**INTRODUCTION TO FRAMEWORK ANALYSIS**

**by Simon Moss**

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| **Introduction** |

Framework analysis is an approach that some qualitative researchers utilise to analyse data. Although similar to other approaches, such as grounded theory and thematic analysis, framework analysis entails some distinct features. For example

* the researcher tends to generate themes from insights they gained before they collected data—such as previous taxonomies—as well as from the data
* the researcher then specifies the theme that corresponds to each segment of text—such as each answer during an interview
* the researcher then sorts the segments of text into clusters, called charts
* finally, the researcher utilizes these charts, as well as other insights, to uncover conclusions.

Ritchie and Spencer (1994) developed framework analysis to study policies (see also Srivastava & Thomson 2009). Yet, framework analysis has been applied in many fields, especially healthcare (Gale et al. 2013; Smith & Firth 2011), including nursing (Furber 2010; Swallow, Newton & Van Lottum 2003). For example, researchers have applied this approach to explore the perspectives of parents towards early education in Australia (Patel & Agbenyega 2013) or the management of medical conditions in their children (Swallow et al. 2011).

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| **Activity 1: Familiarisation** |

Framework analysis entails five key activities. Some researchers will implement these activities in a specific order: familiarisation, construction of the thematic framework, indexing, charting, and interpretation. Most researchers, however, will occasionally switch between these activities several times, depending on their needs. For instance, after they chart the data, they might decide to refine the thematic framework.

**Aim of familiarisation**

During the first activity, called familiarisation, the researcher attempts to become more familiar with the content, scope, and diversity of data. During this phase, researchers may

* listen to the recordings, read the transcripts, scrutinize the field notes, and so forth
* record themes, patterns, insights, and other relevant thoughts as they transpire

Obviously, this phase is vital if other people helped the researcher collect data, such as conduct interviews. Nevertheless, this phase is still vital even when only the researcher collected the data. If researchers do not conduct this activity

* their recollections and perspective of the data are often selective; for example, they might only recall the answers that conform to their expectations
* subsequent phases of the data analysis might thus be skewed or inaccurate
* they might, for example, overlook vital themes

If the amount of data is modest, the researcher might scrutinise all the data. Alternatively, if the data are extensive, the researcher might scrutinise only a subset—perhaps a third of the data, for example. They would deliberately select a range of data, as the following illustration shows

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| **Illustration of familiarisation**

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| **Research question** | What styles or strategies do supervisors adopt to inspire their research candidates? |
| **Data** | Interviews from 50 PhD and Masters by Research candidates |
| **Data selected during the familiarisation phase** | 15 interviews including both* PhD and Masters by research candidates
* male and female supervisors
* male and female research candidates
* science and humanities supervisors
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| **Activity 2: Construction of the thematic framework** |

 The second activity is designed to generate a series of themes, concepts, or issues. For example, after completing this activity, the researcher might generate the set of themes that appear in the following table.

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| **Themes**

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| Exhibits humility  |
| Conveys an inspiring vision of the future |
| Models exemplary behavior |
| Offers advice* Career advice
* Personal advice
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| Promises rewards in response to task completion |
| Criticizes work |
| Seldom engaged |
| Discusses values |

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These themes tend to emanate from three sources of information: knowledge that was acquired before data were collected, the suggestions of participants, and patterns that emanate from the data. The following table discusses these sources of information

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| Source of information | Examples and clarifications |
| Knowledge that was acquired before data were collected | * Initially, the themes are primarily derived from past knowledge; for example, the themes might be derived from a previous taxonomy—such as a taxonomy of leadership styles
* In this example, the second to fifth themes roughly correspond to the main behaviors of a style called transformational leadership
* Alternatively, each theme might correspond to one question you asked during the interviews
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| The suggestions of participants | * The answers of participants might explicitly refer to possible themes or concepts
* In this example, a participant might say “my supervisor demonstrated leadership humility”—and this response might prompt the researcher to develop a theme around humility
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| Patterns that emanate from the data | * While familiarizing themselves with the data, researchers might observe differences or similarities in the responses of participants
* The researchers might then suggest a theme that explains these differences or similarities
* For example, some participants might indicate their supervisor can be critical of their work; other participants might indicate their supervisors are never critical but occasionally suggest alternatives
* The researcher might then suggest a theme around criticism to explain this variation
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These examples demonstrate some key features of this stage. Specifically

* to derive themes, researchers need to utilise their intuition to interpret the responses of participants, to decide which responses are most important, and to appreciation similarities or differences between responses. This stage is not merely a mechanical, methodical operation
* the themes should be relatively straightforward at this time. The definition and nuances of each theme will evolve over later phases.
* the themes can be hierarchical and comprise subthemes as well; career and personal advice might be subthemes of offering advice
* although uncommon, researchers can develop a distinct taxonomy for each group—such as PhD and Masters by Research candidates.

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| **Activity 3: Indexing** |

 Next, researchers tend to assign each theme to the data. That is, the researchers will read the data again—such as the transcript of an interview—and assign each response, sentence, or some other unit a theme. This theme could be specified in the margins, if using paper, or in comments, if using Microsoft Word. During this phase, researchers will scrutinize all the data rather than merely a subset. The following example illustrates this approach. In this example, the first part of the response was assigned one theme and the second part of this response was assigned another theme.

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| **Indexing**

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| My supervisor often described how my life of a researcher could be in the future—and I was really excited by this prospect. | Conveys an inspiring vision of the future |
| My supervisors then offered me some advice on how I could achieve this goal | Career advice |

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When researchers apply this method, called indexing, they can choose a range of variations. For example,

* they might assign more than one theme to a segment of text; indeed, if two themes often apply to the same text, they might later combine these themes or discuss the association between these themes
* each segment of text could be an entire response, sentence, proposition, or some other unit
* again, researchers need to utilize their intuition to interpret the text and themes

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| **Activity 4: Charting** |

 During the fourth activity, called charting, researchers convert the data to a series of tables, called charts. These charts help the researchers summarise the data and distil patterns. Although researchers can utilise a variety of formats to construct these diagrams, in most charts

* each column often corresponds to one theme, one subtheme, or research question
* each row often corresponds to one participant, organization, or similar unit
* the entries are the corresponding responses or texts

To illustrate, the following display is an extract of a chart. In this chart, each column corresponds to one theme. Each theme corresponds to one participant. The cell contains the responses of participants that correspond to each theme. However, rather than enter quotes, these cells are usually summaries of the responses.

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| **A chart**

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|  | **Exhibits humility** | **Conveys an inspiring vision of the future** | **Models exemplary behavior** |
| Respondent 1 |  |  | Many people listen to the supervisor because she can relate many stories about this topic |
| Respondent 2 | The supervisor referred to troubles she experienced while completing her PhD | The supervisor indicated the candidate could shift policies around immigration in the future |  |
| Respondent 3 | The supervisor acknowledged that he wants to improve his skills in statistics |  |  |

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Often, researchers will construct more than one chart. For example, one chart might entail themes that relate to leadership. The second chart might entail themes that relate to knowledge, and so forth. Researchers could then consider other variations. To illustrate

* researchers might arrange the rows or participants according to some variable, such as age
* accordingly, the researchers could more readily ascertain whether responses tend to vary across age or other characteristics

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| **Activity 5: Mapping and interpretation** |

 During the final activity, called mapping and interpretation, the researcher extracts patterns and conclusions from the data. Although researchers do not follow a strict procedure, they will tend to

* review the charts as well as other records, such as the notes they recorded while scrutinizing the data
* identify similarities and differences across characteristics, such as age
* uncover themes or perspectives that tend to coincide
* utilize their intuition to unearth insights during this activity

The conclusions that researchers distil, and the practices these individuals apply, will partly depend on the research questions or objectives. For example, researchers might conduct research to define concepts, characterise phenomena, generate typologies, uncover associations between concepts, explain patterns in the data, to develop theories, or to unearth recommendations. The procedures that researchers apply to interpret the data might depend on which of these objectives are paramount to the research.

**Other charts**

 During this phase, as researchers uncover patterns, they might develop more charts to represent these patterns. They might, for example, realise the features of humility differ between science and humanities leaders. They might develop a chart, similar to the following example, to represent this possibility.

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| **A chart to display associations**

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| **Supervisor refers to previous flaws** | **Supervisor refers to existing flaws** | **Supervisor considers other perspectives** |
| S1 | S4 | S2 |
| S2 | H2 | H4 |
| S3 | H3 | H7 |
| H1 | H4 | H9 |

* The number refers to distinct participants
* The letters distinguish science and humanities candidates

As this chart shows, in science fields, supervisors tend to refer to previous flaws. In the humanities, supervisors tend to refer to existing flaws or alternative perspectives |

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| **References** |

Furber, C. (2010). Framework analysis: a method for analysing qualitative data. African Journal of Midwifery and Women's health, 4(2), 97-100.

Gale, N. K., Heath, G., Cameron, E., Rashid, S., & Redwood, S. (2013). Using the framework method for the analysis of qualitative data in multi-disciplinary health research. BMC medical research methodology, 13(1), 1-8.

Hackett, A., & Strickland, K. (2018). Using the framework approach to analyse qualitative data: a worked example. Nurse researcher, 26(3).

McMillen, R. E. (2008). End of life decisions: nurses’ perceptions, feelings and experiences. Intensive and Critical Care Nursing, 24(4), 251-259.

Parkinson, S., Eatough, V., Holmes, J., Stapley, E., & Midgley, N. (2016). Framework analysis: a worked example of a study exploring young people’s experiences of depression. Qualitative Research in Psychology, 13(2), 109-129.

Patel, S., & Agbenyega, J. (2013). How we view Australian early childhood education practice: Indian migrant parents' perspectives. Australasian Journal of Early Childhood, 38(1), 49-54.

Ritchie, J., & Spencer, L. (2002). Qualitative data analysis for applied policy research. The qualitative researcher’s companion, 573(2002), 305-329.

Ritchie, J., Spencer, L., & O’Connor, W. (2003). Carrying out qualitative analysis. Qualitative Research Practice, 2003, 219-262.

Smith, J., & Firth, J. (2011). Qualitative data analysis: the framework approach. Nurse Researcher, 18(2), 52-62.

Srivastava, A., & Thomson, S. B. (2009). Framework analysis: a qualitative methodology for applied policy research. Journal of Administration & Governance, 4, 72–79.

Swallow, V., Lambert, H., Santacroce, S., & MacFadyen, A. (2011). Fathers and mothers developing skills in managing children's long‐term medical conditions: how do their qualitative accounts compare?. Child: Care, Health and Development, 37(4), 512-523.

Swallow, V., Newton, J., & Van Lottum, C. (2003). How to manage and display qualitative data using ‘Framework’and Microsoft® Excel. Journal of Clinical Nursing, 12(4), 610-612.

Yang, C. T., Narayanasamy, A., & Chang, S. L. (2012). Transcultural spirituality: The spiritual journey of hospitalized patients with schizophrenia in Taiwan. Journal of Advanced Nursing, 68(2), 358-367.