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A Type of Thematic Analysis Using an Example of Interview Data About an Adult Learning Mathematics

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Student Guide

Introduction

The data presented show how a researcher, Dr. Jon Swain, a senior researcher and lecturer at UCL, Institute of Education, went about analysing interview data using a common method, or technique, of qualitative analysis, called thematic analysis, whereby a researcher sets out to identify and organise patterns of meaning, which are referred to as codes or themes. The particular form of thematic analysis used in this example is called a hybrid approach, which is a method that combines two major approaches in qualitative work: one where codes or themes are already known and one where the codes or themes are unknown and have to be created or constructed. In this example, an extract of interview data has been selected to demonstrate how the process of hybrid thematic analysis can be carried out. The data come from part of an individual, face-to-face, interview that the researcher conducted with an adult learner who was returning to college to study maths.

Using a Hybrid Approach to Thematic Analysis for Interviews

Thematic analysis is probably the most widely used form of qualitative analysis in the social sciences across a range of disciplines such as sociology and

psychology. It is flexible and is usually the first qualitative method of analysis researchers should learn as it provides a set of core, foundational, techniques and skills that are used in many other forms of qualitative analysis. The process identifies and organises patterns of meaning, which can be called codes or themes (Robson, 2011). These are basic units of meaning that the analyst considers to be important and which are often associated with the study's aims and focus. If you Google the term "Thematic Analysis," you will find that there is a good deal of literature on the subject and much of the writing is practical, providing step-by-step guides (e.g., Braun & Clarke, 2006; Joffe, 2011; Miles & Huberman, 1994). While some researchers choose to make a distinction between "codes" and "themes," viewing the latter as broader units of meaning, it is often difficult to tell the difference, and if the analyst or researcher decides, the terms can be used interchangeably. For instance, is a unit of meaning about a person's motivation (to perhaps want to study maths as an adult) a code or a theme? In this dataset, to simplify matters, henceforth, I will generally refer to codes/themes as just "codes."

In this particular example, I am choosing to use a specific method of thematic analysis called a hybrid approach (e.g., Fereday & Muir-Cochrane, 2006; Swain, 2018). In some approaches to research, the researcher is concerned with developing and testing out a hypothesis or existing theory (e.g., Children find learning maths easier when they use calculators), and many of the codes will be already known before the research begins. In other approaches, where the purpose of the research is to generate new theories (e.g., What happens when children are given calculators to learn maths?), many of the codes are unknown at the beginning and are seen to "emerge" from the data. A hybrid approach combines these two approaches: The researcher acknowledges that some of the codes will be pre-known because they are part of the project's aims, research questions, or are questions asked in the interview itself, while other codes are unanticipated and will "materialise" or be discovered in the data itself.

Data Exemplar: Interview Data About an Adult Learning Mathematics

Background Information About the Project

The interview extract presented in Exemplar 1 was part of a second interview that the researcher (the author) conducted with Rija (not her real name), who was a Sikh women who, at the time, was around 35 years old. She was part of a two-year study that explored the feelings and perceptions of around 30 adults who had returned to college to take a course in mathematics. Many of these individuals were anxious about studying a subject that many had failed in when they were at school. In the conversation, I am asking Rija how she felt about learning maths, whether studying it had changed her in anyway, and in particular, whether it had any effect on her relationships, in this case, with her husband. The interview took place in the privacy of the classroom after the rest of the class had gone home; the whole interview lasted about 40 minutes and, when transcribed, was around 20 pages of hard copy.

Analysis: A Hybrid Approach to Thematic Analysis

As with most analysis, the first stage for any researcher is to familiarise themselves with the data. This usually occurs by listening to the interview or by reading and rereading the transcript through to see what is happening. This will often be, firstly, at a superficial level (i.e., Rija is talking about her feeling of learning maths, how it has changed her aspirations, and the affect this has had on her husband), but, depending on the researcher's purpose, there will often be a deeper level of analysis when the researcher applies more "academic" or theoretical concepts to use as a lens to understand what is going on. In this project, I was interested in more academic theories (e.g., of gender, identity, relationships, power, dominance, subordination, etc.), and so I was looking out for these themes in the data.

I also knew that the interview schedule, which I had created myself, included questions about learning maths, relationships, aspirations, etc., and so, therefore, these codes were bound to come up as I read through the interview transcript. The technical name of these pre-fieldwork codes/ is "a priori" – that is, those that already exist because they come from the research aims, research questions, and/or from individual questions asked in the interviews, and this means that I could create a list of these before I even looked at the interview transcripts. However, there were also a series of post-fieldwork codes that could not be anticipated or foreseen, and which were derived from examining the data as I read through the interview transcript. The technical name for these codes is "a posteriori."

This interview was one of a series with other adult learners, and so I was looking to see whether the codes here were going to be replicated (or not) in other interviews, in order to gauge how common, and how important, they were going to be in the study as a whole. For example, did other learners, like Rija, feel they were changing as people; did others feel that studying made them feel more independent or did they have aspirations to make more of their lives?

As a researcher begins to code, he or she can either use a broad brush approach to create more general codes or they can use more fine-tuned, or micro, codings: It depends on how interested the researcher is in individual words and phrases. This way of working is known as "free coding"; it depends on the individual researcher's purpose but, in this instance, for me, the main focus was on the individual units of meaning as a whole rather than on the specific words, pauses, hesitations, intonations, and so on, that a researcher might be interested in when carrying out other forms of qualitative analysis such as discourse or conversation analysis.

Coding

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If I was to use a broad brush coding to this interview, the codes *might* look something like:

- Changing identities
- Power in relationships
- Aspirations
- Feelings
- Learning

However, on this occasion, I wanted to apply more fine-tuned coding which produced the following codes. Those that are pre-fieldwork or "a priori" codes are bold, while those that are post-fieldwork or "a posteriori" codes are italic.

- **Independence**
- *Reliance on partner*
- Dominance
- Subordination
- *Rivalry with partner*
- *Improvement in maths*
- **Changing relationship with partner**
- *Competitiveness with partner*
- **Gaining confidence**
- *Changing perceptions*
- **Changing identities**
- **Power and control**
- **Changing aspirations**
- *Aspirations of working*
- *Aspirations to gain qualifications*
- *Feelings of achievement*
- *Feelings of being trapped*

- *Feelings of liberation/freedom*
- *Meeting new people*
- **Learning maths**
- *Enjoyment*

So we can see that, for example, although I could anticipate that a code like "Independence" was bound to come up because this was one of the questions I asked in the interview, a code such as "Reliance on a Partner" or "Rivalry with a Partner" could not be predicted and only came up as a result of our conversation.

The list of codes, and the actual words, may look a little different each time a different person works on the data (Lincoln & Guba, 1985; Lorelli, Nowell, Norris, White, & Moules, 2017). This is because individual researchers will have their own interests/areas to pursue and use their own words and phrases – as long as they know what each one means and what it refers to – and it is good practice to make a note of each code with an accompanying definition. Coded headings can be short or longer – depending on the researcher's own style and vocabulary. So, for example, a code such as "Feeling of being trapped" can be "written as Trapped" or "Limited" or "Confined." It is your decision. The coding can either be carried out manually on a hard or electronic copy or by using a computer software package such as NVivo – again it is up to the individual.

It is important to understand that thematic analysis is not only a method for identifying and analysing data but is also used for organising and describing it and reporting the conclusions. Whatever method is decided upon, the codes (or themes) – essentially chunks of text – have to be "parked" somewhere where they can be retrieved later: again, you can either use computer software or perhaps a Word document. So, for the codes of *Rivalry with partner* and *Improvement in maths*, the chunk of text for me would be:

He always thought he was better at, he was so good at maths, but I find

that I'm even better than him now.

Notice that more than one code can be applied to the same sentence and more than one code can sometimes even be applied to one word! The sentence above is used as an exemplar by the researcher to make a point in an argument they are trying to make by using the interviewee's own words. Depending on the researcher's style, they may want to present a few words, a whole sentence, or a lengthier extract (or exchange) in order to provide readers with a greater context. I generally like to go for lengthier extracts and, as a very rough rule, if I present, say, half a page of data, I will often accompany this with half a page of analysis.

Family Codes

As you read through more of the interview transcripts, the number of free codes will begin to grow. After analysing the 30 interviews in this project, I had well over 50 codes, and this can feel a little unmanageable. The next stage in the process of analysis is to begin to merge or group the free codes under broader headings, which are often known as "family codes." In the series of "free" codes listed above, readers will see that many are concerned with Change, Aspirations, and Feelings. Although each researcher will group codes in different ways, these family codes can work as a way of organising the data and become headings under which you can report your findings and conclusions.

So, under the family code of **Change** you could have:

- Independence
- Relationships
- Perceptions
- Power relations
- Domination/subordination
- Identity

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- Meeting people
- Confidence
- Improvement

Grouped under the family code of **Aspirations** you could have:

- To gain qualifications
- To work

Grouped under the family code of **Feelings** you could have:

- Achievement
- Being trapped
- Enjoyment
- Freedom
- Learning

But, again, each researcher will work slightly differently. For instance, you might want to focus on the code of "Independence" and make this a family code or perhaps create a family code of "Learning." This is the really creative part of the analysis which I find the most fun, and it is up to you how they organise the data and present the conclusions.

Summary

This exercise shows readers the process of how I analysed an extract of interview data using a form of thematic analysis known as a hybrid approach. This is where some codes or themes are pre-known to the researcher/analyst because they come from the research aims or interview questions, while other codes/themes that cannot be anticipated are created or constructed by the researcher from the data itself. I also show how the codes can be merged to create family codes or groupings, which can be used to organise how findings are presented in the final

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report.

Reflective Questions

1. Why do you think it is possible to create some codes before you have even read through the interview transcript?
2. Which phrases/sentences would you pick out for the codes of Independence or Rivalry with partner?
3. Are there any different codes that you can see in Exemplar 1 that the researcher may have missed?
4. What Family codes would you create to organise the free codes?
5. How would you use this hybrid approach in your own research? Could you make a list of what would your own a priori codes be?
6. If two or more researchers used this approach with the same dataset, how similar do you think their findings would match? Argue both for them being alike and different. Does it matter?
7. Looking at the extra data provided, identify the main patterns and begin coding using thematic analysis.
8. Are any of the codes the same as those in the interview with Rija?

Further Readings

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