Introduction to Thematic Analysis

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Methods for Identifying Concepts in Extension Research

**Sources**

- Past studies – Scientific paper, reports
- Theses in the department
- Expert panels - Judge’s rating
- Field experience and interacting with stakeholders

**Problems**

- Stereotypic
- Irrelevant to context; alien
- Misspecification and over identification
- Lack of field application
Thematic Analysis

- Alternate method for construct specification in extension research
- Generated from stakeholder interviews, case studies, success stories and media reports

Thematic analysis is a method for identifying, analysing, and reporting patterns (themes) within data.

Sources
- Audio/Video recorded interviews, events
- Newspaper reports
- Social media / blog posts
- Case studies/ success stories
Themes

• A theme is a *hidden pattern* in the data
• Captures something important about the data in relation to the research question
• Essentially *constructs* related to research question

Identification of theme

**Prevalence** – within data item and across the data set
  ✓ No of Instances of theme – Number of times repeated
  ✓ Keyness of a theme - whether it captures something important in relation to the overall research question
Types of Thematic Analysis

Two approaches

A. Presence or absence of pre-defined framework

(I) Inductive or bottom up approach

✓ Data driven- Coding the data without trying to fit it into a pre-existing coding frame/ the researcher’s analytic preconceptions

✓ Useful for a new and relatively unexplored topic

(ii) Theoretical or deductive or top down approach

✓ Analyst driven - driven by the researcher’s theoretical or analytic interest in the area

✓ Useful when specific research questions and main themes or categories are already identified

✓ Used only to identify similarities and differences
Types of Thematic Analysis

B. Level at which themes are to be identified

(I) Semantic or explicit approach
✓ Themes are identified within the explicit or surface meanings of the data
✓ Themes are organised to show patterns in semantic content

(ii) Latent or interpretative approach
✓ In-depth analysis beyond semantic content - To identify or examine the underlying ideas, assumptions, conceptualisations and ideologies
Steps in Thematic Analysis

Step 1: Define the research problem and question
Step 2: Decide on the sources of data
Step 3: Collect data in a systematic way
Step 4: Transcription and translation of verbal data
Step 5: Familiarising yourself with your data
Step 6: Generating initial codes or labels
Step 7: Searching for themes
Step 8: Reviewing themes
Step 9: Defining and Naming Themes
Step 10: Writing report
Step 1: Define the research problem and question

Research problem
An ATARI Director wishes to computerize its work environment of all the KVKs in their Zone by providing computers to all SMS. The purpose of this effort is to improve the work efficiency of the SMS in performing extension and office tasks. Since computerization is an expensive task, the Director wishes to know how the computerization will be effective when it is done in a full scale. Precisely, he wishes to know the factors which influence computer utilization by SMS. This task is assigned to an SMS (Extension) who is working in ATARI.

Research question
What are the factors which influence computer utilization behavior of SMS in the KVK?
Step 2: Decide on the sources of data
Audio recorded in-depth personal interviews, telephonic interviews, blog posts, case studies, news clippings, success stories

Step 3: Collect data in a systematic way
- **In-depth interviews/ telephonic interviews** – Follow sampling, develop interview guide, pre-test and data collection
- **Audio/ video clippings** – Sources, key areas, screening criteria
- **Blog/ social media posts** – Sources (e.g. facebook or twitter or other), select time period, select search key words, screening criteria for selecting specific posts
- **News clippings** – Select media monitoring programme (e.g. Clipit), key words, screening criteria for selecting clippings
- **Case studies/ success stories** – Sources, key words, screening criteria for selecting cases

Results: Data corpus - all of the data that you collect for your research
Step 4: Transcription and translation of verbal data

✓ Select the *data sets from the data corpus*.

✓ **Data set** - a subset of the data corpus that you are using for a particular analysis. It is composed of data collected from multiple methods.

✓ Select the *data item from the data set*. The data item is an individual piece of data that you collect. Eg. One in-depth interview (with all sample responses)

**Transcription**

✓ The audio/video -recorded in-depth interviews, television programmes or political speeches need to be transcribed into written form in the same language

✓ Follow “orthographic” transcription – Taking into account of all verbal and non-verbal utterances (e.g. stopping, thinking in between)
Thematic Analysis Example

**Translation**

- Translating the transcribed verbatim into English or any other language in written form

**Steps**

- Verbatim transcription of the content in original language and then analysis of content
- After the concepts and categories have emerged, two bilingual translators will translate the concepts and categories into English and the final English version is reached by agreement between both translators
- Back translation - A bilingual person takes the English version and back translates the concepts and categories from English to the original language
- An expert panel committee is involved in reaching final agreement on the translation.

**Result:** Verbatim/ transcripts of the data items
Verbatim 1

“... it is a good idea to have computer in my desk and I would love to use it. Though I have a laptop at my home, my son always uses it and I hardly get time to work with it. If it is in my office desk, I can try whenever I get free time and explore new applications.

When I was in MANAGE, Hyderabad last month, I learned how Facebook and Twitter can be used to create farmers groups and exchange information on new agricultural technologies. Though I am not good in managing Facebook, I can get help from colleague SMS (Horti), who has an active FB account... I know computers can help to improve the extension work, I am still ignorant on how it will be used for field oriented programmes.....” (Dr. Ganesh Sharma, SMS – Plant Protection, Age – 43)
Step 5: Familiarising yourself with your data

- Quickly go through the verbatim/transcripts as a whole; make notes about first impressions.
- Read the verbatim/transcripts again carefully, one by one and line by line, by looking for meanings and patterns, and become intimately familiar with them.
- If the data is already transcribed, the researcher has to spend more time familiarising with the data, and also check the transcripts back against the original audio recordings for accuracy.
Step 6: Generating initial codes or labels

✓ Coding or labelling or indexing - Involves the production of initial codes or pithy labels for important features of the data based on research question

✓ Data extract – Specific word or word(s) in the transcript from where a code was generated

✓ Label relevant words, phrases, sentences or sections

✓ Labels can be actions, activities, concepts, differences, opinions, processes, or the one’s you find relevant

✓ Writing notes on the texts you are analysing, by using highlighters or coloured pens to indicate potential patterns.

✓ Result - Group all the codes along with relevant data extracts and prepare a long list of codes and data extracts
<table>
<thead>
<tr>
<th>Responder</th>
<th>Verbatim/ specific transcript</th>
<th>Initial codes with data extract(s) indicated in parentheses</th>
</tr>
</thead>
</table>
| 1         | “.... it is a **good idea** to have computer in my desk and I would **love** to use it. Though **I have a laptop at my home**, my son always uses it and I **hardly get time to** work with it. If it is in my office desk, I can try whenever I get free time and explore new applications. When I was in MANAGE, Hyderabad last month, I learned how Facebook and Twitter can be used to create farmers groups and exchange information on new agricultural technologies. Though I am not good in managing Facebook, I can get help from colleague SMS (Horti), who has an active FB account... I know computers can help to improve the extension work, I am still ignorant on how it will be used for field oriented programmes.....” (Dr. Ganesh Sharma, SMS – Plant Protection, Age – 43) | Computer acceptance  
Availability of computer at home  
Intention to use computer |
What to code or label
✓ Repeated in several places (Repetition)
✓ Surprises you (Newness)
✓ The interviewee explicitly states that it is important (Importance)
✓ You have read something similar in previously published papers, reports (Familiar)
✓ It reminds you of a theory or concept (Familiar)
✓ Something you think which is relevant to the research question (Relevant)

Other points
✓ Code for as many potential themes/patterns as possible
✓ Stay unbiased
✓ Code extracts of data inclusively – code with the context
✓ Remember that you can code individual extracts of data in as many different “themes” as they fit into - so an extract may be uncoded, coded once, or coded many times, as relevant.
(a) Draw Thematic map – should identify themes, sub-themes, codes

- **Computer Acceptance**
  - Personal attributes
  - Computer anxiety
  - Availability of computer at home

- **Organisational support**
  - Superior support
  - Collegial support
  - Perceived usefulness
Step 7: Searching for themes

- A theme is a coherent and meaningful pattern in the verbatim/transcript relevant to the research question.
- Theme identification involves sorting the different codes identified in the previous step into potential themes.
- Methods – Development of thematic map using theme-piles
  1. Write all the codes developed in step 6 in separate cards
  2. Have a look at all the codes and try to find
     - Codes that can be combined
     - Irrelevant codes – outliers
  3. Based on the relationship between codes, pile them into themes and sub-themes and include the codes and data extracts into each main and sub-themes
  4. Do not abandon anything at this stage, as without looking at all the extracts in detail (the next step) it is uncertain whether the themes hold as they are, or whether some need to be combined, refined and separated, or discarded.

Result – Mind maps and tables containing themes, sub-themes, codes and their relationships.
Step 8: Reviewing themes

- Involves reviewing and refining themes
- Based on Patton’s (1990) dual criteria for judging categories - internal homogeneity and external heterogeneity
- This step involves two levels of reviewing and refining your themes.

**Level 1: Reviewing at the level of the coded data (Reviewing the codes and data extracts)**

- Read all the collated codes and respective data extracts for each theme and sub-theme to check if the data forms a coherent pattern.
- If the main and sub-themes do not fit, you would rework your theme, creating a new theme, finding a home for those extracts that do not.

**Level 2: Over all reviewing of themes with the data set**

Consider each theme in relation to your data corpus.

Thematic map - Do the relationships between the themes reflect the meaning of your data as a whole? If not, return to step 7 (searching for themes) and 8 (reviewing themes). If they do, move on to step 9 (defining and naming themes).
Step 9: Defining and Naming Themes

✓ Refining and defining themes - Capture the essence of what each theme is about and what aspect of the data each theme captures.

✓ Examine the themes, sub-themes carefully to see that they are coherent and internally consistent.

✓ Give names for each theme – The names must be concise, punchy and immediately give the reader a sense of what the theme is about

✓ Draw the final thematic map and describe each theme/ sub-theme in one or two sentences

☑ Result – Final thematic map with clearly defined themes
Final thematic map with clearly defined themes

Perceived usefulness: The extent to which the respondent believes that using computer will increase his or her job performance within an organizational context.
Step 10: Writing-up report

Submit the report in standard format
Applications of Thematic Analysis in Extension

1. **Identification of research themes in a new research area** (e.g. Adaptability of farmers to climate change, service quality of KVKs)

2. **Construct conceptualisation in new ways** – Qualitative content analysis from blogs/ social media, in-depth interviews with stakeholders

3. **Policy analysis** - Comparative analysis of agriculture policies of different governments/ states/ countries to develop **conceptual visualisations of the key themes and concepts embedded within these policies**

4. **Extension strategy development from successful interventions** – Comparing success stories or case studies of successful extension interventions of similar context and **derive key elements which influenced the success of the programmes**