Introduction

The last Element introduced you to a range of methods of collecting qualitative data. This Element will continue that theme by looking at two more ways of collecting data and at what you can do with that data once you have collected it. This Element is divided into 3 sections.

- Section 1: observation
- Section 2: making use of documents from the research site.
- Section 3: analysing the resultant data.

By the end of the Element you should:
- be able to use your research question(s) to focus your observations
- be able to decide what aspects of your study are most suitable for observational methods
- be able to decide how to record your observations
- be able to distinguish between the strengths and weaknesses of the different methods of recording data
- be able to decide what particular role you (the observer) will play during observation
- have gained practical experience of observation
- have gained experience in analysing observational and document based data.

Recommended reading for this Element

The recommended readings in this Element come from these three books.


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5.1
Section 1: Observation

The first major point to note is that schools and colleges are busy places. A great deal can be observed there. The first thing you must decide is, ‘What am I going to observe?’ As always, such decisions will be determined by the underlying research purpose which requires that some form of observation needs to be undertaken. The sort of research questions where some form of observation would be appropriate are:

- Do children in mixed classes behave differently from those in single sex classes?
- What sorts of interaction takes place between teachers and pupils?
- What proportion of teacher time is spent on task?
- At what time in the day/week are teachers most busy and what do they do at these times?

None of these questions can be sensibly explored without observing the situation. Remember that observation is particularly important because it has the potential to give us insights into what people actually do rather than what they say they do or what they think they do. In Element 2 you determined your research topic and went on to decide your research question(s) and the issues that your study would explore. Look back at these now and identify what particular aspects could usefully be explored using observation. Remember that observation is only one of a number of techniques that may be used to collect data. Remember too that it would be unusual, indeed unwise, to rely on only one method of data collection and that observational work should be used to complement other methods.

R Reading
Have a look at Chapter 7 of Hopkin’s book – methods of observation in classroom research

T Task 1
Make a brief list here of those aspects of your research question(s) that you feel are most appropriate for observation.

F Feedback on Task 1
If our research question were **The induction of new teaching staff in Chalfont School during 1995** a number of possibilities for observation would be available. We could, for example, choose to observe:

- the first day of the induction programme
- pre-determined sessions such as discussion groups or short talks by department heads
- informal periods such as teachers during their coffee break

**Recording Data**

Given that the research purpose defines the focus, the next question is, 'How will I record my observational data?' There are, essentially, four main methods of collecting information.

- via memory
- via written notes
- via pre-determined schedules
- via mechanical devices – audio/video tape, camera

**Reading**

Read page 188 of Cohen, Manion and Morrison’s book for some good tips on recording observational data.
Each method has its own advantages and disadvantages. Thus:

- **Memory** is unobtrusive and helps retain the ‘naturalness’ of the event being observed. But its limits are in the amount that can be remembered and the accuracy of that memory.

- **Written notes** are very adaptable to different circumstances, but they may suffer from limited reliability (i.e. would another researcher make similar observations and notes of a similar event?)

- **Pre-determined schedules** are reliable, but may not fit exactly the specific circumstances of any given observation.

- **Mechanical devices** provide very full and reliable evidence but can be very intrusive. They are also time consuming to analyse. A further, purely practical, difficulty is that camcorders, cameras and tape recorders may break down or simply not function at all. So it is a wise precaution to have a backup of some sort such as written notes.

**Participant observation**

Whatever form of recording you use, any visit to a teaching environment will disrupt the very activity you wish to observe. This creates problems of validity. In other words, does the situation you are observing describe or reflect what it is **supposed** to describe or reflect? This effect is likely to be strongest (and your data least reliable) when you first start your observation. It is best to make your observation a regular event, so that whatever you observe can settle down to being ‘normal’. So remember not to rely on initial data. Wait until your participants have, at least to a degree, accepted the situation.

When observing a situation or event those being observed may be nervous or seek to put up a ‘front’ of some sort. Since ‘naturalness’ is important to any qualitative research you should consider ways of preserving or encouraging it. You could act **covertly** so that participants are unaware that they are being observed. However, this raises ethical questions which should be addressed before such a stance is taken. Alternatively you could operate **overtly**, such that participants are aware that they are being observed.

The role you play whilst collecting data is often referred to as ‘participant-observer’ role. Participant-observation is often associated with an ethnographic style of research. This means that the researcher joins a group or organization, participating to a greater or lesser extent in what they are doing. The researcher is then in a good position to observe patterns of social interaction and to talk informally with participants. The researcher shares as intimately as possible in the life and activities of those they are studying. The aim is to gain the deepest possible understanding of the research participant’s meanings and perspectives...
within their normal social context. Of course this can go too far. Anthropologists have a term, 'going native’, to describe a researcher who gets so involved and active with subjects that their original intentions get lost.

Think about your own research project and consider carefully where on the participant-observer continuum you wish to be when you are doing your own observation. You could, for example, carry on your normal duties whilst making notes occasionally in a hard-backed book (emphasizing the participant role). Alternatively, you could take a ‘fly-on-the-wall’ approach and using a structured observation record what is happening on a clipboard for a designated period of time (emphasizing the observer role).

**Task 2**

Now have another look at chapter 7 of David Hopkins’s book *A Teacher’s Guide to Classroom Research*. Use this information to help you make the following decisions about your own research project.

1. Will you be carrying out **covert** or **overt** observation, or a combination of the two in your research? Give reasons for your choice.

2. What sort of participant-observer role will you adopt whilst observing?

3. What steps will you take to ensure a degree of ‘naturalness’ is present during your observation?
1. This is not an easy question to answer and researchers take different stances on this sensitive issue. One approach could be, given the above research question, to simply to adopt an ‘up front’ or overt approach and seek the help and support of those people who run the programme and also those who participate in it. The overt option would perhaps be less appropriate if we were going to evaluate the induction programme or if the research question were particularly sensitive.

2. Exactly where on the participant–observer continuum your role will be will depend on the answer to the next question.

3. This is an important question. One way of ensuring a degree of naturalness in your study would be to go through the course yourself as though you were a teacher being inducted. Another approach would be to actually teach some parts of the programme so that you could find out ‘first-hand’ what it is like to experience such a programme in one way or another. In this way you become part of what you are observing and not an object of curiosity or a ‘spy’.
Observation schedules

You have made some very important decisions by this stage but it is worth remembering that they are not written on tablets of stone. You can alter them when further information is taken into consideration. Before you carry out your observation:

- use your research question to decide the focus of your observations
- give some thought to the sorts of observations that will be useful to your research
- before you collect any data, make sampling decisions, i.e. who, what, where, and when to collect data. Think carefully about these since in your final report you will need to justify why, for example, you have selected those particular people to observe at that particular time.

Finally, you should decide how you intend to record the event you wish to observe and you should have your memory, notebook, schedule, tape recorder, camera and/or camcorder at the ready.

Let us now consider in a little more detail the process of recording observational data using a schedule.

Perhaps one of the most common mistakes in carrying out observations is doing so without focussing. This leads to difficulties in sampling decisions but more importantly it means the data are extremely difficult to analyse. A good way of both focussing your observations and aiding the recording of data is to use an observation schedule. If you work out in advance what you want to observe, you can develop a detailed schedule which itemises the various categories to be used in collecting the observational record. If you do this you should take care to identify the categories which differentiate between different sorts of data. When devising categories make sure they meet the following key criteria:

- the definition of each item must be unambiguous to allow for records to be taken without disagreement on whether a particular aspect of behaviour falls into one category or another
- that the set of categories used covers all the behaviours with which the research is concerned.

It follows from these two that there must be no overlap between categories. It is worth trialling an observation schedule before using it in earnest. Give a colleague a copy of your schedule. Then both observe the same event. Check afterwards to see whether you have both put the same observations in the same categories.
Observation and document analysis

Observation schedules are not easy to use and some practice is required in order to understand their strengths and weaknesses, and how best to apply them. The next task will give you some practice in this.

**Task 3**

Suppose we wish to research **off-task behaviour of administrators in the Education system**. Clearly observation would be play an important role in such a study.

We want you to collect observational data for this study using the schedule on the next page. But before you start, think about how you are actually going to do this in practice. If you choose to tell the administrators **exactly** what you intend to observe then you would probably find that they all work diligently on task for the period of observation. Your data may not be valid or reliable. But suppose you choose **not** to tell them what you are doing. If you then stand over them with pen poised over clipboard, they are going to wonder what you are doing and you will be in an ethical quandary.

One way out of this impasse would be to ask for their permission to observe them for a short amount of time, for example 10 minutes. You could (correctly) say it is for a course you are doing and you could state **in general terms** what you will be observing, for example 'I want to get a picture of the sort of things you do during an ordinary day'. The process of obtaining permission to collect data is called **accessing** and the first practical step in obtaining your data is always to gain access to people, places or events, to get permission to observe or interview people.

For this particular task try to find a friendly administrator who will be willing to act as a ‘guinea pig’ for you - but if this is impossible look for anyone who is carrying out a specific task. It does not matter much what the task is. Anyone carrying out any task is likely to spend some time off-task.

All you have to do is scan one person (or more if you feel confident) over a period of ten minutes noting down what they are doing in the categories which follow:

1. talking not related to the task in hand
2. doodling
3. daydreaming
4. wandering around
5. working at other tasks unrelated to the task in hand

*Have they gone yet?*
6. interacting with other people not related to the task in hand
7. using a pencil sharpener, looking for a pen, throwing paper away etc
8. other

As an example of the sort of data you will obtain the schedule for administrator Joan is given:

<table>
<thead>
<tr>
<th>Administrator: Joan</th>
<th>1st</th>
<th>2nd</th>
<th>3rd</th>
<th>4th</th>
<th>5th</th>
<th>6th</th>
<th>7th</th>
<th>8th</th>
<th>9th</th>
<th>10th</th>
</tr>
</thead>
<tbody>
<tr>
<td>Off-task activity</td>
<td>1</td>
<td>3</td>
<td>4</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

We can see that Joan was on task for 4 of the 10 minutes (during the 3rd, 4th, 8th and 10th minutes) and that for the remaining six minutes Joan was off-task. Remember to include an ‘other’ category (here it was no. 8) in case some observations cannot be placed in the designated category list. It is worth noting that some categories are not easy to apply, for example, during the second minute how can we be sure that Joan is daydreaming since she may have been thinking and therefore on task.

This type of observation is of particular pertinence to the classroom; observing teachers, classroom assistants, pupils and groups of pupils reveals a great deal about teaching and learning.

Now you try. Carefully select someone and use the schedule to collect data on one subject. Use the space below to record your findings.

**Feedback on Task 3**

This is a matter of putting the scheme into practice.

**Task 4**


When you have absorbed this material, select and observe some event related to your research topic. You may wish to carry out
more than one observation which will provide you with insights or answers to your research question. Record your findings here.

**F Feedback on Task 3**

This is a matter of devising a scheme and putting it into practice.

**Section 2: documents**

Documents broadly include any papers, especially official ones, which provide more or less direct evidence of decisions, transactions, status, thoughts, debates or actions, which are directly or indirectly related to the purpose of a research inquiry. Documents may be contemporary or historical in nature and include both text and visual data. Documents which are considered primary sources of data would include, for example, annual reports, minutes of meetings, personal diaries, memoranda, records, letters, files, institutional prospectuses, videos, photographs, diagrams, or catalogues.

Documents are a useful source of evidence but they have their limitations. One problem with them is that we may not know how they came into being in the first place or who wrote them. Another problem is pointed out by Andrew (1985) who makes an important point with regard to ‘complete’ records:

> Documents have differential survival rates and those which survive do not always provide all the information required….The answers to a great many questions are simply not available, since the necessary records either never existed or failed to survive. (p. 156)

**T Task 5**

Think about your research question again. Make a list of the sorts of document you could find within your working environment which
might be relevant to your study. Note down any problems you foresee in gaining access to these documents or using them in your study. For example, are there any restrictions on your publishing them?

An example of analysing documents

Later, in Section 3, we will consider in some depth ways of analysing qualitative data. However, it is worth gaining experience of obtaining documents and making sense of them. Let us consider the way teachers communicate with those outside the institutions or organisations they work for. Of course they communicate in a variety of ways, both verbal and non-verbal. Let us first consider written communications, i.e. documents, which are sent from the school/college to the outside world.

Our research question might be concerned with information about how parents or guardians of reception class children are prepared prior to their arrival at a primary school. We could identify, for example, letters to parents or guardians of children who are soon to be admitted to the school. The first task would be to obtain copies of the documents sent to potential parents or guardians. This may not be as simple as it sounds since different sorts of information may need to be sent to different people. In other words there may not be a 'standard' letter.

Having obtained the documents, we need to make sense of or analyse them. Let us suppose that we are particularly interested in the language used when writing to potential parents or guardians. Suppose, too, that we are using a definition of 'language' which includes any diagrams or photographs enclosed. How are we going to analyse them? What are we going to look for? In order to decide this we need to think about our purpose in carrying out this piece of research.

Our research question is concerned with communication. However, this is a very broad and unfocussed term. We could narrow it down by looking at a particular aspect of communication, for example 'factual information'. Equally, we may have good reason to want to explore this type of communication in general terms. If so, we should simply approach the data without any particular prior concerns. Let us make things hard for ourselves and take the latter stance.

The next step is to ask a range of questions of the documents before us. We could begin by making the following kinds of quantitative analysis:

- approximately how many words are there per page?
- how many paragraphs are there per page?
How readable is the document. There are many ways of calculating this. A nice, simple yet effective one is by using the SMOG formula. The number of words of three or more syllables in every thirty sentences equals P. Reading Age = P+8.

How is the space utilised? Compare the proportion of text to photographs, lists, diagrams, etc.

What percentage of the document is given over to welcoming and reassuring the potential parent or guardian of the child about to be enrolled in the school? Compare this with the percentage of instructions and lists (for example, what uniform or P.E. kit parents and guardians may need to buy before school term starts).

Next we could look at the ‘tone’ of the document:

Are there any words which are ‘technical’ and if so are they explained?

What is the general tone of the document, e.g. ‘cold’, ‘officious’, ‘neutral’, ‘warm’, ‘welcoming’?

Is the document signed by a member of staff or has a rubber stamp of some sort been used?

How has the document been duplicated? Is it a stencil copy, a photocopy or has it been produced on a laser printer?

Obviously, we could go further with our analysis by exploring the actual content of the document and considering how effective it is in preparing the potential parent or guardian for their child’s entrance to school. Our analysis would raise questions which would need to be answered by further data collection. We could interview the author of the document to find out what they intended to achieve when they wrote it. Also we could identify a sample of potential parents or guardians and ask them for their views on the document. In this way we would be able to compare and contrast the differing perspectives.

Analyzing participant observation and document-based data

In general, the comments that follow could be said to be true of analysing any qualitative data. Although here we will use the term analysis, a friendlier and perhaps less threatening term might be interpretation. It is important to remember that although qualitative data is descriptive you must go beyond simple description and provide interpretations of your data. Being analytical is central to being a researcher.

Observational data, like other forms of qualitative data, are not looked upon favorably by all researchers, particularly when viewed from a scientific perspective. Cohen, Manion and Morrison (2000) say:
The accounts that typically emerge from participant observations are often described as subjective, biased, impressionistic, idiosyncratic and lacking in the precise quantifiable measures that are the hallmark of survey research and experimentation. (p. 313)

The quote above represents a ‘scientific’ perspective of participant observation. Johnson (1984) gives an alternative perspective:

In qualitative research the work is intended to be intensive and illuminative and will not usually lay claim to being representative and generalisable. In summary, the main requirement in qualitative research designs is to give oneself the chance to be enlightened and to avoid a research situation which rules out exploration and open mindedness. (p. 22)

In analysing data collected through observation we are essentially looking for patterns in order to build up a picture of the phenomena observed. We need this picture to be in some sense typical or characteristic. As the quotation from Johnson makes clear, claims about the typicality of the phenomena observed can be made only in terms of 'the case' being researched. However, readers of an account of case-study research may generalise from the particular sample to a wider population by relating the events portrayed to their own experience. Therefore, it is important to be clear from the beginning about the kind of claims you want to make about the data you have collected by observation.

In participant observation you collect the data you gain from the observation of subjects in the form of a schedule, field-notes, or a research diary. Then you add to them continuously over the research period to build up a picture of the phenomena. The 'off-task' schedule that you used earlier could be the basis of a number of observations which would include a 10 minute slot each half-day throughout the working week or a variety of half days during a week throughout a year. In this way we can build up a picture of 'off-task' behaviour over a weekly or yearly period. This may tell us something about the annual working pattern of an administrator or what parts of the day/week/year they work most effectively.

An important aspect of participant observation is that it is unusual to leave the data lying dormant, as it were, to be analysed only at the end of the fieldwork period. Continual reading through and reflection on the schedules, videos or field-notes will often highlight issues worthy of further investigation. For example, you might note from your observations that a particular college administrator uses mornings to carry out the bulk of their work, leaving afternoons more flexible and therefore with potential for socializing. You may then want to go on to collect further data to either substantiate or refute this working hypothesis, or to carry out an in-depth interview with the administrator.
on this particular issue. So, as you can see, researchers make sense of their data soon after they have collected it. This enables them to refine the focus of their study.

The ongoing analysis of data gathered through observations and field-notes is used to help *progressive focussing* and in generating *grounded theory* which explains the phenomena observed. *Progressive focussing* is the continual funnelling process which limits and clarifies the scope, subject and structure of a research project. In this process it is not uncommon for the initial research question to be transformed almost beyond recognition. The fieldwork may increasingly reveal that this question simply did not address the issue that was fundamental to the problem under review. *Grounded theorising* is the ongoing process of developing hunches, ideas and interpretations of the data. These serve to guide data collection and are refuted, or substantiated and developed, in the light of the new data collected. Theory building and data collection can therefore be viewed as interrelated.

Remember that it is important in doing this kind of analysis to be alert to the danger of 'going native'. This involves getting so caught up in the events that you are supposed to be researching that you fail to examine them critically and take for granted the very phenomena that should be regarded as problematic. Teachers and others working in the education system carry out research into aspects of their own work and this has helped to improve practice. However, practitioners frequently take their everyday practice for granted and they may be blinkered by prior assumptions and personal values. This is why it is vital to use a structured approach (a research approach) to making sense of data. A way of avoiding the charge of being blinkered by prior assumptions is by searching for exceptions or negative cases which disprove previously held or emerging hypotheses - a process referred to as *analytical induction* in the methodology literature. It is a useful exercise to try to find ways of making the familiar strange or providing yourself with different frameworks for thinking about your data.

It is important not to put off analysing your data until after you have left the field. There are two good reasons for this. First of all, you will be collecting quite a lot of data and if you leave analysis until the last moment you will find it a daunting, if not psychologically damaging, process. The second reason is that analysis in the field helps focus further data collection and refine emerging ideas and concepts. Therefore, as your data come in, try to make sense of them as soon as possible. You will probably find it helpful to adopt the following approach.

- Force yourself to make decisions about the type of study you want to accomplish.
- Force yourself to make decisions that narrow the study.
- Develop analytic questions.
Plan data collection sessions in the light of what you have found in previous data collection.

Bring together in a field diary what you are learning from the various sorts of data you collect.

Try out your ideas on key informants.

Begin exploring the literature while you are in the field.

**Practical guidelines for interpreting qualitative data**

Remember that your analysis must be effective. This means that whether you are interpreting observational, documentary, interview or questionnaire data you must always bear in mind that:

1. data analysis is more than description; it involves **interpretation**
2. for the purpose of research, interpretation must be **systematic and reliable**
3. there should be **coherence** of interpretation, i.e. interpretation should reflect **patterns** in the data.

Once you have got your information from a series of interviews/observations/questionnaires/documents, you face two main tasks. These are:

- to **seek similarities** where these exist
- to **identify diversity and variation** around the common features.

Now you can go on to analyse your data. You will find this easier if you follow the steps outlined below. But remember that you have already done some preliminary analysis. You have already made decisions about what to observe, what questions to ask, and whom to interview.

**Steps in data analysis**

This is also considered in Element 6a.

1. Your data must have a purpose – to satisfy your research question. Your research question may involve a range of subsidiary questions.

   **Code the data** in terms of relevance to these subsidiary questions.

   Some data may be relevant to more than one. This first stage provides you with the basis for deriving an overall picture of the sets of data, e.g. all teachers expressed anxiety about changes being made in the funding of the education service but there was variation in the sources of such anxiety.
2. The second stage is to look in more detail at the emergent pattern. Are there any **sub-patterns**? For the above example, what forms of anxiety have been expressed and how is each one constituted? Are some of these forms of anxiety more widespread than others?

Remember to code **positive** and **negative** data, e.g. while many teachers admitted to anxiety about funding changes, a number were enthusiastic about the prospect.

3. Also look for patterns in terms of **who** is saying **what**, e.g. differences between teachers from different schools, or differences between comments made by senior and junior teachers, or teachers from different year groups or different disciplines.

4. The next two stages involve looking more critically at the data. **Look for omissions**. Were there things that you expected to come up which did not? For example no teacher mentioned the prospect of losing their jobs as a source of anxiety. Such omissions are useful in that they help you to reflect on the quality of the data. Is there any reason for feeling that participants were unprepared to comment on such a topic? Why did you, the interviewer, originally expect this to be an issue? Were there any issues for which you were **unprepared**? Do they need following up in any way?

5. **Test the rules** by which you have coded the data. Describe these rules to a friend or colleague. Show him or her an unmarked sample of the data you have analysed and ask them to analyse the data according to your rules. (There is clear scope for team co-operation here). Any substantial variation in the patterns produced is worrying and will require a re-examination of the rules by which you are operating. In any event, you should try to discuss your plans for data analysis with your tutor.

6. **Have a 'rag-bag' category** for data which do not demonstrably relate to your research question. This may be a fruitful source of data as your research proceeds.

Your aim here is to render data into a manageable form. You want this form to be conducive to critical reflection and deeper understanding. The process of analysis is a difficult and demanding one so it is extremely important to give it the maximum time and effort necessary to make sure that your final research account is not merely a description of events, however lucid and well-ordered this might be. Try to consider the **relationship between** the findings on the various issues you have identified. For example you may find that contradictions emerge. You must try to explain these. Also you may find that your findings can be compared with those of related research and. Then you can look for explanations for similarities and differences. Another way of analysing data is to consider how findings at the local, micro-level of an institution or organisation relate to national, macro-level events.
T Task 6

The data you have collected do not automatically provide your answers. You need to interpret your raw information. As a researcher your next task is to make sense of it.

Note down your interpretations of the data you have collected by observation and then use these notes to explain how your findings relate to your research question(s).

S Summary

In this Element we have considered three important issues. The first two sections were concerned with data collection techniques – observation and documents – and both approaches are capable of yielding good quality evidence. We also looked at how to record data, in particular the limitations and strengths of each of the approaches. Finally, we discussed analysis, initially in general terms and later in a more pragmatic way.

Analysis and making sense of data collected are fundamental to the research enterprise. They are also perhaps the most difficult aspects of the process. Many researchers, even experienced ones, struggle with interpreting the data. It is natural that you too may at first find this aspect difficult and frustrating. Don’t be scared of ‘wrestling with the data’. The most important thing to remember is that you must immerse yourself in the data as soon as possible. Do not put off analysing them.

A good way of forcing yourself to analyse is to start writing. The act of writing, of putting your ideas down on paper, forces you to organise them – to analyse them.

R References

You might like to follow these up as extended reading.


Both the following books contain a chapter discussing the process of analysis using data from participant observation:
