and Clarke (2006, p.86) have already highlighted, 'Analysis is typically a recursive process, with movement back and forth between different phases. So it's not rigid, and with more experience (and smaller datasets), the analytic process can blur some of these phases together.'

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