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Name of the material

Guide for analysing Qualitative research

Sources

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Purpose of the material

To give an overview of qualitative research to educators who may not be familiar with research methods.

Material

How you can use this material in your practice

This will be useful to those leading and also to those undertaking Practitioner Inquiry.

Debrief – reflection and metacognition

Feedback on the use of the tool

Feedback from educators and trainers has been positive – this has formed part of an information pack to educators new to Inquiry.

Research in Education

The British Educational Research Association (2014, p. 10)) argues that,

'Research literacy is viewed as a key dimension of teachers' broader professional identity, one that reinforces other pillars of teacher quality: notably subject knowledge and classroom practice'

Scholarship in the field thus seeks to describe, understand, and explain how learning takes place and how formal and informal contexts of education affect all forms of learning.

Educational research embraces the full spectrum of rigorous methods appropriate to the questions being asked. These include:

1. Major Approaches to Educational Research

	Major practical purposes	Characteristic research methods	Forms of research knowledge
Scientific Research	To provide an empirically 'proven' basis for improvement	Systematic designs, involving large, structured samples and gathering of quantitative data	Objectivist, seeking generalisations and explanations. Located in the positivist research paradigm.
Interpretive Research	To inform judgement as a basis of improvement. Seeks to gain rich descriptive data as a means of interrogating meanings and intentions.	Flexible designs involving detailed holistic case studies and empathetic gathering of qualitative date	Describing cases and developing understanding. Concerns for the experiential, subjective and qualitative dimensions of research.
Action Research	To directly improve practice through self- development	Cyclical designs, based on self-monitoring using a range of data in a practitioner's workplace	Evaluative, describing, reflecting and analysing personal practice.
Critical Research	To illuminate inequalities and support emancipatory practice	Relational designs, using data eclectically to illuminate a dialectic between individual agency and social structure	Transformative, aspiring to reveal structural circumstances and support 'praxis'

Post Modern Research	To deconstruct hidden power relations and affirm diversity	Reflexive, flexible and participatory designs, often interrogating cases from a particular stand-point	Perspectival, emphasizing complexity, un-certainty and difference

2. Research in Education: Contemporary Developments

In carrying out research the purpose is to try to make some claim to knowledge; to try to show something that was not known before. However small, however modest the hoped for claim to knowledge is, provided it is carried out systematically, critically and self-critically, it is research.

Part of being a professional demands that teachers should:

- Avoid taking everything they see at face value
- Adopt an attitude of professional scepticism or one of reasoned doubt
- Question and scrutinise the means by which claims are generated (validity, reliability, authenticity, applicability)
- Be open-minded
- Be constructive

If research in education in the UK has achieved anything in recent years, it is to have made much more complex our understanding of what goes on in schools and classrooms.

Until relatively recently so much of our understanding had been grounded in large scale surveys that sought to place an emphasis upon the MEASURABLE, OBSERVABLE and QUANTIFIABLE.

Thus, we came to know very little about the processes of teaching and their consequences for student's social, intellectual, emotional and physical identities. Hence the case for 'alternative ways of knowing' and the part that qualitative research procedures can play in revealing something of the complexities of teachers' work.

3. Key Concepts within Qualitative Research
- Inquiry within and / or about real-life contexts
- The emphasis on interpretation and meaning-making
- The central/pivotal role of the researcher in qualitative research
- Notions of intelligibility, authenticity and applicability

(Lankshear & Knoble 2004, p.69)

4. The Contribution of Qualitative Procedures to our Understanding
• They can provide rich descriptive data about particular social and cultural contexts and of the actions of those that inhabit them. Gains 'insider' information.

- They provide data upon relatively undisturbed 'natural settings' rather than those which have been artificially constructed for research purposes.
- They facilitate study of situations in the round, reflecting the complexity of the total setting rather than studying features which have been decided in advance.
- They make it possible to study such processes over a period of time moving away from the cross-sectional analysis, taken at a single point in time, which is characteristic of most quantitative work.

5. Methods of Collecting Qualitative Data

Qualitative approaches to data collection usually involve direct interaction with individuals/groups/classes. The data from qualitative studies are often collected from:

- Interviews
- Focus group discussions
- Observations
- Questionnaires

These approaches elicit rich, descriptive data and deep insight into the issue under study. Unlike quantitative data, raw qualitative data cannot be analysed statistically. Samples are usually smaller than with quantitative studies and are often locally/situationally based (e.g. classroom).

5.1 Interviews

Interviews can be highly structured, semi structured or unstructured. Qualitative interviews should be fairly informal. Interviewees should feel as though they are participating in a conversation or discussion rather than in a formal question and answer situation. However, achieving this informal style is dependent on careful planning and on skill in conducting the interview. Semi structured and unstructured interviews should not be seen as a soft option requiring little planning and preparation. The development of the interview schedule, conducting the interview and analysing the interview data all require very careful consideration.

5.1.1 Structured Interviews

Consist of the interviewer asking each respondent the same questions in the same way. A tightly structured schedule of questions is used very much like a questionnaire. The questions may even be phrased in such a way that only a limited range of responses can be elicited.

5.1.2 Semi Structured Interviews

Involve a series of open ended questions based on the issue the researcher wants to address. The open ended nature of the question defines the issue under investigation but provides opportunities for both interviewer and interviewee to discuss some topics in more detail. If the interviewee has difficulty answering a question or provides only a brief response, the interviewer can use cues or prompts to encourage the interviewee to consider the question further. In a semi structured interview the interviewer also has the freedom to probe the interviewee to elaborate on their original response or to follow a line of inquiry introduced by the interviewee.

5.1.3 Unstructured Interviews

Sometimes referred to as 'open ended discussions', they have very little structure at all. The interviewer proceeds with the aim of discussing a limited number of topics, sometimes as few as

one or two, and frames the questions on the basis of the interviewee's previous response. Although only one or two topics are discussed they are covered in great detail. Unstructured interviews are exactly what they sound like - interviews where the interviewer wants to find out about a specific topic but has no structure or preconceived plan or expectation as to how they will deal with the topic. The difference with semi structured interviews is that in a semi structured interview the interviewer has a set of broad questions to ask/issues to explore and may also have some prompts to help the interviewee but the interviewer has the time and space to respond to the interviewees responses.

Qualitative interviews are more usually semi structured or unstructured. If the interview schedule is too tightly structured this may not enable the phenomena under investigation to be explored in terms of either breadth or depth. Moreover, the agenda has been set by the researcher and may overlook the priorities relevant to the interviewee. Semi structured interviews tend to work well when the interviewer has already identified a number of aspects he/she wants to be sure of addressing. The interviewer can decide in advance what areas to cover but is open and receptive to unexpected information from the interviewee. This can be particularly important if limited time is available for each interview and the interviewer wants to be sure that the "key issues" will be covered.

6. Focus Group Interviews/Discussions

Sometimes it is preferable to collect information from groups of people/students rather than from a series of individuals. Focus groups can be useful to obtain certain types of information or when circumstances would make it difficult to collect information using other methods to data collection.

Group interviews can be used when:

- Limited resources/time prevent more than a small number of interviews being undertaken.

- It is possible to identify a number of individuals who share a common factor and it is desirable to collect the views of several people within that population sub group.

- Group interaction among participants has the potential for greater insights to be developed.

6.1 Characteristics of a Focus Group

1. The recommended size of a group is of 6 – 10 people. Smaller than this limits the potential on the amount of collective information. More than this makes it difficult for everyone to participate and interact.

2. It is advisable to ensure that several focus groups should be run in any research project. It would be wrong to rely on the views of just one group. The group may be subject to internal or external factors of which the investigator is unaware. This can lead to idiosyncratic results. Individual groups may not go very well: the members may be reluctant to participate or not interact well with each other and limited insight will be gained. Sufficient groups should be run to provide adequate breadth and depth of information but a small number of groups may achieve this, as few as three or four. There is no upper limit on the number of focus group interviews that could be held although this will be limited by resources.

3. The members of each focus group should have something in common, characteristics which are important to the topic of investigation.

4. Qualitative information is collected which makes use of participants' feelings, perceptions and opinions. Just as in individual interviews data collection and analysis is time consuming.

5. Using qualitative approaches requires certain skills. The researchers require a range of skills: groups skills in facilitating and moderating, listening, observing and analysing.

7. Observation

Not all qualitative data collection approaches require direct interaction with people. Observation is a technique that can be used when data collected through other means can be of limited value or is difficult to validate. For example, in interviews participants may be asked about how they behave in certain situations but there is no guarantee that they actually do what they say they do. Observing them in those situations is more reliable: it is possible to see how they actually behave. Observations can also serve as a technique for verifying or nullifying information provided in face to face encounters.

7.1 Participant Observation

Some researchers draw a distinction between participant observation and non-participant observation. Participant observation "combines participation in the lives of the people being studied with maintenance of a professional distance that allows adequate observation and recording of data" (Fetterman, 1998, pp. 34-35).

7.2 Non-Participant Observation

Non-participant observation is observation with limited interaction with the people one observes. Non-participant observation may provide limited insight into the meaning of the social context studied. If this contextual understanding is important, participant observation might be needed. These two data collection techniques can complement each other and be used together.

7.3. Techniques for Collecting Data through Observation

7.3.1 Field Notes.

The researcher can record observations by making notes of what has been observed. The limitations of this are similar to those of trying to write down interview data as it occurs. First there is a risk that the researcher will miss out on observations because he/she is writing about the last thing he/she noticed. Secondly, the researcher may find his/her attention focusing on a particular event or feature because they appear particularly interesting or relevant (selective attention) and miss things which are equally or more important but their importance is not recognised or acknowledged at the time.

7.3.2 Video Recording.

This frees the observer from the task of making notes at the time and allows events to be reviewed time after time. One disadvantage of video recording is that the students in a class may be more conscious of the camera that they would be of a person and that their behaviour will be affected. They may even try to avoid being filmed. This problem can be lessened by having the camera placed in a fixed point rather than carried around. However, this means that only events in the line of the camera can be recorded limiting the range of possible observations.

7.3.3 Photographs and Artefacts.

Photographs are a good way of collecting observable data of phenomena which can be captured in a single shot or series of shots. Artefacts are objects which inform us about the phenomenon under study because of their significance to the phenomena. In education, for example, the most obvious form would be samples of students' work.

7.3.4 Documentation.

A wide range of written materials can produce qualitative information. They can be particularly useful in trying to understand the philosophy of an organisation as may be required in action research and case studies. They can include policy documents, mission statements, annual reports, minutes or meetings, codes of conduct, etc. More specifically, they might also include learning logs or diaries. In the case of action research projects, lesson plans and associated resources represent key forms documentary evidence.

7.3.5 Questionnaires

Questionnaires are not among the most prominent methods in qualitative research, because they commonly require subjects to respond to a stimulus defined by the researcher, and thus they are not acting naturally. However, they have their uses, especially as a means of collecting information from a wider sample than can be reached by personal/focus group interviews. Though the information is necessarily more limited, it can still be very useful. For example, a questionnaire might be used in the first instance to identify emergent issues/patterns, followed by qualitative techniques on a sample as a check and to fill out certain features of the questionnaire replies.

8. Handling Qualitative Research Data

Interviewers have a choice of whether to take notes of responses during the interview or to tape record the interview. The latter is preferable for a number of reasons. The interviewer can concentrate on listening and responding to the interviewee and is not distracted by trying to write down what has been said. The discussion flows because the interviewer does not have to write down the response to one question before moving on to the next. In note taking there is an increased risk of interviewer bias because the interviewer is likely to make notes of the comments which make immediate sense or are perceived as being directly relevant or particularly interesting. Tape recording ensures that the whole interview is captured and provides complete data for analysis so cues that were missed the first time can be recognised when listening to the recording. Lastly, interviewees may feel inhibited if the interviewer suddenly starts to scribble: they may wonder why what they have just said was of particular interest.

The ideal tape recorder is small, unobtrusive and produces good quality recording. An in built microphone makes the participants less self-conscious. An auto reverse facility means that the tape will automatically "turn itself over" if the interview lasts longer than the recording time available on one side of the tape: this prevents an interruption in the flow of conversation. A tape recorder with a counter facility can be useful when analysing the taped data

8.1 Transcribing Qualitative Data

Transcribing is the procedure for producing a written version of the interview. It is a full "script" of the interview. Transcribing is a time consuming process. It may not be essential to transcribe every interview. It is possible to use a technique known as tape analysis which means taking notes from a playback of the tape recorded interview. If tape analysis is used the counter facility can be useful because the researcher can listen to the tape and make a note of the sections

which contain particularly useful information and key quotations and return to these sections of the tape for fuller analysis.

Another procedure sometimes adopted when interviews are used in qualitative research is constant comparative analysis. This is a process whereby data collection and data analysis occur on an ongoing basis. The researcher conducts the first interview which may be unstructured or semi structured. The interview is transcribed and analysed as soon as possible, certainly before the next interview takes place, and any interesting findings are incorporated into the next interview. The process is repeated with each interview. When using this procedure it is quite possible that the initial interviews in a research projects are very different to the later interviews as the interview schedule has been continuously informed and revised by informants.

9. Inductive Analysis and Grounded Theory

Qualitative researchers do not, on the whole, start with a theory which they aim to test (deductive reasoning). They mainly work the other way round, seeking to generate theory from the data. Theory is then said to be 'grounded' in the data. Some would argue that their aim is to understand the quality of social settings such as classrooms. In pursuit of this they produce richly detailed material that goes beyond description. It should present detail, context, emotion and the complexities of social relationships that link people to one another. In this way, the voices, feelings, actions and meanings of interacting individuals are revealed. Such an approach often contains new ideas or concepts that cast new light on the activity under study, and which might help us understand similar activity elsewhere.

9.1 Primary Analysis

As interview transcripts are made, or field notes of observation compiled, or documents assembled, the researcher continuously examines the data, perhaps highlighting certain points in the text or writing comments in the margins. These might identify what seem to be important points, and note contradictions and inconsistencies, any common themes that seem to be emerging, references to related literature, comparisons and contrasts with other data and so on. Many of these first attempts at speculative analysis will probably be discarded later, but some ideas will no doubt take shape as further data collection and analysis proceed. Sometimes, the notes one makes may be little more than a scribbled comment; at other times, particularly as the research goes on, one might write longer notes or memos, perhaps summarising parts of data that go together but have come from different sources, or rehearsing ideas at greater length.

9.2 Category and Concept Formation

Most qualitative researchers arrive at a point where their data has to be organised in some kind of systematic way, if only for analytic purposes. That is to say that, while it can appear to be a little bit chaotic, it is important to recognise that if we are to understand the data we must impose some kind of order. A popular way of doing this is through identifying major categories under which the data can be subsumed/'catalogued'. This has its challenges All the data have to be included. The categories have to be exclusive, that is to say data must fit within one and one alone, and the categories should be on the same level of analysis. One usually has to have several shots at this before coming to the most appropriate arrangement, reading and re-reading notes and transcripts, and experimenting with a number of formulations. It may be helpful to summarise data in some way, tabulate them on a chart, or construct figures, mind-maps or sketch diagrams. Such distillation helps one to capture material 'at a glance'.

Theorising goes on throughout the study. As soon as one begins to identify significant events or words, and goes on to develop categories and concepts, one is building up essential components of theory. In this way, the categories of data are used to construct a case that the

themes are the main findings of the study. Further "evidence" to support the findings is provided by using direct quotations from respondents. Key quotations are selected to illustrate the meaning of the data. Quotations should be used because they are good examples of what people have said specifically about the category being described. A range of quotations should be selected to illustrate such features as: the strength of opinion or belief; similarities between respondents; differences between respondents; the breadth of ideas. Links with extant literature will bring further levels of criticality to such a study.

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