

CHAPTER FIVE

METHODOLOGY

Introduction

Chapters Two to Four have examined a number of important factors believed to influence *retention* and *attainment* in education, particularly for Aboriginal students. How these factors might be related to Aboriginal students' identity and how the interrelationships between such factors can be conceptualised has also been explored. Much research has analysed reasons for the lack of retention and attainment of Aboriginal students. In contrast, this project takes a more positive approach, focusing on the strengths of a few individual Aboriginal students who had made a successful transition to senior secondary schooling.

This chapter, which describes how the study was developed and conducted, is presented in six major sections. The first section provides the rationale for the *assets analysis orientation* of the study, the *constructivist paradigm* within which the study is constructed, and the *multi-site case study design* of the study. This is followed by a discussion of a variety of methodological issues relating to the selection of the student participants. The section concludes with a description of the final student cohort.

The second section provides details of data collection and processing in three sub-sections: the sources of data and data collection procedures (including who was interviewed about whom), the conduct of the interviews and the transcription of interviews. Section three describes how the data were analysed and how the descriptive case studies were written. Section four provides details of the cross-case analysis that was facilitated by the conceptualisations of the case studies. The final section of the chapter considers ethical issues and how these were addressed, as well as the trustworthiness of the data, given the assumptions and biases which underlie the study.

Developing a research methodology

Some aspects of the research methodology used for this study have been borrowed from evaluation research. For example, there is a *process* focus as in *process evaluation* (Patton 1987). The main difference here is that the emphasis is on analysing *how* the

individual students got to where they are, rather than how any particular program produced the results it did. The *assets analysis* (Patton 1981) orientation has also been borrowed from evaluation research. This orientation is set within a *constructivist paradigm* (Guba and Lincoln 1994) and utilises *multi-site case studies* (Burgess et al. 1994). The first three parts of this section provide a rationale for this orientation, framework and design. These are followed by a discussion of a variety of methodological issues: the criteria used for the selection of the student participants, the initial case study and its methodological outcomes, the process of selection of student participants and details of the final student cohort. This section concludes with a description of the final student cohort.

Assets analysis

Herman et al. (1987, 16), in summarizing different approaches to evaluation, suggested that there are three basic types of evaluation: needs assessment, formative evaluation and summative evaluation. Often evaluations occur in the following order: a needs assessment is carried out to determine the amount of money and effort required to meet high priority needs, formative evaluators follow up the identification of weaknesses and work with the organisation / individual during the implementation of programs to address these needs and, finally, a summative evaluation examines the outcomes or the effectiveness of the programs.

Patton (1981) introduced the concept of *assets analysis* to call to attention what he felt was a conceptual weakness in the way evaluators thought about *needs assessment*.

Assets analysis is the opposite of needs assessment. Where needs assessment determines deficiencies to be corrected, assets analysis identifies strengths to be built on.

(Patton 1981, 79)

Patton's concern was that evaluators were tending to focus on client needs to the exclusion of client assets and strengths. This perspective was leading to a deficit approach to educational and social action programming.

The deficiency perspective exists when the student or client is viewed largely in terms of deficits to be removed or corrected, as an empty vessel to be filled, or, yet again, as clay to be molded. Program personnel become so concerned about what is to be done to the client and for the client that they lose sight of what can be done *by* the client. Clients in such programs come to view themselves in the same way [emphasis in original].

(Patton 1981, 79)

For example, in the school setting many students who participate in 'remedial' programs can see themselves as failures because well-meaning remedial programs often focus on finding the reason for failure in students, thus "blaming the victims" (Reyhner 1992, 39). This is just one of the ways schools label students as failures. Streaming and creaming students are also powerful mechanisms schools use to label students and influence student outcomes (Connell et al. 1982, 187). Schools thereby define the criteria of success and failure and, "once labelled a failure, a student cannot become a success" (Hatton and Smith 1992, 6).

However, it is possible to raise the level of performance for individual students through compensatory education "without making the clients feel inferior" (de Lacey et al. 1985, 220) and without diminishing or reversing student strengths and assets (Patton 1981, 80). This can be achieved by:

- informing students of their individual strengths and assets
- positively affirming these
- helping students build on them.

(derived from Patton 1981)

This requires a formal process of assets analysis.

For this inquiry it was felt that the outcomes would be more useful to staff in schools, in helping / encouraging other Aboriginal students to stay at school and succeed, if the study focused on the assets and strengths of some Aboriginal students who had done just that. School staff would also be in a better position to support Aboriginal students if they had some concrete examples to cite.

Hopefully, other Aboriginal students would be able to identify with the values, qualities, means, resources and circumstances that had helped these particular Aboriginal students. Current students could then reflect on their own assets and strengths and how they could use their own personal qualities, resources and circumstances to help themselves.

In addition, an assets analysis approach would be an affirmation of the strengths of the student participants themselves and, therefore, participation would be more likely to benefit than harm them. However, to conduct an assets analysis and to do it well the assets analysis should be structured within a constructivist paradigm. This is what I have done.

The constructivist paradigm

The *constructivist paradigm* within which this inquiry is based, has influenced all the methodological issues that were confronted in designing and carrying out this study. Guba and Lincoln (1994, 107) view a paradigm as a "set of *basic beliefs* [that] must be accepted simply on faith [because] there is no way to establish their ultimate truthfulness [emphasis in original]." Each one of us lives our lives according to such a set of beliefs. Our individual *worldview* defined by these beliefs determines how we see our world, our place in it and "the range of possible relationships to that world and its parts" (Guba and Lincoln 1994, 107).

From an ontological perspective, I believe that reality is subjective and relative, that each individual perceives a different world because each views the world from a different perspective, however minute that difference in perspective might be. This subjective reality is constructed by individuals as a result of their life experiences. As individuals' life experiences change, so do their constructions of reality and the importance of individual elements within this reality. However, given that many individuals share similar life experiences, elements of individuals' realities may also be shared.

Epistemologically, I believe that whenever an inquirer seeks to discover aspects of another person's world there is always some form of interaction between the two individuals. Also, any knowledge obtained by the inquirer from one who knows is *created* by the interaction between the individuals during the inquiry process (Guba and Lincoln 1994). Consistent with my constructivist views, I determined to undertake critical inquiry by interacting with participants. Again, consistent with my constructivist worldview, this study is interpretive because it addresses *how* rather than *why* questions. It was assumed that the answers to the how questions would include subjective or 'commonsense' interpretations and explanations of *why* (Denzin 1989, 127) some Aboriginal students had stayed at school and achieved success and *how* their Aboriginal identities related to their retention and attainment. The aim of this hermeneutic / dialectic methodology (Guba and Lincoln 1994) was to reconstruct and interpret previously held constructions about these phenomena that were shared by the students themselves and people close to and trusted by the students using critical inquiry.

My acceptance of the constructivist paradigm, as expressed by Guba and Lincoln (1994), led me to choose a qualitative design for this study. Apart from the fact that, within a constructivist framework, qualitative design and data collection are highly

appropriate (Guba and Lincoln 1994), this choice was substantiated by other findings in the literature. For example, Chapters Two and Three have established that the interrelationships between various factors shown to be related to Aboriginal students' retention, attainment and identity are complex and largely unknown. According to Lancy (1993), this is an important reason to use qualitative methods. The need to provide contextual information and emic views are further reasons (Guba and Lincoln 1994).

This research provides an example of how research design, data collection and analysis are *simultaneous and continuous processes* within the constructivist paradigm (Bryman and Burgess 1994, 217). For example, I found myself analysing data as I read the relevant literature even before I had conducted any interviews. I also had the opportunity to undertake an initial case study some time before I did the others. The initial analysis of data helped me create my first interview guide, which was then modified by experience as I worked on each of the subsequent case studies. As this was to be my first major research undertaking it was important to me that I could develop and/or change categories as the study progressed and the larger picture emerged, and would not 'locked into' a predetermined structure.

Despite the flexibility of the constructivist paradigm, it has not often been used to investigate the retention and attainment of secondary students. The vast majority of the findings reported in Chapter Two are based largely on analysis of quantitative data within positivist or post-positivist paradigms. The few exceptions include the studies by Burt (1991), Walsh (1993) and Day (1994). Even though McInerney (1990a, 1990b, 1991, 1992) used qualitative approaches to collect background data on the motivation of Aboriginal students, his main findings were based on psychometric analyses of grouped data. He admitted that this form of analysis "may absorb the individual differences of those students for whom these motivational variables *are* influential" (McInerney 1991, 167). Individual differences can only be identified using individual case studies.

Case studies

Although support for many of McInerney's findings comes from the qualitative studies of Day (1994) and Walsh (1993), we still have no in-depth individual case studies to illustrate how the various factors involved in identity, retention and attainment are interrelated for individual Aboriginal students. Day's (1994) research, for example, indicated clearly that there were some commonalities among those Aboriginal students who have chosen to stay at school and achieve their goals, but it is difficult to see the students as individuals because of the way the data have been analysed. In contrast, the

case studies recorded by Burt (1991) are particularly interesting because they demonstrated that each student is unique, and factors that have been important for one person may not have been so for another and vice versa. However, the autobiographies recorded by Burt (1991) are very brief and limited in scope. Neither do they explore the motives, meanings and emotions of these individual students, including their behaviour in ordinary situations, factors which Schwarz and Jacobs (1979) have asserted are essential components of any case study.

Sue Johnston (1990, viii), also pointed to the "need to go beyond the data and examine the educational experiences and outcomes of individuals and of specific groups". She confirmed:

[T]here is much scope for research which utilises ethnographic approaches. There is a need to talk to girls and boys, to observe them in their school settings and to search for meanings with them in a collaborative way. Case studies are required to provide the richness of data necessary to assist understanding.... Collaborative research approaches have the added advantages of empowering the participants, of valuing their perspective and of giving them the means to understand their own situation more effectively.

(Johnston 1990, 45)

Although Johnston's views were specifically targeted toward student retention, the same would be true for studying student attainment.

Both Harris (1980) and Jordan (1988) recommended a similar approach to studying identity. Harris (1980, 24) stated that "detailed case studies of individuals in their various life situations [need to be undertaken in order to] understand how much societal pressures enhance or impede the development of a coherent and positive sense of identity based on choice and commitment". Jordan (1988, 111) added that the Aboriginal worlds of the students and their Aboriginal identity should be studied as they are conceptualised by both the Aboriginal students themselves and significant others, both Aboriginal and non-Aboriginal. This also indicated that a case study approach would be appropriate.

Hakim (1987, 62) explains how case studies can be effective:

After a body of knowledge has accumulated on a topic, *selective case studies* can focus on particular aspects, or issues, to refine knowledge. For example, case studies can be used to provide a more richly detailed and precise account of the processes at work within particular types of case highlighted by surveys, whether typical or anomalous; they can be used to substantiate or refine causal processes thought to underlie observed patterns

and correlations.... At the most rigorous level, case studies are designed to achieve *experimental isolation* of selected social factors or processes within a real-life context so as to provide a strong test of prevailing explanations and ideas.... One variant of this design is the 'critical case', or 'strategic' case study which assesses the evidence for a conclusion or explanation by looking at the *most favourable* illustration of it [emphases in the original].

(Hakim 1987, 62)

The fact that three phenomena were to be explored in this study - retention, attainment and identity - provided the impetus to undertake *case study* research of *critical cases*, a small number of Aboriginal students who were already undertaking senior secondary studies. The research then became what Stake (1994, 237) has called a *collective case study*.

The emphasis in this study is on examining the perceptions of the students and significant others about the interactions of individuals within the school setting. This is important because, according to Schwarz and Jacobs (1979), patterns of interactions are influenced by the the actions of individuals as well as the constraints of the settings. Searching back in time for plausible causal factors of why individual Aboriginal students had stayed at school and met with success along the way, the research process also contains elements of *ex post facto* research as discussed by Cohen and Manion (1980) and *case histories* as described by Hakim (1987). However, because of their relatively narrow focus and the relatively short length of time available for working with each student, the case studies presented in this study could well be described as *condensed case histories*.

As I was based in the country, in order to find sufficient Aboriginal students who were already undertaking senior secondary studies, I needed to work in several schools, some many kilometres apart. Thus the study incorporated *multi-site case studies* (Burgess et al. 1994).

Multi-site case studies

The research design is similar to that described by Burgess et al. (1994) although it was developed independently. This research has focused on ten individual case studies and three key themes (retention, attainment, and identity). The case studies were chosen to facilitate the collection and analysis of data relating to the three themes in a range of settings. Each individual case study is important, but sub-themes emerging from each informed the data collection in parallel cases and the analysis of data across all ten. The themes for the cross-case analysis were developed toward the end of the project when I had conceptualised the individual case studies. Yet this could not have been achieved if

the initial three themes had not been used in posing the questions and in collecting the data, illustrating why Burgess et al. (1994, 143) argued, "data analysis is integral to the way in which questions are posed, sites selected and data collected".

This study can be viewed as ten studies in one (looking at each case individually), one study from ten (focusing on the cross-case analysis) or three studies from ten (following the three major themes - retention, attainment and identity). Its very complexity overcomes many of the problems associated with traditional single-site case studies (Stenhouse 1984; Burgess et al. 1994). Having determined the orientation, framework and design of the study, the next challenge was to select the sites and the individual students.

Criteria for the selection of students

The literature cited in Chapter Two indicated that, for both Aboriginal and non-Aboriginal students, those in the country were more disadvantaged than their city counterparts when it came to retention and attainment. Recent indications in South Australia are that differences in achievement have been more significant than those for retention for all students in the country, but particularly so for Aboriginal students (Department for Education and Childrens Services 1994, 6). In line with the assets analysis focus of the research, and the fact that I had lived and worked in country South Australia for the previous thirteen years, I felt it important to take case studies of 'successful' Aboriginal students from those who had been identified as being most disadvantaged.

This means that the students selected to participate in this research are not representative of the total population of Aboriginal students undertaking senior secondary school in South Australia at the time of the study, not even of those doing so in the country. However, the students who participated in this research are "illustrative" (Burgess et al. 1994, 131) of non-metropolitan Aboriginal secondary students who choose to stay at school beyond the years of compulsion.

Students were invited to participate in this research if they were:

- undertaking Year 11 or Year 12 studies, ie: SACE subjects
- attending school regularly
- achieving success in at least some areas of their studies

and their teachers felt that:

- they would complete Year 12 or go on to further study elsewhere
- they would be interested in participating in the research
- their parents were likely to agree to their participation.

During the process of refining the research methodology I received a request from a principal to include a student at his school as a participant in this study. The principal had heard about my forthcoming research and felt that participating in it would help the student finish the school year before he went on to the traineeship he had already won. As the student met the criteria that had already been determined I agreed to this request. This initial case study proved valuable in several ways. It confirmed that my years as a teacher, a school administrator and a consultant had provided me with sufficient skills in interviewing and document analysis to undertake those aspects of the research without further training, something Hakim (1987, 73) indicated may be necessary for new researchers. I had also been concerned that, as a non-Aboriginal person, I would have some difficulty establishing rapport with some Aboriginal interviewees. However, this initial case study demonstrated to me and to an Aboriginal Education Worker (AEW) colleague who assisted me with some of the interviews that I was able to establish rapport with an Aboriginal parent and an Aboriginal student I had never met before. This was particularly important because both she and I realised from our experiences working with this student that it would be a practical impossibility for me to rely on the assistance of her or other AEWs in future interviews; professional commitments would make matching diaries a nightmare.

Process of selection of students

As I was still working in the Western Area of South Australia, the area where I had worked as a consultant over the previous three years, and knew the schools and the principals quite well, I decided to undertake my research in this area. I wrote to the principals of the seven schools in the area where I thought there would be Aboriginal students meeting the above criteria to obtain permission to work in their schools (Appendices 1a and 1b). I also contacted the principals personally, either by phone or face-to-face, to explain in more detail how I expected to conduct the research in their schools and to ascertain the name of the most appropriate staff to contact. Only one was unable to assist me because there were no Aboriginal students in the school undertaking senior secondary studies. All but one staff member nominated by his or her principal was either an Aboriginal Education Resource Teacher (AERT) or an Aboriginal Education Worker (AEW).

I contacted the nominated staff members, explained the focus of my research and the criteria for students to be asked to participate and asked if they could suggest any suitable students and assist me in making contact with the students and their parents. All of the AERTs and AEWs nominated were enthusiastic and helpful. The support of a staff member at each school was very important to me as visiting the schools involved travelling considerable distances and it would not have been feasible for me to make

arrangements directly with students for visits to the school. I then made arrangements with the AERT or AEW at each school to talk with nominated students at a time convenient to the students. Only one student declined to be involved; he did not even want to meet me.

Details of the final student cohort

Eleven students initially participated in my research. However, one student's attendance became very irregular and she virtually dropped out of school during the study, so she has not been included in the final cohort. Table 5.1 shows the gender and the year level of the final student cohort. The Year 11 students were undertaking mainly Stage 1 subjects of the South Australian Certificate of Education (SACE); the Year 12 students were undertaking mainly Stage 2 subjects of the SACE.

Table 5.1 The gender and year level of the student cohort.

	Male	Female	Total
Year 11	3	4	7
Year 12	1	2	3
Total	4	6	10

Although all students were registered at their schools as being Aboriginal and were recognised as such by school staff and their peers, not all their parents were of Aboriginal descent. Table 5.2 indicates the Aboriginality of the parents at home with the students. Three students lived with their mother only, the natural father either being deceased or living elsewhere. The remaining seven students lived with either both natural parents or their mother and a long-term father figure.

Table 5.2 The Aboriginality of the parents at home.

	Father	Mother	Total
Aboriginal	6	8	14
Non-Aboriginal	1	2	3
Total	8	11	17

The students came from four high schools (Years 8-12) in regional centres and two area schools (Years R-12) in rural centres. These schools were attended by varying percentages of Aboriginal students. Table 5.3 outlines the percentages of Aboriginal students in relation to the different school types.

Table 5.3 Percentages of Aboriginal students at the different types of schools the student participants attended.

Type of Sch.	% Aboriginal Students			No. Schools
	0 - 5	10-20	30+	
R - 12	1	0	1	2
8 - 12	2	2	0	4
No. Schools	3	2	1	6

The data collection process

The data collection procedures were based on the descriptions of *condensed field work* and *condensed case study* as used in schools by Stenhouse (1982, 1983, 1984). A variety of data were collected. This section details the kind of data that were collected, how these were collected, including from whom and from where, and how interview data were processed.

Sources of data and data collection procedures

Although non-interview data were collected, the bulk of the data came from interviews. Interview data were collected from three sources: each student was interviewed at least once; a close family member of each student was interviewed once; others nominated by the students were each interviewed once. After working with the first student over a period of time I was confident that I only needed to interview each participant once, provided I used a comprehensive interview guide. However, when opportunities arose to interview some of the students more than once, these were taken.

Interviewing a very close family member was important for several reasons. Firstly, it enabled family members to understand the context of the research better than they might have done from the written information they had received and it provided them with

opportunities to express any concerns they might have about the research. Secondly, the close family member was competent to talk about the student in the context of the family and community. Thirdly, it provided an opportunity to check data obtained from different sources, a form of methodological triangulation.

In most cases the significant others nominated by the students were teachers, but three were non-teaching staff members and one was a community worker who supported school staff in working with students. One friend was a fellow student and another was a teacher who had never taught the student. At least three non-family members were interviewed about each student. Interview data came from 65 separate interviews. Table 5.4 indicates who was interviewed about each student. The student names on the table are the pseudonyms that have been used consistently throughout this thesis. It is significant that over half the people interviewed were school staff even though there was no direct suggestion that students nominate staff members.

Table 5.4 Interviewees by number of interviews.

	NUMBER OF INTERVIEWS WITH EACH PARTICIPANT									TOTALS
	Family members					School Staff		Others		
	Students	Mother	Father	Aunt	Sister	Teachers	Other	Yth Strategy	Friend	
Bret	1			1		5				7
Gina	1	1				2			1	5
Helen	1	1				2	1		1	6
Larry	2				1	4				7
Lisa	1	1				5				7
Lucy	2		1			3				6
Marcia	2	1				2	1			6
Nicolas	3	2				3				8
Sally	1	1				4				6
Toby	2	1				2	1	1		7
TOTALS	16	8	1	1	1	32	3	1	2	65

Interviews were audiotaped in an effort to capture the vividness of speech and obtain a full record of the interviews (Stenhouse 1982) and so that the actual words spoken by the person in the interview could be used to illustrate outcomes of data analysis (Patton 1991, 347).

The interview data were complemented by documents about the school such as prospectuses, staff lists, timetables and curriculum offerings (provided by the principal or delegate). In addition, with each student's consent (see Appendix 3), school copies of students' reports and other information that was contained in the students' school files

were examined. Quantitative indices included demographic data on the student population in the school and retention rates of different groups of students, where these were available.

Conduct of the interviews

Most student and teacher interviews were held in an office or an empty room at the school the student attended. However, for one student the second interview was held at his home as he had been unwell and the interview with his older sister occurred at the same time; for one teacher the interview was conducted while she was on yard duty. The school based AERTs or AEWs made most of the initial family contacts for me. However, I needed to personally follow up with four family members to organise a time and a place to talk with them. This I did by phone. In all instances parents and close family were willing to come into the school for the interview but that was not always possible due to their work commitments or lack of transport. Two close family members were interviewed at their homes, three at their places of work, and one over lunch at a local club.

Wherever interviews took place I tried to set up a situation where the person being interviewed felt comfortable, preferably where we were sitting side by side but angled towards each other, with the tape recorder between us but out of the direct line of sight of either of us when we faced each other. Where this was not possible we managed the best we could.

I saw all the people I interviewed as participants in my research, just as Stenhouse (1982, 266) had done. They were reflective observers of themselves and others. My task was to facilitate them talking about their experiences and observations. I obtained most information about how to do this from Patton (1991). In the interviews I talked as little as possible, remaining open to whatever emerged in the interviews because, according to (Patton 1991), this is a pre-requisite for all naturalistic inquiry. However, I exerted some control over the direction of the interview, using an interview guide (Appendix 5) rather than a set of specific questions in a particular order. In this sense I conducted *focused interviews* (Cohen and Manion 1980; Bailey 1987). My interview guide consisted of a list of issues I wished to explore in the interview and possible questions I could use to explore these issues; it was derived from the initial analysis of data from my literature search. Most questions were open-ended to allow me to pursue areas of interest I had not anticipated and worded to suit the situation at the time.

In order to establish rapport with each interviewee I used slight variations in the personal background that I shared with them. With teachers I emphasised my educational background, whereas with students and their close family members I put more emphasis on personal information about my own family. I shared this personal information about myself, my family, my work and my study in an effort to establish a reciprocally honest and open relationship between the two of us as suggested by Bridges (1989, 145). In each case this led naturally into teachers talking about the student in the school context, and the student and close family member sharing information about his or her own family and relationships with the school, with the student as the focus. What I wanted to do was create "the conditions in which the interviewee says what [s]he means, means what [s]he says, says what [s]he thinks and thinks about what [s]he says" which are the major tasks of the interviewer according to MacDonald (1982 cited by Bridges 1989, 145). This process of building up relationships before "worrying about information" has also been recommended by Michael Williams, a member of the Gooreng people of South East Queensland, who has assisted non-Aboriginal workers in the field (Eades 1982, 80). Then, as Fontana and Frey (1994, 374) pointed out, if we want people to "uncover their lives to us [so that we can learn about them,] we must remember to treat them as people."

There was no set time for any of the interviews so they varied a great deal in length, from 20 minutes to just over an hour. All interviews continued until they came to a natural conclusion, either by the need for the interviewees to return to work, or when they expressed the view that they really did not have anything more to add. About half of the interviews with teachers fell in the shorter range, but these interviews were very highly focused as there was little need for me to spend a great deal of time establishing rapport. All interviews with students and close family members were in the longer range.

There were a variety of interruptions to the smooth flow of interviews. For example, one student was minding a young cousin and between us we had to keep the youngster amused while we talked, one interview with a parent was interrupted by a sudden thunderstorm so we stopped to check what the tape recorder was picking up our conversation and out on the oval when the teacher was on yard duty we had to stop a couple of times while potential incidents between students were investigated. Then there was the mechanical necessity of turning the tape over or inserting a new one.

Transcription of interviews

I had transcribed the interviews from the initial case study and began doing the same with those with the succeeding students as soon as possible after the interviews had taken place. However, as this was taking rather a long time I sought out someone to do this for me. This turned out to take much longer for her than either she or I had imagined. I had been unaware that transcribing typically takes four times as long as the actual interview (Patton 1991, 349). In typing the transcripts I made whole sentences out of broken or disjointed ones and edited to a minimum the things that I had said while still leaving a context for what the interviewee said. However, I still retained the actual words spoken and the flavour of the forms of speech used by each of the participants. My reason for editing interviews in this way was to ensure that copies of transcripts I sent to participants for checking did, in fact, make sense. Even for the transcripts typed for me, I still had to do the editing myself. In the end it was more efficient and cost effective for me to do the transcribing and the editing at the same time.

The advantage of transcribing most of the interviews and doing all of the final editing personally was that I became very familiar with the data. This was a tremendous help when it came to the analysing the data. While I was transcribing, and even when I was out in the field, I found myself developing ideas about how the data might be analysed which is what Hammersley (1984, 56) had done.

Analysis of individual case study data

After examination of the various options in terms of computer software available to take the tedium out of the manipulation of data (Tesch 1990, 164-165), I had selected NUD•IST and obtained a copy. I chose NUD•IST because this program promised to facilitate continual review of my index system, a feature required by constructivist qualitative data analysis. Once the transcribed interviews had been checked by the interviewees they were imported into NUD•IST, as were the non-interview data.

Miles and Huberman (1984, 17) defined *good analysis* as "any method that works - that will produce clear, verifiable, replicable meanings from a set of qualitative data". I owe much of my knowledge of how to analyse qualitative data in practice to Miles and Huberman (1984, 1994), Tesch (1990), Glesne and Peshkin (1992), early editions of the NUD•IST manuals (Richards et al. 1992a, 1992b), and some trial and error on my part. Miles and Huberman (1984, 67) used the terms *reduction*, *display* and *conclusion*

drawing to describe what they believed were the three concurrent flows of activity involved in the analysis of qualitative data. Therefore, I spent a lot of time and effort in trying to develop "a strong, well-organised indexing system" (Miles and Huberman 1984, 67) because I believed that to be a crucial prerequisite for these processes. The NUD•IST manuals were invaluable in this process. Appendix 7 provides details of how I constructed and continually modified my indexing system, and the complete index system by the time I had coded all the data.

I then used the NUD•IST software to "dialogue with the data" (Tesch 1990, 93) and search for emerging themes. Initially, for each student, I searched separately for data relating to the three phenomena under investigation - retention, attainment and identity. From this I printed out reduced case study data for each student which I then used to write the individual case studies. The text of the case studies is rich in detail and contains extracts of interviews to support my interpretations of the data. This has been done because:

[I]t is the combination of richness and interpretive perspective that makes the account valid. Such a valid account is not simply a description; it is an analysis. Within the details of the story, selected carefully, is contained a statement of theory of organization and meaning of the events described.

(Erickson 1986, 150)

My *causal network matrix* model (see Chapter Four) proved a valuable way of conceptualising the interrelationships between the various factors that had been important in the retention and attainment of individual Aboriginal students and in fostering their Aboriginal identities. Therefore, each case study comprises the descriptive text and two causal network matrices, one for retention and attainment factors and the other for factors related to the student's Aboriginal identity. Although there were some overlaps in these sets of factors these were not enough to warrant trying to fit all the factors and their interrelationships onto a single matrix for each student.

Once drawn, the *causal network matrices* provided a useful analytical tool for revealing patterns across cases and indicated that cross-case analysis would be valuable. The potential for such generalisability across cases had been recognised by Miles and Huberman (1984) who suggested that, "given multi-site data, it is possible to develop rather powerful *general* explanations [emphasis in original]" (Miles and Huberman 1984, 132). For this reason, MacDonald and Walker (1978) and Bulmer (1984) asserted

that case studies could provide a basis for theory building just as could other forms of research. However, " 'local causality'... must be carefully understood in order to build a causal map that has more general applicability" (Miles and Huberman 1984, 132).

Cross-case analysis - looking for patterns

The case study data were further analysed. Initially this was done by comparing and contrasting the two *causal network matrices* for each student with those for the other students. This suggested patterns which were then pursued by going back to the original data. Using the *matrix* and *vector* index system search functions of NUD•IST revealed overall patterns - similarities and/or differences between individual students (Campbell and Patton 1991, 450). In addition, various traditional matrices were constructed to indicate the frequency of occurrence of individual factors for individual students. The data within these matrices were then manipulated (whole rows and columns were moved) with the aid of a *draw* program on the computer to make patterns more obvious.

The matrix of the student related factors associated with retention and attainment (see Appendix 8) revealed three separate groups of students. The groups have been categorised as follows:

- Expected stayers - students who either had a history of being academically successful or who stood out from their Aboriginal peers in junior secondary school because of their desire to learn and their positive attitude to school work, and their motivation to pursue a career that required further study.
- Possible stayers - highly motivated students who were academically competent but less academically successful than the expected stayers and students with recognised academic potential who were less motivated than the expected stayers.
- Unexpected stayers - students who had stayed at school and intended to complete Year 12 despite a series of 'problems' that would have led most students to leave school early.

Significant patterns within and across groups were then tabled. Some were also conceptualised on causal network matrices. This indicated common trends or *plausible possibilities* of causality (Miles and Huberman 1984). However, Miles and Huberman

(1994, 435) cautioned:

[T]here is a danger that multiple cases will be analyzed at high levels of inference, aggregating out the local webs of causality and ending with a smoothed set of generalizations that may not apply to any single case.

(Miles and Huberman 1994, 435)

A conscious attempt has been made to avoid this by making the individual case studies the focus of this thesis and by always coming back to individual cases or groups of students in any discussion of cross-case trends.

In grouping the students, as with the individual case studies, anonymity and other ethical issues needed to be addressed.

Ethical issues and trustworthiness of the data

Ethical issues

I obtained permission to conduct this research from the Education Department of South Australia prior to my research proposal being given clearance by the University Ethics Committee. One condition of this permission was that a copy of this report must be submitted to them, now the Department for Education and Childrens Services, before it is published. Another was that the names of all participants be anonymised. Therefore, pseudonyms have been used for individual students and other participants have been identified only by their relationship to the student concerned. Schools and regional or rural centres have been described in demographic terms only. The categories of demographic information about the schools have been carefully selected to ensure that there are at least two communities in the state with a school that fits each category.

Although, in addition to the use of pseudonyms for individual students some personal identifying information has also been anonymised, the sex of individuals has not been changed because "this would destroy evidence on gender-specific behaviour" (Burgess 1985b, 156). The only people apart from myself and the participants who had access to any of the real names of any of students and the schools they attended were the person who transcribed some of the interviews for me and the Aboriginal Education Worker who had worked with me during the first case study. I discussed the issue of confidentiality with them and they understood the need to maintain this indefinitely. Apart from myself the only people who knew the real identities and pseudonyms of the students were the students themselves and they were told only their own pseudonym.

However, in common with Hilary Burgess (1985, 1992), I believe that it would have been impossible to disguise the identity of the students and teachers at the same school from each other. This view was also expressed by Reynolds (1979), Sieber (1982a; 1982b), Burgess (1985b), and Smith (1990). Sieber (1982a) went as far as stating that the only way of ensuring the privacy of those studied was to take an analytic approach to the whole study. This is what I have done.

Teachers were aware of the anonymity dilemma and I made sure students understood that people who knew them well would be able to identify them. This did not seem to worry the students. They were each quite aware that they were already well known in their own schools because they were very much in the minority. In fact, the students had been invited to participate for this very reason.

During the preliminary meeting with each student I explained in some detail:

- who I was
- where I was from
- the course of study that I was undertaking
- how this research was part of it
- what the research involved
- how they could help me
- what this would involve
- how I would use the data obtained
- how confidentiality would be ensured
- how they could vet the information they provided.

I also answered each student's questions about these. For most of these meetings the school's AERT or AEW was also present. At that time I gave the students consent forms for them and their parents to sign (Appendices 2b and 2c), a form on which to nominate people I could talk with about them (Appendix 3) and a phone number where I could be contacted if they or their parents had any further questions. I made arrangements for students to return the completed forms to the AERT or AEW. I also provided a plain English statement about my research for them and their parents (Appendix 4). I found the guidelines on obtaining informed consent provided by Lincoln and Guba (1985, 254-255) very useful when it came to preparing my own consent forms (see Appendix 9).

For the students, participation in my research was "low risk" (Patton 1991, 356) because they could nominate people with whom I could talk about them. This meant that they

faced little risk of being put in a situation of having unexpected unpleasant things revealed. In fact, I believe that the positive nature of my research has meant that there have been fewer ethical issues to consider and that it has been easier to address them.

Throughout the research process I have done my best to ensure that involvement in this research was a positive experience for all participants, particularly for the individual students. By encouraging the students to reflect about themselves I believe that they will have come to see themselves as more important than they thought they were, a phenomenon described by Stenhouse (1984, 222). Feedback that I received in some teacher interviews substantiated that this was the case for several students and there was never any reason to think that it had been any different for the rest of the students. This is consistent with the statement by Watts (1976) that:

Academic gains are not the only outcomes; there are many references to increased self-esteem and a heightened confidence which arise from the individual attention from a sympathetic and concerned adult.

(Watts 1976, 200)

Others interviewed about the students also had the opportunity to reflect on their part in the positive outcomes for particular students, something they might well not have done if they had not been asked to do so. Additionally, they may have enjoyed being interviewed as many people do (Benney and Hughes 1984).

Regardless of whether or not I had talked with the person being interviewed before, I began each interview by providing the same information to the interviewee as I had shared with each of the students at the initial meeting. I also specifically secured consent to tape record the interview from each person being interviewed, explaining that I wanted to record the interview accurately, that this would be difficult to do if I tried to rely on my memory and that taking copious notes would be a distraction. However, I did take a few notes, usually to remind me to follow up particular issues at a later stage, either with the same person during that interview or with others I had organised to talk with.

Working in a cross cultural situation, I was aware of the need for me to be sensitive to and show respect for cultural differences as advised by Patton (1991, 340). One of the ways in which I did this related to the manner in which I obtained consent to tape record interviews with the Aboriginal parents or close family member. I am aware that many Aboriginal people are reluctant to fill in too many forms, therefore, I decided to obtain verbal consent to tape record their interviews. This was "informed consent in a

culturally appropriate way" (Crowley and Cruse 1992, 12). For them the interview was usually the second time I had explained about my research and shared something of myself with them. Also, all parents had already given written consent for the student to participate in the research. In common with all other participants, the close family members were aware that they would have the chance to make any changes they wished to transcripts of interviews, an essential element of ethical research according to Guba and Lincoln (1989).

Of greatest concern during the development of the research methodology was the issue of power. Power relationships were inherent in almost all aspects of the research; nowhere could power be distributed evenly. This is common to almost all types of research (Smith 1990, 151) because much research involves the powerful studying the less powerful (Wadsworth 1988; Walker 1983b; House 1990; Finch 1984). In this case it was to be a non-Aboriginal teacher studying Aboriginal students. Troyna and Carrington (1989, 209) were critical of such power and status differentials because they believed that these could interfere with the process of communication. The most obvious way to reduce these differentials, establish rapport and improve communication is for interviewers to share things about themselves (McInnes 1994). According to Finch (1984), this is particularly important when women are interviewing other women.

There is a real exploitive potential in the easily established trust between women, which makes women especially vulnerable as subjects of research.... It seems to me that the crux of this exploitive potential lies in the relationship established between interviewer and interviewee...[and therefore] the only morally defensible way for a feminist to conduct research with other women is through a non-hierarchical relationship in which she is prepared to invest some of her own identity.

(Finch 1984, 81)

I was aware of this and invested some of my own identity with all interviewees, regardless of their gender.

Then there is the power of the interview, discussed by both Patton (1991) and Walker (1983a) where *position power* is vested in the interviewer. Paradoxically, the more skilled the interviewer the greater the power differential between the interviewer and the person being interviewed. According to Patton (1991, 355):

When interviewees are open and willing to talk, the power of interviewing poses new risks. People will tell you things they never intended to tell you.... Interviews can become confessions, particularly under the promise of confidentiality.

The effects of the interview do not cease when the interview does. According to

Walker (1983a, 157):

The *kinds* of questions that are asked are usually enough to set trains of thought going in the interviewee's head that do not stop when the interview ends. Those who have been interviewed will know that it is quite common, for some hours, or even days after the interview has ended to keep rethinking lines of thought that first came to light in the interview itself. The question is a powerful tool for change, sometimes more powerful than the recommendation or the conclusion [emphasis in the original].

However, the effects of the interview do not have to be negative. In this research, because of its *assets analysis focus*, there was more opportunity for the effects of the interview to be positive and for the individuals being interviewed to empower themselves.

Knowledge is another basis for power differentials. Knowledge of others grants power over them (Robert Friedrich cited by Smith 1981, 3) and, according to Walker (1983b, 51), "in the particular case of education, knowledge is not only the basis of power but the medium through which power is exerted." This raised the questions: Who owns the information? Who has control over it? As the researcher, I would take from the interviews the knowledge I had obtained and I would have potential power over it. Therefore, I determined to hand back at least some of that power by providing participants with "retrospective control of editing and release of data" (Walker 1983b, 71). What I could and cannot guarantee is that the knowledge I hand over to the Department for Education and Children's Services will be used to facilitate the empowerment of Aboriginal students in the future. Fulfilling this requirement poses both an ethical and a political dilemma (Finch 1985, 116-117).

According to Burgess (1989, 8) there is no 'solution' to ethical dilemmas identified by researchers, so I have heeded his advice and spent time reflecting on my work in an effort to develop a better understanding of the ethical implications associated with it. In the process I have become more conscious of what Parlett (1981) meant when he wrote:

ultimately there is no substitute for an acute awareness of others' rights (including the right to say no); the absolute requirement to preserve confidences; and the overriding rule not to 'investigate others in ways that we would not ourselves like to be investigated'.

(Parlett 1981, 225)

I have consciously tried to behave in this way. Similarly, I have consciously clarified the assumptions and biases associated with this study.

Trustworthiness of the data

The assumptions made in this study relate mainly to the nature of the research I have undertaken. The case study methodology used:

builds upon the the study of single settings or occurrences. It treats each case as empirically distinct and does not presume, therefore, that different cases can automatically be thrown together to form [an] homogenous aggregate.

(Hamilton 1983, 78)

The cases in this instance are individual students. Each case record consists largely of perceptions: perceptions of the student about himself or herself, perceptions of teachers and/or friends about individual students and perceptions of a close family member about that student in the family and school context. These perceptions must be interpreted in context. Therefore, each case is qualitatively different from any other (Cronbach cited by Stake 1978) because the context is different.

Similarly, reliability in the traditional sense of replicability is pointless because the value of the case studies lies in their uniqueness (Janesick 1994, 217). However, by interviewing a close family member and a selection of school staff about each individual student, in addition to interviewing the students themselves and examining students' school records, I believe the authenticity of the data collected has been improved by a form of *methodological triangulation* (Cohen and Manion 1980, 211). Kemmis (1983, 103) also cited "triangulation of participant's perspectives" as an appropriate technique for case study research, and Adelman et al. (1983, 146) emphasised the importance of cross-checking 'facts' and pursuing discrepancies between accounts of incidents. This was important because individuals do not necessarily perceive events in the same way; "the world in which the reality is to be located is that of the perception of participants and the meanings they ascribe to them" (Stenhouse 1982, 269).

Patton (1991) believes that it is important to ensure *trustworthiness* of both the data and the analytical processes. According to Patton (1991, 11), this depends largely on "the methodological skill, sensitivity and integrity of the researcher". I collected most of the data personally and was as consistent in my approach as it was possible to be working with different people in different settings. I used unstructured but focused interviews. According to Gordon (1969 cited by Bailey 1987), these can be more valid than highly structured ones because communication is impeded less and the interviewer has more flexibility to change the wording of questions to ensure that the language used is appropriate. Flexibility was achieved by using an interview guide rather than a list of

specific questions. The time spent building rapport with participants was repaid because it is likely to have increased the *trustworthiness* of the data obtained (Patton 1991, 344, 346). Similarly, I made the relationship as authentic as I could as this is a "special form of reciprocity" (Lincoln and Guba 1985, 105) which also ensures that data is complete, undistorted and meaningful, in other words, trustworthy. In addition, in a narrow methodological sense, the processes of data reduction and data analysis were made more dependable because I carried out all the coding of the textual material myself in a relatively short space of time.

The quality of the outcomes of any research depends on the factors mentioned above. Lincoln and Denzin (1994, 579) believe that: "A good text exposes how race, class, and gender work their ways in the concrete lives of interacting individuals." The case studies and their conceptualisations produced as a result of this research do just this. They are also representations consistent with reality as perceived by participants in the research. Therefore, I believe that they demonstrate *verisimilitude*, an alternative which Lincoln and Denzin (1994, 579) feel "dispenses with the quest for validity", given the latter's inappropriateness within the *constructivist paradigm*.

Biases

The interviews themselves were prone to subjectivity and bias on my part. Bias was introduced because "one set of ears and eyes" (Woods 1986, 43), mine, collected most of the data. The sources of possible bias (among others) lay in:

- my personal characteristics - cultural background, age, sex, social status, attitudes and opinions
- the possibility that I might stereotype the interviewee
- misperceptions on my part about what I was hearing
- the personal characteristics of the interviewee - leading to misunderstandings of what was being asked
- the substantive content of the interview guide I had prepared - a tendency for me to frame questions and/or seek answers that supported my preconceived notions
- my personal responses to what I was hearing which may, in turn, have affected the direction of the questioning or the extent to which I was willing to probe deeper into issues at hand.

(Adapted from Cohen and Manion 1980; Bulmer 1984; Daly 1992; Clandinin and Connelly 1994)

This means that the data obtained from the interviews are also biased (Scott 1984). However, these distinctly human elements in the interview situation are necessary for the *validity* of interviews (Kitwood cited by Cohen and Manion 1980, 253). Also, given

that there was only one researcher, me, the bias was constant.

Patton (1991, 475) pointed out that the predispositions or biases of the researcher may also affect data analysis and interpretations if they are glossed over. I am certainly conscious of the fact that the way I set up the initial index categories was influenced by the way I had analysed data reported in the literature. Although modified by the data I then obtained first hand, that initial structure persisted. Then there was the problem of inclusion / exclusion of data. As Guba and Lincoln (1989, 135) pointed out in other cases, the field work generated more data than could be included in the case studies and I had to select data that would illuminate the foci I had previously chosen.

These are just some of the ways in which my personal perceptions and interpretations have affected the direction of this study. However, the biases were constant, recognised and acknowledged, and attempts were made to resolve problems associated with them. Such biases need not be seen as bad (Guba and Lincoln 1989, 137).

Summary

This chapter initially provided the theoretical framework for the *assets analysis orientation* and the *constructivist paradigm* within which the *case study methodology* of this study was developed and conducted. The second section provided details of how the research developed in practical terms, from the criteria for the selection of student participants, through the process of selection of the student participants, to a description of the final student cohort. Data collection and reduction procedures were then discussed in some detail, as were the data analysis processes that resulted in the individual case studies and the subsequent cross-case analysis. The chapter concluded with an exploration of ethical considerations, assumptions and biases associated with the research.

The following chapter is the first of three chapters containing the individual case studies; it includes the case studies of the *expected stayers*. Chapter Seven comprises the case studies of the *possible stayers* and Chapter Eight the *unexpected stayers*. In all three chapters, the descriptive case study data for each student have been organised according to whether they relate most closely to retention, attainment or identity. This provides a common structure throughout. The descriptive case studies have been written in the present tense because that is how the students were encapsulated at the time of their participation in this research.