



Research Design

Abstract In this chapter we will present the research design and explain the methods used to select, gather and analyse data. The empirical data for this exploration is based on findings from two case studies: One in a large Norwegian hospital and the other in Government agency. In addition, we will draw on data from a project in another Government organisation, a state department, where some of the same questions about age and competence were asked.

Keywords Research design · Case study · Qualitative interviews · Older workers

We view the research process as an evolving process, whereby we as researchers are having our assumptions challenged again and again as new data becomes available and new ideas and understandings emerge. Each time we are challenged, this causes us to revisit these assumptions and refine them based on the empirical evidence and our interpretations of this evidence. Our choice of research theme lends itself to an explorative approach where we hope to develop theory or concepts rather than test hypothesis.

Research based on qualitative methods is often criticised for being overly descriptive, however in situations where concepts are not well understood, there is a need for good descriptions. We do, however agree

with the critics who suggest that description alone is seldom enough to make a scientific contribution and this has led us to use a systematic way of gathering data, developing descriptions, analysing these descriptions and developing new concepts. In this way, we intend to develop, not theory, but a systematic concept of the older worker related to their experience and their know-how. Our methods of conceptual ordering of data and the systematic documentation of relationships between themes and concepts are inspired by Strauss and Corbin and their work on grounded theory (Strauss & Corbin, 1998).

4.1 RESEARCH METHODS

The empirical data for this explorative study comes from two case studies, a hospital and an Inspectorate, in the public sector in Norway. The case studies were chosen in organisations with a large number of older employees and where management was interested in supporting older employees in their work and achievements. Thus these cases are in no way representative of all Norwegian workplaces or even the public sector. They are instead chosen because of the opportunity for us to learn from detailed descriptions of the work experience of older workers in these organisations. Another reason for choosing these particular cases is that the researchers were given access to a large number of employees over a period of time. The number of case studies was limited in order to study the experiences of different employees in the same context and to make the context an integral part of the study. There are many factors which can influence the experiences of workers and affect how they and their colleagues view their competence. It has therefore been important for us to view the events and situations described in our data in the context of the organisations where they happen.

4.2 DATA AND DATA COLLECTION

The data comes largely from interviews and is supplemented by written documents such as annual reports and strategy documents as well as online sources and local media reporting. Most of the data was collected using individual face-to-face interviews, group interviews and plenary discussions at larger more formal gatherings of employees.

Interviews are the chosen method of many researchers and there are different kinds of interviews. Kvale (1996: 5) suggests the aim of the

interview is “to obtain descriptions of the life world of the interviewee with respect to interpreting the meaning of the described phenomena”, this matches well with our aims, where we want to find alternative conceptions of meaning and reality in the local context. We are not interested in quantifying objective data, but would rather interpret meaningful events and relations in the lived world of the interviewee. The most common form of interview is the individual interview, which can be conducted as a kind of conversation, allowing the voice of the interviewee to be heard. This kind of interview is usually steered with an interview guide; in the current study a semi-structured interview guide was developed. This method of interviewing allows the interviewee to choose much more of the content of the interview and also gives them space to describe things in more detail and sometimes to think out loud. This way of interviewing has the advantage that the interviewees’ perceptions of their everyday life can be brought into focus.

When asking individuals about what they know, what they do at work and what value this might have, it is often difficult to get good data without individuals editing it. Interviewees are often concerned that the interview should sound good, maybe that it should fit in with what their employer wants to hear, or that it should match what they want to hear about their own careers. This does not mean that people have been untruthful in interviews, but answers to questions do not always provide the best and most interesting information for researchers. Therefore, we have endeavoured to provide space for people to tell their stories. In our own experience and supported by others (Kvale, 1996), we have found that interview subjects get more taken up with the narrative, trying to describe it the way it was and they often stop to correct themselves as they remember more details of recent events. It is then up to the researcher to analyse this rich data.

As well as the individual interview, data was gathered in group interviews. The individual voices do not always get heard so well in these interviews, but they can often generate very fast interactions which build upon each other. Participants are frequently stimulated by what colleagues say, correct them and elaborate on what they have said. This kind of interview is often more challenging for the interviewer, but usually very rewarding.

In the hospital study, 8 individual interviews were carried out, in addition to seminars with small-group discussions with 2–8 participants and plenary discussion where the smaller groups presented their results and

the other groups were invited to supplement, comment and add their own results. There were 3 seminars a year with approx. 50 participants each time, covering a total of up to 450 older employees over a 3-year period. The individual interviews lasted from 1 to 1½ hours and the group sessions for around 2 hours.

In the Inspectorate we carried out two group interviews with 4 participants from two regional offices, one group interview with 8 participants at the Directorate level, 6 individual interviews as well as group discussions in smaller groups and plenary with 42 participants representing the whole organisation (Directorate and regional offices). One group interview and two individual interviews were conducted online in the data meeting room of the Inspectorate. The rest were conducted face-to-face.

The supplementary cases from another project were based on 11 individual interviews in a government department.

4.3 THE CASES

One is in a large regional hospital in Mid-Norway, integrated with the Norwegian University of Science and Technology. They have a staff of approximately 10,500, of whom roughly 2400 are 55 years or older. The employees consulted were mostly nurses and auxiliaries, but also some doctors and other hospital staff.

The second case was a government agency, with 600 employees, organised with a central office—the Directorate, 7 regional offices and 16 local offices throughout the country. The Directorate regulates the agency's overall strategy, programmes and information. The district offices guide and supervise individual enterprises in local communities. They have administrative, supervisory and information responsibilities in compliance with the requirements of the Working Environment Act. This case is referred to as the Inspectorate.

4.4 HOW THE DATA WAS ANALYSED

The individual interviews were recorded and transcribed, the group interviews were recorded and written notes were produced. Notes were taken in the larger discussion groups. In group interviews and larger discussion groups, there was more than one researcher present.

By allowing interviewees to tell their stories, one inevitably ends up with lots of unstructured text, lots of digressions and lots of examples of

situations which are important for interviewees. Unlike structured interviews where we compare the different answers to questions, we wanted to take advantage of the rich data, so, inspired by grounded theory (Glaser & Strauss, 1967; Strauss & Corbin, 1998), we have proceeded through several iterations of categorising themes and concepts, then structuring relationships between them.

4.5 GROUNDED THEORY

Grounded theory was first developed in the 60s by Glaser and Strauss, their intention was to develop theory directly derived from data. The idea is that theory developed in this way will bear closer resemblance to reality than other more abstract theories. The ideas of Glaser and Strauss have been developed and refined in subsequent years. This method for gathering and analysing data is based on a systematic process of data gathering, followed by iterative analysis and categorisation. This method is relevant in situations where the researcher does not begin with a preconceived theory in mind and is not striving to test a theory. The method is appropriate for researchers who start with an area of study and want to build theory by allowing it to emerge from the data (Strauss & Corbin, 1998: 13). Categorising or grouping of themes in an iterative process allows for the consideration of alternative meanings and interpretation of phenomena. Based on the categories identified in the first stage of analysis, the building blocks for the next stage will emerge.

Grounded theory has, of course, been criticised and one of the criticisms is that, like many qualitative methods, findings cannot be generalised. However, the aim of grounded theory is to develop what Corbin and Straus call “representative concepts” “ultimately to build a theoretical explanation by specifying phenomena, in terms of the conditions that give rise to them, how they are expressed through action/interaction, the consequences that result and the variation of these” (Strauss & Corbin, 1990: 421). It is therefore important that researchers using grounded theory include the conditions and context which are associated with the phenomenon found in the particular data. Anyone trying to reproduce the study would have to ensure that conditions and context were the same.

4.5.1 *First Stage*

Rough grouping of pieces of text. These can be sentences or paragraphs in a longer narrative, or they can be direct answers to questions. This is a process of sorting and labelling. This first grouping is quite general but the process becomes more rigorous by using various analytical tools. These tools can be.

Checking the perceived meaning of the statement with the context. There are often multiple interpretations of statements and it is important that the statements do not take on a life of their own, independent of their context.

Comparing statements with the researchers' previous experience is a way of sensitising the researcher to the choice of category. Comparing with previous examples can support the choice of category, but also reveal less obvious aspects of the statement.

Questioning different aspects of the concept, turning it around. This questioning can be done with the interviewee, between multiple researchers or by one researcher alone asking critical questions.

Avoiding standard ways of thinking about the phenomenon. This reduces the risk of the researcher closing themselves off from potential new interpretations and understanding.

4.5.2 *Second Stage*

This is where one tests the labels and regroups. One can test the labels with the interviewees, but in some cases the labels might not be easily recognisable to interviewees. Reading and re-reading transcripts and re-listening to recordings is normal in this phase and the researcher should question the reasons for grouping and again look for alternatives. If the same words are used by different interviewees, then at this stage it is normal to question whether they refer to the same or a similar phenomenon or event. It is here that we dig deeper and consider different potential meanings, different dimensions and interpretations. It is not just a case of counting how many interviewees refer to the same phenomenon, or how many describe it the same way, but what are the similarities and what are the different nuances in their words and in the actions behind the words. We also define subcategories and re-group data under multiple categories. Hopefully by this stage some of the earlier labels emerge strengthened and perhaps some have merged and others have

appeared from within the same data. It is during this stage that one starts to move from labels to concepts. As Strauss and Corbin (1998) emphasise, a concept is “an abstract representation of an event, object, or action/interaction that a researcher identifies as being significant in the data” (ibid.: 103). These concepts may arise directly from the terminology of the interviewees, their own words, or they may be based on the meaning they evoke for the researcher.

4.5.3 *Third Stage*

At this stage the theory building becomes more evident and one moves from fragmented labels to related categories. Here we look for relationships, not necessarily causality, but more in terms of conditions. It should be possible to develop some statements based on the data and it is in this phase that one looks for one main category to express the findings.

Grounded theory is a powerful tool to analyse and identify emerging new theory or concepts. At the same time there are some difficulties in claiming to use grounded theory, or being inspired by it, as we claim. George Allan (2003) reflects on several of these difficulties, with which we sympathise. Firstly, he argues that “Glaser and Strauss’ (1967) emphasis on the researcher having ‘no preconceived ideas’ when collecting and analysing data” (Allan, 2003: 8) is difficult from two perspectives. Firstly, how do you get participants to agree to something vague and not well described? To this, we would like to add the question, how do you ensure informed consent from participants who don’t know what the study is about? Secondly, how do you code the material, how do you know if a statement is of importance, if you have no preconceived ideas of what to look for?

In our case(es) we started looking for something which we didn’t have a clear understanding of, namely what does late career competence actually look like in a workplace setting. Over many years as researchers we had come across several stories that had made us curious and given us glimpses of what the competence of older workers could look like or how might be described. During a project in an industrial plant someone mentioned that the older production workers could “hear when something was off kilter before the alarm went off” by the sound of the machines. We were reminded of this story when, in our hospital case, the nurses talked about *the clinical eye*. This experience-based, integrated knowledge takes years to develop, but can obviously emerge in many different settings.

Allan (ibid.) also discusses the difficulties of when you have found enough, how do you know you have reached the point of *saturation*, with reference to Glaser (1978). Do you ever reach a point of saturation or is there always more to find if you keep looking and continue the analysis? For us this was a very relevant point, as the material is extensive and rich, and could potentially always reveal more. All the individual interviews are taped, and tone of voice, laughter or similar expressions might also be analysed. Allan (ibid.: 9) argues that instead of looking for this point of saturation, “the theory could be allowed to emerge right from the start. I use the term ‘allowed to emerge’ to mean that concepts and categories should be noted and considered as soon as they are noticed and this is the start of the theory”.

4.6 HOW THIS METHOD WAS USED IN THE CURRENT PROJECT

The phenomenon being investigated was what older employees know and how they use what they know to contribute to their workplace. We were keen to avoid a listing up of qualifications and courses attended by employees, therefore we deliberately chose a less conventional way of discussing competence. We did not mention formal, informal or non-formal competence, nor did we ask about education or skills. To articulate the practical use of late career competence, we asked about practice and practical situations where the older worker thought that he or she had an advantage over younger colleagues with shorter careers.

In order to gain a better understanding of this phenomenon and to stimulate interviewees to share their experiences and their thoughts with us, two main questions were asked:

“In what ways have you found your age and the length of your career to be an advantage in the performing of your job?”

“In what ways are older employees with and long careers more proficient at their jobs than their younger colleagues?”

Thus the first categories shaping the data collection, were: age, career and advantage.

In spite of the way these pre-chosen categories steered the data collection, a rich variety of descriptions of working practice and specific events arose from the interviews. Our job was then to analyse the data and develop categories through a bottom-up data-driven analysis. In the first round of analysis, we looked for the main statements which provided answers to the original questions. We then began to group these statements and label them.

Certain phases emerged which required more clarification. These were mainly terms used to describe some kind of competence which the interviewees considered important. One example was *the clinical eye*. In order to better understand this term and how it was used, we asked “what does the clinical eye see?”, “what is different between the clinical eye and the ordinary eye?”.

Another term frequently used without any explanations or indications of its characteristics was “life experience”. We asked for examples, but also “how does one use life experience?”.

A term used by several was to have been on stormy seas before (in Norwegian: “har vært ute en vinternatt før”, having been out in a winter night before). This phase is well known and most interviewees would not consider it necessary to explain what is meant by it. It was important for us to find out what lay behind it for our interviewees. So we asked “What does an employee who has been on rough seas before, do differently from a younger employee?”.

In the next stage of analysis findings from small-group discussions were presented in plenary sessions to larger groups of fellow employees, who were invited to comment. This resulted in some corrections, some more details on some points and suggestions for additional themes to be included. After this round of scrutiny and refinement by the employees themselves, the process took on a more structured form and some follow-up questions which arose.

Initially we asked how older employees contribute more than less experienced colleagues? This was followed up with questions on the novel contributions of younger employees and how these can be used by the older employees. We asked how older and younger colleagues together might contribute to each other’s learning. Discussions on the question of how older employees contribute did not focus exclusively on length of service or on experience, but also produced rich descriptions on how age and experience is useful, not only for the employees, but also for their employer.

At this stage we developed subcategories relating to career, age and advantage, basically using terms as they were used by the interviewees.

After this stage of refining categories and developing subcategories, we moved over to phase where we tried to gain a better understanding of what the categories were telling us. We did this by drawing upon the researchers' experience and the experiences of others who have researched seniors at work, or development of competence at work. Here we found that many of the experiences recounted were similar to those described in connection with practice learning among novices (Dreyfuss & Dreyfuss, 1986) and the gradual development of apprentices (Lave & Wenger, 1991). We also found similarities with Eraut's (1994) findings on professionals, but we also found examples of competence, skills or abilities which do not match with earlier findings. This phase of analysis led us to question whether there is a term we could use to describe the kind of competence these older employees are telling us about. Our understanding of this kind of competence, developed from the ideas of senior competence as described by Göranzon (1990, 2006) in Chapter 3 and evolved through our analysis of the data until we ended up with the concept of *the wise worker*, which is presented and discussed in Chapter 7.

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