

Chapter 3

Methodology

Introduction

This chapter focuses on the research design employed to answer the research questions. The chapter begins with the rationale for adopting the qualitative methodology in general, and case study in particular, to carry out the study. The ensuing sections contain information about the role of the researcher, details on the selection of participants, the duration of the study, data collection and data analysis. Then issues pertaining to validity, reliability and ethics were addressed before concluding with a summary of the chapter.

Design of the Study

Research design is a plan that assists the researcher in collecting data and making conclusions that are able to answer the research questions formulated at the outset of the study (Yin, 2003). Hence it is of utmost importance that the chosen methodology is able to answer the research questions so that the purpose of the study is realised.

Bearing this in mind, a qualitative inquiry was determined to be appropriate based on the touchstone put forward by Creswell (2005) and Merriam (2001). They advocated the qualitative inquiry to be fitting for studies that investigate a process, and where the research questions focus on describing how the process takes place. Creswell (2005) added that this inquiry was often used when the study aimed to present an exhaustive view of how the event being explored takes place in its natural setting.

Research in special education has generally been conducted using experimental research designs. But qualitative inquiry is not a stranger to research in special education since it has been used to document the stories of individuals with disabilities Pugach (2001). The use of qualitative inquiry is increasing in descriptive and process oriented studies which require researchers to work in naturalistic contexts like investigating the instructional practices of teachers in the classroom (Brantlinger, Jimenez, Klingner, Pugach, & Richardson, 2005). Experts in the field of education in general and special education in particular, have always advocated adopting scientific evidence as the correct basis for selecting teaching practices (Carnine, 1997; Guralnick, 2000). However, there is a growing concern that evidence-based practices were not being used for preschool special education (Guralnick, 2000). Odom et.al (2005) opined that qualitative inquiry, through its data collection methods, would be able to discover and provide evidence for matters pertaining to how the practices were used in the classroom. Therefore, qualitative inquiry was the right choice for the current study which investigated a process namely classroom instruction. As put forward by Odom et.al (2005), the data collection methods of qualitative inquiry discovered and provided evidence for the practices in the preschool classroom for the current study.

Among the designs within qualitative methodology, this research used the case study approach, more specifically a multiple case design. According to Yin (2003) this approach is suitable when the study intended to answer 'how' and 'why' questions; "the focus is on a contemporary phenomenon within some real-life context" (p.1) and the researcher has little or no control over the events. In addition, qualitative case study design allowed the researcher to preserve the holistic and significant characteristics of real life events that happen at the site (Yin, 1984). Therefore this approach was suitable for the current study because it intended to

answer four ‘how’ questions; the focus was on instruction that took place in the preschool classrooms for CSN; and the researcher had no control whatsoever over the instruction that took place in the classroom. Case study approaches allowed for “...an intensive, holistic description and analysis of a single unit or a bounded system” (Merriam, 2001: p12) due to the prolonged engagement at the three sites. The researcher became a part of the background. This helped reduce the teacher’s apprehension at being observed, so teachers were able to go about their daily duties without being self conscious. This acceptance presented the researcher with opportunities to record the daily happenings at the preschools, with ease.

A multiple case design (Yin, 2003) of three cases was used in the belief that the combination would bring about a better understanding of the instruction provided in the preschool classrooms for CSN. Three preschool classrooms were selected so that the number was not too big to prevent the researcher from providing an in-depth understanding and an exhaustive examination of the instruction at each classroom (Creswell, 2005). Case studies also provided rich descriptive data that could be used to compare (Gillham, 2000) strategies and activities used to carry out instruction in the preschools. It also opened up the possibilities of informed discussions with the three teachers, about their professional expertise, the judgements they made daily, and their comprehension of the various curricular activities (Radnor, 1994). It also made available ‘insights and illuminated meanings’ (Merriam, 2001) which helped identify why certain strategies were preferred over others during classroom instruction in the specified preschools and the teachers interpretation of the recommended practices.

The Preschool for CSN comprised only one classroom in the mainstream primary school. Hence, the term preschool and classroom referred to the same entity.

Role of Researcher

The researcher as the primary instrument had its advantages and disadvantages. The advantages related to collecting and generating significant information whereas the disadvantages connected to “human mistakes”, “missed opportunities”, and “interference of personal biases” (Merriam, 2001, p. 20). The researcher and his/her communicative competency was the central instrument in collecting data (Flick, 2002; Merriam, 2001) besides his/her “tolerance for ambiguity” and sensitivity to the context and data (Merriam, 2001).

In this study the researcher took on the role of a non-participant observer, sitting at an advantageous place, to observe and record without getting involved in the activities that were taking place in the classroom. The researcher paid attention to how the teachers at each preschool implemented the lessons, and later interviewed them to gain information about the planning and assessment stages in classroom instruction. Interviews also helped clarify the interpretation of the teachers’ actions while they were implementing instruction.

Prolonged engagement helped the researcher gain the teachers’ confidence so that they felt comfortable enough to discuss important matters pertaining to the study. The teachers were constantly assured that the study was being carried out to help improve classroom instruction in preschools, and that confidential discussions of issues would remain so.

Being the main instrument of the study the researcher was able to process the data quickly in order to obtain essential additional elucidation to make sense of the data gathered throughout the study (Merriam, 2001). The researcher maintained a log where details of the study were recorded daily, at the end of the day for the purpose of an audit trail (Guba & Lincoln, 1983).

The Cases

The case or bounded system as stated by Merriam (2001) and Creswell (2005) can refer to an activity, event, individual, a group, a class, a state, or a country, which is detached by physical boundaries for the purpose of research. The case or the bounded systems in this study were the three Malaysian preschool classrooms for CSN.

The three cases were selected using the purposeful sampling method, which according to Merriam (2001) was the most widespread method used in choosing a case for qualitative inquiry. The main criterion for selection was that the teachers at each preschool classroom were willing to take part and provide the information necessary to answer the research questions of the study (Maxwell, 2005). The teachers agreed to be observed, interviewed, audio and video-taped, and photographed. They also agreed to provide photocopies of documents related to their classroom instruction.

The three preschools for the three cases, were selected from the first phase of preschools launched by the MOE in 2005. The intention of this selection was to identify three preschools which typified the existing 32 preschools for CSN in terms of teacher experience in the preschool programme, teacher's academic qualification, participation in courses provided by the MOE, types and number of students in each preschool and the presence of a teacher assistant. These selection criteria connected the study to the manner in which teacher selection and other such matters were accomplished in the local context.

The first criterion was that the teachers must have taught in the first phase of preschools so that these teachers would be in their third year of teaching preschoolers, when this study was conducted. This was to ensure that they had

become familiar with the Curriculum Specifications, and had ironed out initial teething problems.

Second, the teachers needed to represent the wide range of academic qualifications that was present currently among the preschool teachers for CSN. This criterion was included to depict the actual situation in the local context where teachers of varying qualifications and experiences taught preschool CSN. Teachers who taught in the first phase had Certificates in Teaching (for primary mainstream students), Diplomas in Teaching (for primary mainstream students), and Degrees in Early Childhood Education. The researcher believed that the different academic qualifications would add to the level of insight provided to the current study.

Third, the teachers need to have attended all the courses and workshops organised by the MOE pertaining to the preschool programme. This was to ascertain that the teachers knew how to use the Curriculum Specifications and other teaching materials given to them.

Fourth, the preschool should have a minimum of five students, and fifth, the enrolment must comprise students of different abilities and disabilities.

The researcher believed that the number of students in the class with differing disabilities, together with their varied temperaments would aptly illustrate the manner in which instruction was carried out in the classrooms.

Finally, the preschools need to have a teacher assistant to help in preparing the meals, cleaning the preschool classroom as well as help in the necessary administrative work.

The first case was the preschool in Rivers Primary School, referred to as the Rivers Preschool. It had five students during the first phase of data collection (five weeks in March and April), and eight during the second phase (two weeks in September). Kayla was the teacher in this preschool.

The second case was the preschool in Lakes Primary School with a total of nine students during both the phases of data collection. It is referred to as Lakes Preschool and Marla was the teacher.

The third case was the preschool in Islands Primary School, referred to as the Islands Preschool. It had students coming in at different times of the year. It had six students during the first phase and eight students during the second phase of data collection. The teacher was Sheila.

The three mainstream primary schools had primary special education as an integrated programme, where students with special needs were taught from the ages of seven in primary one until age twelve in primary six. Besides the integrated programme for children with special needs, both the Lakes Primary School and the Islands Primary School had preschools for mainstream students as well. In addition Islands Primary School had two classes for children with hearing impairment.

Table 3.1 provides information about the teachers and students in each of the three preschool classrooms.

Table 3.1

Information about the teachers and students in the three preschools

Demographic Data	Case One Rivers Preschool Classroom	Case Two Lakes Preschool Classroom	Case Three Islands Preschool Classroom
Teacher	Kayla	Marla	Sheila
Sex	Female	Female	Female
Age	Early 40's	Mid 40's	Mid 20's
Academic/ Professional Qualification	Certificate in Teaching for Primary schools (Option: Teaching English as a Second Language, TESL) Degree in Early Childhood Education Masters in Special Education	Certificate in Teaching for Primary schools (Option: Malay Language)	Diploma in Education for Primary schools (Option: Mathematics Elective: Special Education
Student Enrolment	9	9	8
Gender	2 Female, 7 Male	2 Female, 7 Male	1 Female, 7 Male
Disability:			
Down Syndrome	2	4	0
Autism	5	1	3
Mental Retardation	0	4	3
Developmental Delay	1	0	0
Cerebral Palsy	1	0	2

This study means to investigate how the three stages of classroom instruction, assessment, planning and implementation as established through research were carried out in the preschools. Behaviour management strategies were beyond the scope of this study. It is discussed in part together with implementation stage, only because it cannot be separated from classroom management at that point.

In addition, the study meant to discover the manner in which the teachers, who had the responsibility, actually delivered the instruction in the classroom. Hence, the study described the teacher's methodology, the roles played by the teacher assistant and parents, if and when the teacher involved them in carrying out the three stages of instruction.

Duration of Data Collection

Government preschools for CSN operate five days a week, from eight to half past eleven in the morning. The selected three preschools were situated in three different states. The researcher spent seven weeks at each preschool; five weeks in the first phase and two weeks in the second. The two phases were distinctly separate in the case of Rivers Primary School. The first phase of data collection was continuous in Lakes Primary School, but the second phase had a few interruptions. The division of data collection in two phases was not at all obvious in Islands Primary School. There were interruptions during the two phases in the other two preschools due to the teachers being away, attending courses and school holidays. In addition, the teachers had to be away for school functions.

However, resumption of visits after these short breaks allowed the researcher to conduct more interviews to close the gaps discovered during the first phase of data analysis. As stated by Patton (2002), these visits allowed for more data collection and opportunities for clarification and expansion of responses by the

participants. Regardless, the researcher maintained observation for the requisite number of days equivalent to seven weeks, in each of the preschools.

During the first phase, the first two days were spent in getting familiar with the teacher and students. Field notes were taken, but the camera and video recorder were used only after the students had become accustomed to the researcher's presence. The first phase of data analysis took place as soon as data was collected. Data was collected at the three preschools over the duration of a year. The researcher then carried out the second phase of data analysis, comprising individual case reports, cross case analysis and the final report.

The data collection and analysis procedures in qualitative methodology are recursive and vigorous (Merriam, 2001; Mertens, 2005). The researcher, as the main data collecting instrument kept in touch with the respective cases through repeated visits, phone calls as well as electronic mail to collect more data and for further clarification.

Data Collection

Multiple forms of data were collected (Patton, 1997; Strauss & Corbin, 1990) or made, (Morse & Richards, 2002) to provide a rich description of the cases, to answer the research questions as well as to develop an in-depth understanding of the phenomenon under investigation. Morse and Richards (2002) refer to it as making data because according to them, data is always changing. Different means of data collection, like observation which included video and audio-taping and photographing, and interviews and document analysis (Merriam, 2001; Patton, 2002) were used in this study to add to the rigour and breadth.

The conceptual framework of the study (refer Figure 2.2) was constantly referred to during data collection to ensure that the study stayed in focus. The stress

on the data collection techniques varied according to the stage of classroom instruction being investigated. A discussion of the techniques and how each one was used to collect data for each specific stage of classroom instruction follows. Figure 3.1 captures the focus of data collection for each technique.

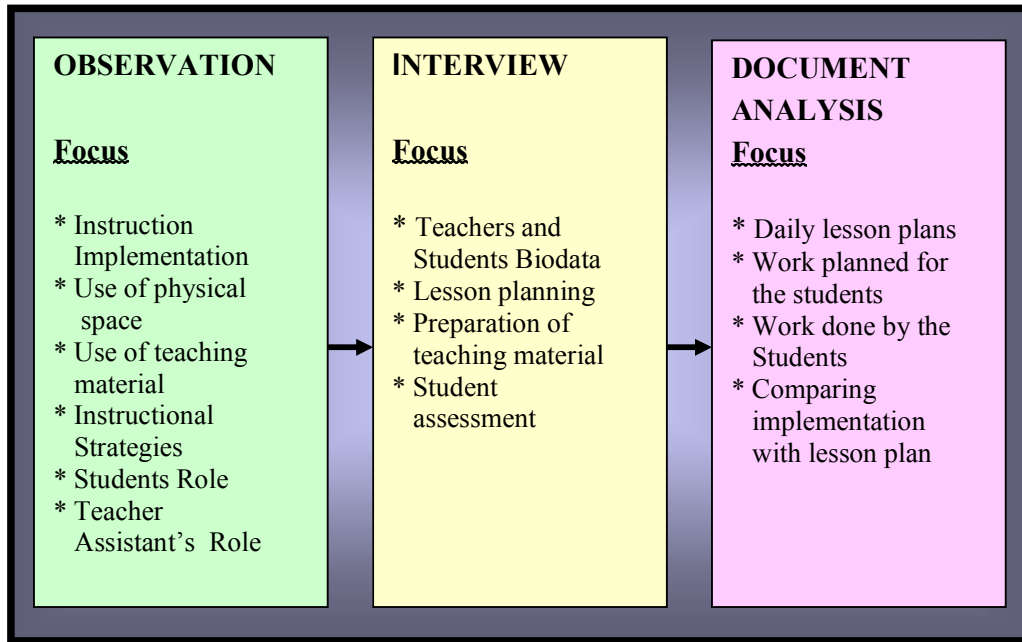


Figure 3.1. Diagrammatic representation of daily data collection process at each preschool

Observation

Observation was an important technique, in collecting data for this study. As held by Morse and Richards (2002) observation was the most natural way of obtaining data because the occupants of the classroom became unaware of their behaviour as the researcher spent more time at the site. As the teachers became more relaxed with passing days, and more used to being observed, they were more inclined to talk about the various reasons for providing instruction in their specific ways.

The observations concentrated on how the instruction for the preschool children with learning disability was implemented in the classroom. As stated earlier, the researcher spent about seven weeks in each preschool. The researcher arrived at the preschool every morning at about seven o'clock and began taking notes from the time the first student entered the classroom. Extensive field notes were taken in the form of chronologs, which were running accounts of the classroom instruction, to record details of the implementation. The running notes also included the verbal instructions given by the teacher to the students. The researcher also took photographs and short video clips of the activities as part of the observation process. However, note taking was interrupted whenever the researcher was involved in taking photographs and video taping.

Merriam (2001) and Patton (2002) stated that, observation comprised the processes of a programme that were observable. Hence the three main features: watching, listening and asking questions for clarification are included (Gillham, 2000). The copious notes written during the observation provided information on the flow of instruction, the strategies employed, and how the recommended practices for preschool CSN were used. The researcher was also able to ask relevant questions to clear doubts immediately. Observation in the actual setting where the action took place, presented the researcher with a first-hand experience of how instruction was provided in the classroom (Merriam, 2001).

This activity was kept on track via an observation protocol (Appendix A). Attention was paid to observe the daily lesson flow, the use of teaching materials and the physical setting when providing instruction, the types of instructional strategies used during instruction and the role played by the students. Observation also focused on the role of the teacher assistant in classroom instruction. The description of the setting was updated as and when teachers made changes. A

classroom plan was also drawn to give a clear picture of the layout and to give the location of the furniture and teaching material.

This creation of rich, descriptive data would assist readers understand what actually took place during classroom instruction, how the three established stages of instruction were acted upon, because the context of this study was a real-life preschool special education classroom and not an experimental set-up. The manual running notes were supplemented with video recordings of the classroom instruction and photographs of the materials and the activities. The video recording and the photographs were transcribed for analysis and coded for easy access and storage. Observations carried out at the preschools were coded as T1/OBS/9 (Appendix B); T1 referred to Rivers Preschool (T2 and T3 referred to the Lakes Preschool and Islands Preschool respectively), OBS referred to the technique used to collect data that is observation, and 9 referred to the 9th day of the visit, at the specific preschool.

Interview

Merriam (2001) states that, interviews were necessary to discover peoples' interpretation of the activities in which they were involved. In comparison to questionnaires, interviews were more personal and able to approximate real-life situations and could be reworded if the questions were not understood for the first time (Guba & Lincoln, 1983).

In addition, semi-structured interviews enabled face-to-face and oral communication between the researcher and the interviewee to get more information about their experiences (Guba & Lincoln, 1983), besides eliciting information concerning their opinions, feelings, and knowledge (Merriam, 2001; Patton, 2002). Interviews with the three teachers began with a description of the study and of ethical issues such as gaining permission from the various authorities and assurances

of their anonymity. As the researcher spent more days at the preschools, the teachers became more relaxed and were able to share how they provided instruction for the preschool students. Interviews were usually carried out after making prior arrangements with the teachers to remain after school hours. The interviews were carried out in the preschool, which was found to be conducive. Sometimes the researcher also managed to have short discussions with the teachers immediately after the day's lessons were over. The researcher tried to interview the teachers after each observation but it was not always possible because of the teachers' involvement in the school activities. The number of observations and interviews are provided in Table 3.2

Table 3. 2

Details about the number of observations and interviews

Participant	No. of Observations	No. of Interviews
Kayla	35	16
Marla	37	16
Sheila	30	15

The initial interviews drew information about the teachers and their students. The questions that followed, related to the three stages of classroom instruction, assessment, planning and implementation. They were asked to narrate how they carried out each stage and the documents they used in each stage.

Teachers related their opinions and displayed knowledge that was relevant to assessing students, planning and implementing instruction in classroom. Probing questions elicited associative and elaborative responses (Guba & Lincoln, 1983), such as the manner in which they came up with the activities, the steps involved in

preparing their lessons, the references that guided them in planning instruction and their preference for certain teaching strategies and not others. These interview sessions also helped clarify matters connected with the implementation of instruction in the preschools because the questions asked were related to the classroom instruction observed prior to the interview.

They were asked questions on discrepancies between the planning and the implementing of the lesson; and questions on how they assessed the daily achievement of each child in order to prepare the following day's lesson. An interview protocol (Appendix C) consisting of open-ended and semi-structured questions was also prepared to facilitate the interview. All the interviews were audio-recorded and transcribed to facilitate data analysis. The transcriptions also enabled the researcher to ask for further clarification from the participants. The interviews were coded for easy identification and storage. Interviews carried out at the preschools were coded as T1/INT/9 (Appendix D); T1 referred to Rivers Preschool (T2 and T3 referred to the Lakes Preschool and Islands Preschool respectively), INT referred to the technique used to collect data that is interview, and 9 referred to the 9th day of the visit, at the specific preschool.

Document Analysis

Document analysis consisted of examining programme records and physical materials found within the setting of the study (Merriam, 2001; Patton, 2002). Documents, as stated earlier, consisted of two types, official records about the programme, which were a rich source of information, and the physical materials found in the setting.

The official document of the preschool programme is the Curriculum Specification provided by the MOE. The teachers used it as a reference for preparing

the daily lesson. The researcher used the Curriculum Specification as a reference when scrutinising the Learning Outcomes written in the daily lesson plans. The content of the Curriculum Specification is provided in Chapter Two. However, only the lesson plans prepared by the teachers were included in document analysis for the purpose of this study.

The physical materials found within the setting were those used by the teachers for classroom instruction in the preschool classroom. The documents included worksheets prepared by the teachers and the checklists used for assessment. Copies of these materials were collected for analysis.

Analysis of physical materials using a document analysis protocol (Appendix E) was pertinent to the study to facilitate in the triangulation of the data. The lesson plan was used as a point of reference when observing implementation, to discern discrepancies between the written plan and the implementation. Photocopies of the physical document, such as the students' written work, were filed for cross comparison within and between cases. Photographs of the students' completed worksheets were also taken for analysis. These photographs were stored and saved in computer hard disk and coded. Short notes describing the photographs were added to the codes for convenience and easy identification. Documents collected at the preschools were coded as T1/PV/9 (Appendix F); T1 referred to Rivers Preschool (T2 and T3 referred to the Lakes Preschool and Islands Preschool respectively), PV referred to the documents (photographs or video recordings) collected at the preschools, and 9 referred to the 9th day of the visit, at the specific preschool.

Figure 3.1 (refer to page 77) is a flow chart representation of the data collection process comprising observation, interview and document analysis in that sequence. The observation technique focused on instruction implementation and the use of physical space and teaching materials during implementation. The interview

technique focused on how the daily lesson plans and the teaching material were prepared. It also focused on how and when students were assessed.

Finally, document analysis looked at the important documents used in the three preschools namely: the daily lesson plans and worksheets that had been completed by the students. The daily lesson plans were triangulated with the field notes to discover how closely they were connected. Although this described to a linear process of data collection, the actual process was recursive. The researcher returned to the nearest preschools, and made contact through the telephone and email with the teachers of the other two for the purpose of clarification and to get additional data.

Data Analysis

The examination of qualitative data involved technical processes such as analysis and interpretation (Patton, 1980). Analysis entailed sorting and arranging data into patterns and categories. Interpretation attached meanings and significance to the data that had been analysed. But Patton (1980) asserted that there were no specific rules to follow in carrying out these steps.

The present study involved two phases of data analysis. The first phase was done concurrently with data collection at the preschools. Every day for the duration of data collection, the researcher made it a practice to back-up copies of the raw audio and video data into the computer and two external hard discs as precaution against loss of data. The video cartridges were also converted into compact disks. In addition, the researcher attempted to complete the days verbatim interview transcripts and expansion of field notes on a daily basis. However, there were times when this endeavour could only be completed over the weekends. These transcripts were printed for storing. The typewritten observations, interview transcripts,

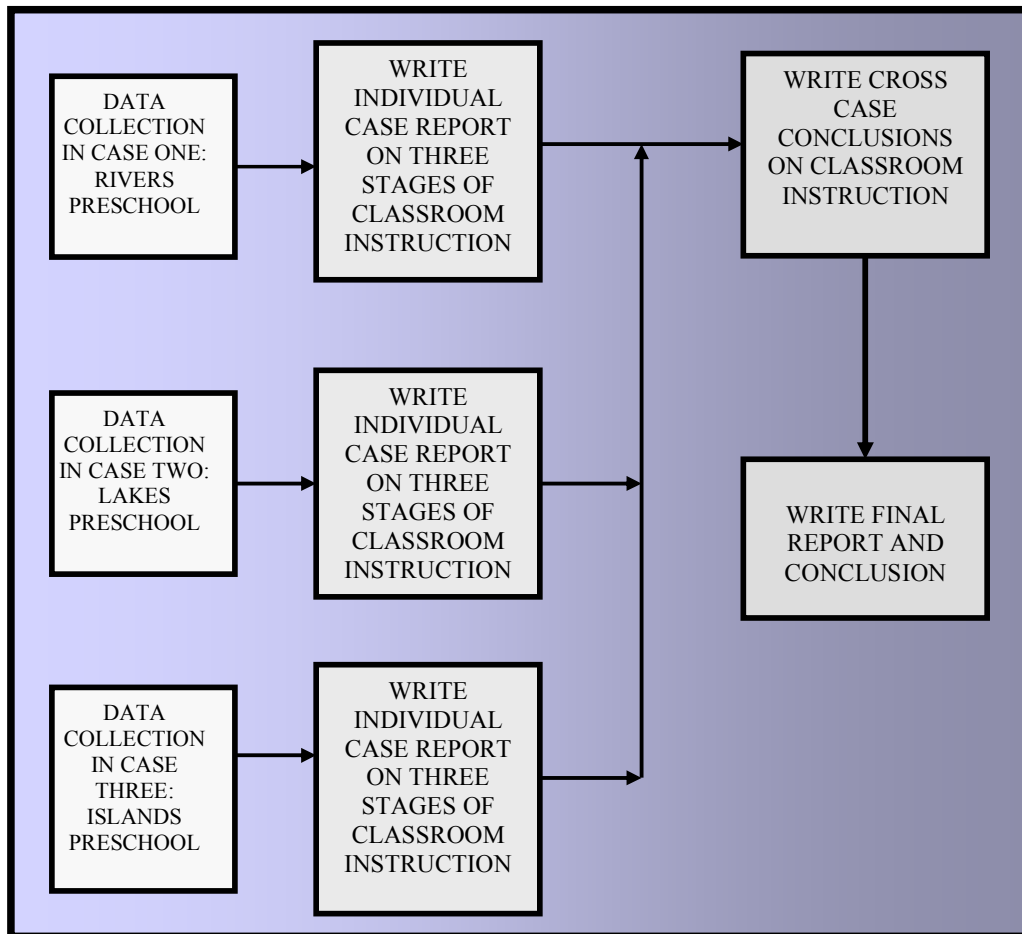
documents and photographs were coded accordingly and filed for quick and easy retrieval. Before meeting the participants for the second phase, the researcher perused the interview transcripts to determine that the information thus far, could already answer the research questions and formulated additional questions wherever clarification or additional information were necessary. The interview transcripts were given to the participants for member check.

The second phase of data analysis started after the researcher had spent seven weeks at each of the preschool. The first step was to import the data from MS Word files into the NVivo software (Bazely, 2007). Each interview was read several times to get an overall view and an understanding of the underlying meaning before using the NVivo 7 programme to manage the data.

The conceptual framework of the study derived from the literature in the PSE field was the backdrop against which the data was analysed. The NVivo 7 programme was used to sort the data under free nodes. The names for this initial coding were obtained inductively by reading the transcripts and the observation notes repeatedly. Some examples of the free nodes were: worksheets, lesson plan, and one-to-one instruction. The next step was to group the related free nodes into tree nodes. This was also done inductively and deductively. The tree nodes in the interview transcripts contributed towards the assessment and planning stages of classroom instruction whilst the tree nodes of the observation field notes contributed to the implementation stage.

The tree nodes contributed to the development of the categories and the sub-themes for the three stages of classroom instruction for each participant. The categories helped in formulating the individual reports for the three stages of classroom instruction, for each case. The analysis of the categories for recurring patterns in the individual reports of each stage assisted in developing the sub-themes

for the cross case report. The cross case report helped in answering the first three research questions pertaining to assessment, planning and implementation of classroom instruction as well as in arriving at the findings of the study. The discussion of the findings answered the fourth research question of the study related to the use of recommended practices in PSE in classroom instruction and helped derive the conclusion of the study.



(Adapted from Yin, 1984, p.51)

Figure 3.2. Diagrammatic representation of the data collection and analysis process

Ethical Issues

Ethical issues in a qualitative study were to be expected during the data collection and findings dissemination stage (Merriam, 2001). Informed consent was obtained from the Ministry of Education, specifically the Division responsible for Education Planning and Research (Appendix G), the relevant state education departments, school administration, teachers and parents before the researcher began collecting data.

Teachers and parents were informed of the researcher's intention to video tape as well as photograph the instructional strategies in the classroom. However, they were assured that appropriate measures would be taken to protect their anonymity. In addition, the interview and observation details would be kept private and confidential.

Validity and Reliability

The study investigated how teachers assessed the students, planned and implemented lessons in three government preschools which used the same curriculum. The current study focused on the three stages of classroom instruction because the stages were interdependent and each stage was important for the success of instruction.

According to Morse and Richards (2002) "reliability requires that the same results would be obtained if the study were replicated, and validity requires that the results accurately reflect the phenomenon studied" (p.168). Triangulation, member checks, peer reviews, prolonged engagement, comprehensive description and audit trails were a few of the strategies used for elevating validity and reliability in a qualitative research methodology. Prolonged engagement referred to the length of

time spent at the place of study and comprehensive description related to the thorough portrayal of the events in the study.

Maxwell (2005) is of the opinion that triangulation was the collecting of data from many sources and settings using a variety of techniques to reduce chance associations and biases brought about by employing a specific procedure. Three techniques associated with the qualitative methodology: interviews, observation and document analysis were employed to collect data from the three preschools. Member checking (Creswell, 2005) was also carried out. Interview transcriptions were given to the participants to confirm the accuracy of their recorded accounts. In addition interpretation of the interview data was also discussed with the participants. Last but not least was the audit trail, which referred to the evidence that the researcher had documented to keep track of the research events and the decisions made pertaining to the research (Morse & Richards, 2002). How these strategies were used to maintain validity and reliability is discussed below.

Validity

The validity of a study depended on the way data is collected, analysed, interpreted, and the findings presented (Merriam, 2001). Even though they differed in terms of goals and design, all preschool special education programmes in Malaysia, implemented classroom instruction using similar instructional strategies. Therefore the findings of this study can be generalised across all preschools, irrespective of the programmes they followed. In addition, this study involved three sites, so its external validity was further enhanced (Merriam, 2001) through the production of comprehensive descriptive data (Patton, 2002) about classroom instruction during repeated observations carried out for seven weeks at each site. The validity of the methodology also depended upon the ethics employed when

collecting data (Merriam, 2001). Issues pertaining to ethics, such as obtaining permission from the MOE, school administration, teachers and parents were taken care of before beginning the study. Besides that, summaries of field notes and tentative interpretations were discussed with the teachers for member checks throughout the study to check for credibility.

Internal validity of observation, an important technique for data collection in this study was enhanced through triangulation with multiple sources of data (Morse & Richards, 2002) such as interviews with the preschool teachers and analysis of the documents used for the purpose of classroom instruction. Besides efforts to determine the validity of the study, a qualitative methodology by its nature, has ecological validity because the variables were not manipulated. Instead, they are observed in context.

Unstructured interviews are automatically able to increase the validity of the data by reducing the chances of misunderstanding (Guba & Lincoln, 1983) between the researcher and the interviewees. The participants were able to clarify the meanings of the questions and the researcher was able to verify ambiguous answers. Construct validity was also observed because the participants were able to give opinions if the questions asked were relevant to classroom instruction in the preschool programme. Participants also performed member checks on the analysis and interpretation of data pertaining to the planning and assessing of instruction.

Reliability

The reliability of a study refers to how well the research findings can be reproduced. Hence, an appropriate way to ensure this, is by generating an audit trail, that is an exhaustive description of how data was collected, categories established and decisions made throughout the study (Merriam, 2001). The researcher

maintained a diary to note details of visits to each preschool, such as dates, time, duration and interesting events. The audit trail also included information on how categories were established while analysing the data about the instruction practised in the preschool special education classroom.

The reliability of a study could also be increased by triangulating data obtained from a variety of sources (Merriam, 2001). The three data collection methods for this study were observation, interview and document analysis. Apart from ensuring that repeated interviews revealed consistent and dependable information, data obtained from the observations and interviews were also triangulated to confirm the emerging findings.

Besides the above mentioned ways of ensuring reliability, there were others such as prolonged engagement, member checks and peer reviews (Merriam, 2001). The researcher spent seven weeks at each preschool to observe classroom instruction. Concerted efforts were made to gain the teachers confidence to reveal valuable information pertaining to the planning, implementing and assessing stages of the instruction in the preschools. Verification of the transcribed data and its interpretation were obtained from the teachers. Furthermore, the researcher also discussed the process of the study, emerging findings and tentative interpretations with peers to strengthen the reliability of the study.

Summary

This qualitative case study investigated how the three stages of instruction established as assessment, planning, and implementation were carried out in three government preschools, for CSN. Purposeful sampling was carried out by selecting three preschools which typified the government preschools in Malaysia. The selection criteria were related to teacher academic qualification, number and types of

students and the presence of a teacher assistant. Data obtained for the planning and assessing stages were obtained mainly through interviews, whereas observation provided data for the implementation stage. The three techniques were used to triangulate the data for the three stages of classroom instruction. The data was analysed using an inductive and deductive approach and is presented in the following chapter.