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'Co-constructing' changes to classroom practice: Processes developed with early childhood teachers for students at educational risk.

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Chapter 3

The Language Development Project

“Action researchers are using systematic and critical enquiry in an attempt to improve their practical situation”

(Bassey, 1999, p. 41).

Introduction

The Language Development Project (2000) was the working title for this research in progress. Although not the thesis title, this descriptive title was used by the school community during the data collection year and for subsequent reference to this study.

This research provides an empirical database from which to determine how individual teachers make and use language development decisions. It provides a way of *knowing* (as opposed to theorizing) the extent to which teachers’ personal constructs of language development determine their responses to students’ language-based educational risk. My belief is that this empirical research can explain the extent to which the teachers’ classroom language development practices were shaped by the co-construction of language development plans.

As discussed in Chapter 2, teachers’ experiences of daily decision-making about the language development practices they select and implement in their classrooms are quantifiable and able to be represented objectively. However, the expectation of researcher detachment in quantitative methodology (McAllister, 2002) is not appropriate to this research. Here, I interpret the complex phenomenon of early childhood teachers’ decision-making about classroom language development practices. I argue that qualitative methodology is more suitable for exploring “a topic about which little is known” (Davidson & McAllister, 2002, p. 28).

This research is not intended to represent teachers as a homogenous group of professionals whose judgements can be predicted and quantified (although this may be possible in carefully designed and constrained circumstances). The idiosyncratic responses of individual teachers are of interest here. Teachers' descriptive data contribute to understandings of classroom realities and illustrate the extent to which available theories of decision-making account for individual teacher's mindsets. Here, I was motivated by the need to understand, for example, why and how teachers respond quite differently to the same child, or disagree about whether a particular child is at educational risk and how they might respond to that child in their classrooms. My intent was to "retain holistic and meaningful characteristics of real-life events" (Davidson & McAllister, 2002, p. 29).

In Chapter 2, I introduced qualitative methodology as a way to incorporate multiple data sources arising from teachers' decision-making situations. In this study, links are made from data illustrating variation in teachers' responses to decision-making opportunities, to analytical statements and interpretation of these statements. This "iterative process" of establishing, rejecting or modifying analytical statements and testing them against data (Bassey, 1999, p. 71) is a defensible qualitative research method. In this chapter, I detail the use of iterative action research processes during the Language Development Project (LDP). I explain research methods and processes as used in the LDP, to facilitate reciprocal teacher and researcher learning. In addition, principles of trustworthiness are examined so that "qualified general statements" (Bassey, 1999, p. 12) can be made and anomalies in data can be valued in later chapters.

Constructivist interpretive methods

The Language Development Project is described here as a constructivist, interpretive study. In accord with Bassey (1999) this research with early childhood teachers included "a search for deep perspectives on particular events and for theoretical insights" (p. 44). I acknowledge that empirically based perspectives and insights contribute to later discussion about the potential of co-constructive classroom language development planning in other educational contexts. No certainties about co-construction in other educational contexts can be stated.

Fehring (1999) comprehensively references the constructivist interpretive approach. She sought to combine features of Lincoln's (1993) constructivism, the joint representation and recreation of individuals' socially constructed realities, with Gilbert's (1992) interpretation of observational data in contexts of reality. Fehring states that the combination of constructivist and interpretive processes is a way of ensuring the teachers' voice is not recreated by researchers' own constructions. She attends to settings, situations and contextual relationships prior to interpreting data about influences on teacher judgements. Reference to Fehring is important to the current study as the research project most closely related in content and method to that presented here.

When the current study was conducted with ten early childhood teachers in a single rural primary school, the school context was expected in some way to be typical of something more general. The issue of teachers' thinking and pedagogy specific to students at educational risk was explored. Issues were kept in focus by attention to individual teachers and constructivist, interpretive methods. Plausible interpretations were created from this extensive exploration of shared thinking and practice with ten teachers. Selected teacher stories are used to weave study interpretations into one structured narrative (in Chapters 4 to 7).

Like Stringer (2004), I believe that the systematic processes of action research are tools for teachers to enhance their classroom planning and school program development. Teachers' professional capacities were extended as they facilitated my data collection, analyses, interpretations and report writing. I used Bassey's (1999) seven stages for qualitative research in educational contexts and accepted his conviction of the benefits of constructivist, interpretive research:

There is a need for rigorous research which does not ignore, but rather addresses, the complexity of the various aspects of schools and schooling: for research which explores and takes account of different objective experiences and subjective perspectives, and which acknowledges that qualitative information is essential, both in its own right and also in order to make full and proper use of quantitative indicators (Sikes, in Bassey, 1999, p. x).

Stage 1: Identifying the research issue

The first of Bassey's (1999) seven stages of educational research is *identifying the research issue, problem or hypothesis*. In Chapter 1, I introduced the research issue of possible connections between teachers' personal constructs of early childhood language development, principles of social judgement theory and negotiated classroom language development planning. This notion of connections was translated to research questions in the first chapter. Chapter 2 included details of early childhood classrooms as qualitative research contexts. I considered teachers' opportunities to be involved in oral and written language development and the social construction of classroom research. The benefits of teacher participation and the necessity of scientific rigour were specified. Throughout this action research, identification of the research issue, context and method were continuously refined using Bassey's (1999) methodological structure.

Stage 2: Research questions and ethical guidelines

Stage two, *asking research questions and drawing up ethical guidelines* is critical in defining research directions and ensuring respect for truth and persons. Prior to data collection, a research proposal outlining this study was presented to academic staff and an invited audience at the University of Notre Dame Australia (Bochenek, 1999). The presentation of the research proposal was an opportunity to invite constructive criticism of my research context, questions and design. It was also an opportunity to debate the importance of this study and the intended outcomes. Procedures for establishing ethical standards and the trustworthiness were presented to the audience and prompted the review and redefinition of the proposed action research.

A revised research proposal was presented to school staff in October 1999, in anticipation of data collection in 2000. This was followed by an overview of the theoretical context of this research presented to early childhood teaching staff at the project school. A letter, sent to the school board, invited comments, questions and consideration of the study in the school during 2000. Data collection began after the approval of the University Ethics Committee, the School Board and ten early childhood teachers. The school Principal confirmed approval late in 1999.

All participant teachers, educational assistants, parent participants and parents of children at educational risk (on behalf of the children) signed consent forms detailing data to be collected in the course of the study, the use of that data for analysis, interpretation and subsequent presentation to the school and broader communities. I explained to all study participants that the data and findings of this study would be used for professional purposes in the future. No end date was assigned to data usage to ensure that the data could be maximally useful to the educational community. Data anonymity was addressed with the use of data codes, teacher numbers and pseudonyms. The University Ethics Committee approved data consent forms as shown in Appendix B (Consent to use child data) and Appendix C (Consent to use adult data).

Actions arose from continuous reflection and questioning during this research project. Barry (2002) states that a preparedness to modify research decisions, directions and initial research questions is part of the responsive and sensitive mindset beneficial to qualitative researchers. In the current study, questions and procedures were continuously reviewed through action research cycles with participant teachers. When modifications were made to the initial research plan, I reviewed the ethical guidelines of the study to ensure that the action research remained within acceptable standards.

Stage 3: Collecting and storing data

Two of Bassey's (1999) recommendations for data management particularly influenced the collection and storage of my research data:

1. Be systematic in data collection.
2. Begin data analyses as soon as possible.

Early and continuous data analysis was particularly salient to co-constructive processes. During this study, the teachers and I shared observations, discussion, planning, selection and implementation of classroom language development practices. We regularly reflected on our observations, negotiations, classroom practice and reviews of teaching and learning, as a way to confirm or modify cumulative interpretations. This interactive style of negotiated language planning included the exchange of opinions and discussion about points of confusion. Most

importantly the documentation of continuous dialogue was a way to track participants' personal constructs and negotiated language development practices.

Details of the content and processes of negotiated language planning were recorded in several ways during the school year. Methods of collecting and storing data included:

- **Teacher identification codes** were attached to all LDP documentation, as appropriate. Teacher codes began with a T=teacher, followed by the year level taught, the first initial of the pseudonym used, and a teacher number – as an alternative to the pseudonym. For example TIP5 identifies a Year 1 teacher, Penny, who is Teacher 5 in this study.
- **Child identification codes** were used on all LDP student data. Child codes began with a C=child, followed by the child's school year level (K=Kindergarten, P=Pre-primary, 1=Year 1, 2=Year 2.) The last two letters coded the child's name.
- A **daily research diary** included **participant observations** and reflections on classroom actions, planning with teachers, incidental observations and issues arising during the year. The Research diary is referenced as CB=researcher's initials, RD=Research diary and the date of entry.
- **Audio-tapes.** Whenever possible, planning discussions with teachers were taped to allow for review, transcription and data analyses. Similarly, all teacher interviews during Terms One and Four were taped. (Dated with a teacher identification code added.)
- **Transcripts** from audiotapes are referenced with the teacher code followed by DI=data item numbers (eg. T1P5DI1-2 indicates data items one and two from teacher Penny.) Data items were numbered to indicate each new piece of information. At times, a conversation is summarized and referenced with the teacher identification code and the date the tape was made (eg. T1S29/9/00).
- **Interview notes:** refers to comments recorded as interviews were conducted. These are available from the research archive (with dates and teacher identification codes added). They are not directly referenced in this text

because interviews were transcribed, and/or the source of research diary entries.

- **An Oral and Written Language Database (OWLD)** was completed for each of the 33 focus children in the study (and others at teacher's requests). An outline of the database is given in Appendix D. The OWLD was updated each school term, labeled as OWLD1, OWLD2, OWLD3 and OWLD4 respectively.
- **A Summary of sessions** outlined the strategies used in classrooms particularly for focus children in each year level (Kindergarten to Year 2). They were given to parents and teachers at the end of the school term. A Year 1 example is given in Appendix E.) Teachers refer to these as "summary" or "session notes."
- **Co-constructed classroom practice*** was documented in many ways with participant teachers. Archived evidence includes:
 - *Working notes from discussion, planning and review sessions,
 - *dated daily lesson plans for each early childhood class, filed by school year level and teacher identification code, in chronological order for the year,
 - *further oral and written language samples / assessments collected during the implementation of classroom activities,
 - *copies of teacher-researcher activities prepared for classroom use,
 - *notes detailing activities and outcomes, given to teachers after each shared classroom session, and
 - *incidental written correspondence between research participants.My reflections about co-constructed practice are also recorded as in the Research Diary (eg. CBRD29/2/00).
- **Documentation of staff workshops/ professional development sessions** conducted as part of the LDP. These are described, as relevant to later text.
- **Staff (and parent) review workshops** conducted by Dr Ann Zubrick and Dr Gay Ward University of Notre Dame staff to triangulate my data and findings. These data (audio taped and notated) are cited as SR=Staff Review and the date (4/9/00). They are also described in the text.
- **Staff evaluations** were part of a professional development session in Term Four. The importance of these data necessitated that they were identified

separately. Hence the format: teacher identification code, followed by E=evaluation and the date (21/11/00).

- **CD Roms and video tapes** of the parent forum summarizing research outcomes, (24/11/00).
- **Written copies of outcome summaries** presented to the whole school staff (14/11/00), School Council AGM (21/11/00) and a School Community Forum (24/11/00).
- **A Thesis Planning Journal** and earlier thesis drafts evidence my analyses and interpretations (2001-2004) since data collection (2000).

These original data are available as evidence “that the research was carried out systematically and could be the basis of an effective audit” (Bassey, 1999, p. 77). In addition, records of school policy and administration are available to verify the context in which this research was conducted. During times of data sharing, such as teacher workshops, participants were reminded that they could remain anonymous or provide personal anecdotes from their own experiences.

In the first school term of 2000, nine early childhood teachers became involved in the Language Development Project and participated for the entire school year. A tenth teacher returned from leave and chose to become involved for Terms 3 and 4 of the school year. As classroom language development plans were negotiated over four action research cycles, data were analysed continuously. Factors contributing to the development of co-constructive planning processes and influencing changes in participant thinking and pedagogy were documented and examined throughout the action research cycles.

The four action research cycles coincided with each of the four school terms. The iterative process of revisiting analytical statements with data and participants’ interpretations, was embedded in each cycle of observation, reflection, planned change and action (Wadsworth, 1997) during the data collection year.

Action research cycle one: Personal constructs and classroom practice

During the first four weeks of the school year, I requested that classroom teachers recommend times and schedules for my participant observations in their classrooms. I invited teachers to identify times that best represented their language teaching, inclusive of children with individual or group education plans. Initially this research was planned to probe teachers' personal theories of language-based educational risk, characteristics of students identified as being at educational risk, language development practices selected and implemented by teachers for students at risk, and areas of need perceived by teachers in addressing language-based educational risk.

The classroom observation period coincided with the first four weeks of a new school year. All teachers were teaching new classes of students so this was an optimal time to observe and participate in the establishment of classroom policies and routines, as well as, to build relationships with individual students. Traditionally, teachers use these early weeks to note the individual learning strengths and needs of the children in their classes. In addition, I sought to establish personable working relationships with classroom teachers, mindful that the future of co-constructed language planning could be facilitated by positive working relationships in which all participants were valued. I was also aware that teachers needed time to become familiar with their students prior to reflecting on individuals' strengths and needs, or language development plans, during initial interviews.

I explained my participant observation role (Wadsworth, 1997) as that of a skilled volunteer in the classroom. Teachers retained responsibility for all classroom decisions but were able to ask me to complete specified tasks. For example, teachers asked me to take reading groups and work with specified texts. All teachers were aware of my familiarity with classroom literacy teaching and learning. Simultaneously, I supported rather than challenged current teacher thinking and pedagogy. Spontaneous discussions about the personal constructs of early childhood language development, classroom language development practices or particular children at educational risk were welcomed and encouraged. However, I did not initiate such discussion as a participant observer. With a clear priority to establishing teacher-researcher relationships, I used the participant observer role to get to know

teachers and students. I also reflected on opportunities to facilitate the co-construction of classroom language development planning, once working relationships were established, and teachers and I had observed students' strengths and needs. The participant observer role did not include making judgements about the effectiveness of teachers' thinking and practice.

Another purpose of the participant observation time in classrooms was to understand how teachers identified students at educational risk. As a participant observer I attended to and recorded indicators of students' educational risk during the first four weeks of the school year. I compiled student profiles from classroom data such as running records of reading (Clay, 2002) speech-language samples and written work samples. During this participant observation time teachers were asked to consider which students were at educational risk. Shared discussion of nominated students moved the teachers and myself from a phase of initial observation on to reflections about how to respond to students at risk. This shift from observation to reflection is expected in action research.

Initial interviews

Each teacher also allocated a time for an individual interview. As discussed earlier, teachers had been informed in 1999 about opportunities for involvement in this study (2000). They were not asked to commit to the project until after we had shared initial interviews and I had worked as a participant observer in their classrooms. The purpose of this settling-in period was to allow teachers to sample engagement in a teacher-researcher project, to ask questions and to contribute to shaping the initial action research cycle.

Consent forms were discussed and signed during the initial interview session. As classroom observation data and teachers' reflections on personal constructs were shared during initial interviews, teachers were able to provide informed consent at two levels: (a) Consent to their future participation in the Language Development Project, and (b) consent to data collected to date being retained and used in this study. All teachers provided consent and were reminded that they could withdraw their consent at any time during the project.

Initial interviews conducted during the first month of the school year were planned for several reasons. The main purpose was to confirm participants' personal constructs of early childhood language development, language-based educational risk and the role of teachers in managing educational risk in classrooms. To this point, my observations of teachers' classroom practice were interpreted as indicators of teachers' thinking. Yet my observations and interpretations needed to be verified by teachers' comments and reflections (Buchanan & Khamis, 1999) and by teacher-researcher dialogue specific to incidents of classroom practice and individual students.

The first indicator of a need to plan change came at this point. From classroom data I noted children at educational risk in each of the study classrooms. By contrast, most teachers were reluctant to nominate children at educational risk by the end of the first month of the school year. I needed to understand teachers' hesitation to identify observable characteristics of educational risk and to move to explicit language planning accommodating students' strengths and needs. Possible explanations for teachers' hesitancy included their unfamiliarity with characteristics of educational risk, variation in their competencies to assess and document educational risk, variation in their confidence in their judgements of educational risk, absence of personal constructs of educational risk as significant in early childhood classrooms, or researcher misinterpretation of data to date. Hence, initial teacher interviews facilitated my move from a field research participant observer role in early childhood classrooms to an analysis and reflection role (Wadsworth, 1997).

Prepared questions facilitated individual interviews with participant teachers (see Appendix F). Interviews were semi-structured (Wadsworth, 1997) rather than centered on the sequence of prepared questions. Discussion focused on how teachers perceived their students, how they identified students at risk, their teaching role, and the type of support they believed would help them to meet the needs of such students.

I acknowledged that collaborative planning must be based on common understandings (Hart, 1992; Merritt & Culatta, 1998). DiMeo, Merritt and Culatta

(1998) believe that participants being attuned to one another's beliefs and practices assists classroom collaboration. Wadsworth recommends that "strategically powerful questions" (1997, p. 39) engage research participants in a personal way. She suggests asking interviewees "how they feel about how things are now"; as well as, asking them to describe how they could be better supported. Since my intent was to understand each teacher, my observations and interpretations of language development practices, resources and specialist services for students at educational risk, were supplemented with discussion.

Wadsworth (1997) cautions researchers about being judged "to be too much at odds, too distant or not able to understand or respect" research participants. She believes that participants may withhold valuable information if the researcher is judged to be threatening, not to be like the participants, or unfair. Accordingly, I referred to my working discussion with classroom teachers as "collaboration" or "negotiation" during this study. Negotiation was the preferred term during the data collection year, used to emphasize continuous and shared decision-making with teachers. (The development and identification of co-constructed thinking and practice occurred as the action research cycles progressed.)

To understand how and why particular factors encouraged teachers to change, I considered ways to optimize working relations with class teachers by intentionally reducing conflict (Reilly, 1996). Conflict is reduced when people recognize their own beliefs and become aware of those of others. Since exchanges of self-insight and other-insight (Reilly, 1996; Ennis, Cothran & Loftus, 1997; Youniss, Noack & Hofer, 1995) are known to shape teacher-researcher relations, I asked teachers how they thought I (or others) could support their teaching of students at educational risk. I did not specifically ask them to report on current problems.

Teachers identified two ways in which their teaching could be supported. They requested detailed, diagnostic information about who was at educational risk and why. As a group, teachers were unsure about *how* to identify students at educational risk. They also requested practical support. They needed to see how the identification of language-based educational risk could be translated to in-class language development activities and strategies. Participant observation and interview data

confirmed variation amongst teachers. I had noted that teachers reported a range of understandings of educational risk and diverse personal constructs of the significance of educational risk in early childhood classrooms. Initial teacher interview data also verified a range of teacher competencies to assess and document educational risk. These data showed variation in teachers' levels of confidence about their judgements of educational risk.

During initial teacher interviews, I encouraged each participant teacher to discuss their response to opportunities to negotiate classroom language development practices with me. In this way, I could begin to negotiate specific language development planning with teacher participants and to use social judgement theory to reinforce teachers' right to accept, reject or remain neutral to my contributions. Four weeks into data collection, teacher interview and participant observation data supported my plan to "co-construct" language development plans with classroom teachers. More specifically, positive teacher-researcher interactions resulted in our plan to collate detailed oral and written language assessment data and to negotiate classroom language development plans for individual students.

Detailed Oral and Written Language Data (OWLD)

During the research proposal stage of this study (1999), I had formed a construct about the potential value of specialist language development data to classroom teachers. I considered how the provision of such information could influence teachers' theory or practice about students at educational risk. I recognized that my collection and valuing of both clinical and classroom data to make diagnostic and critical decisions about individual students at language-based educational risk, influenced my construct formation. I believed that detailed, individual student oral and written language data could assist classroom teachers to plan and implement appropriate language teaching and learning practices for their early childhood students. I did not *know* how teachers would respond to such data.

I developed an Oral and Written Language Database 1 (OWLD1) as a way to share detailed language development information about students at risk. The OWLD is a twenty-point database of speech, language, hearing, literacy and learning style

characteristics, compiled using language observation and assessment practices from both speech pathology and education. The data were collected from classroom oral and written language samples and individual student assessments. The purpose of the OWLD was to combine objective and descriptive information for student profiles, to systematize data collection, and to provide a common database for co-constructing classroom language development plans.

The Oral and Written Language Database is referred to throughout this study. The abbreviations OWLD1, OWLD2, OWLD3, OWLD4, refer to the particular school term in which the data were compiled (eg. OWLD2 means data from school Term Two). The OWLD provided a cumulative record of individual student data over four school terms. The OWLD format of presentation was amended each school term in response to teacher and parent feedback on previous formats. The OWLD1 to OWLD4 summarize twenty points of oral and written language status for each of the thirty-three students at risk (also known as focus children) during this study.

The thirty-three focus children were each recommended for detailed oral and written language assessment by at least one participant teacher (including myself as a participant researcher). After compilation of the OWLD1 (Appendix G) for these students, the teachers negotiated whether or not they needed support to plan individual, small group or whole class language development tasks for these students.

From Term One, I analysed OWLD data and described students at educational risk within one of three student cohorts. My thinking was that these cohorts could assist classroom planning and support changes to teachers' thinking and planning about students with language-based educational risk. The three cohorts were summarized as follows:

1. **Data Group One** included children with “general language weakness,” specified as receptive *and* expressive language difficulties. Children in data Group One were considered “at educational risk” as described by Bishop (1997), Catts (1994) and Rinaldi (2001).
2. **Data Group Two** included children with “skewed language profiles.” Group Two students evidenced diverse strengths and weaknesses with language

learning and using language to learn. These children were considered to have “some” language-based educational risk (usually receptive *or* expressive language issues).

3. **Data Group Three** included children who scored “within the range for age” on standardized language assessments but who displayed characteristics of language-based educational risk in the classroom. In the current study, these children were regarded as having “specific” educational risk.

Each cohort suggests a different view of language-based educational risk. In summary, Group One students were considered to have more “pervasive” educational risk (Catts, 1993, 1994) than children in Group Two. Group Two children were at greater risk than those in Group Three. The significance of each data group for co-constructive language planning was discussed with participant teachers throughout the study year.

The use of the OWLD format prompted my development of a two-part hypothesis as follows:

- (a) Teachers’ understandings of specific speech-language-hearing impairment can be enhanced by the provision of detailed oral and written language assessment data; and
- (b) Teachers’ understandings of detailed, individual student data assist them to better select and implement classroom language development strategies and practices for students at educational risk.

However, preliminary interactions with teachers challenged my thinking about this form of oral and written language data for early childhood teachers. I understood that my “data construct” resulted from my valuing, my development of, and my experience with, such explicit data forms. My hypothesis did not accommodate diverse personal constructs about links between assessment, monitoring, teaching and learning or the need for such data. Similarly, my construct and hypothesis failed to account for teachers’ disparate connections between OWLD data and personal constructs of language development, language teaching and the potential for change in early childhood pedagogy. Through sharing personal constructs about these issues, research participants confirmed that classroom and clinical language data

were potentially useful to classroom teachers and language clinicians. However, the routine provision of such data is not sufficiently attuned to the processes of adult decision-making. The principles of social judgement theory (Runner, 1999; Krebs, 1999) challenged the construct that “one method fits all”.

The compilation of OWLD1, to include teacher data, comprised six of the ten weeks of the first action research cycle. By the end of school Term One, participant teachers and I had used the OWLD1 to clarify which students would be our focus children for the co-construction of classroom language development plans. In addition, the compilation and review of the OWLD1 provided all research participants with a shared understanding about why we would focus on these thirty-three students at risk from the cohort of 230 early childhood students. The sharing of the three student cohorts was one way for participant teachers and myself to consider the homogeneity or diversity of students’ educational strengths and needs within each classroom.

Most importantly, the first action research cycle provided data about connections between personal constructs and classroom practices, and thereby refined the direction of inquiry. During the first research cycle teachers interpreted indicators of educational risk and reflected on the impact of language-based educational risk for classroom teaching and learning. In addition, I interpreted teachers’ responses to the OWLD and cohorts of students at educational risk. I had begun to interpret the extent to which teachers’ personal constructs of language-based educational risk shape and determine pedagogy for students at educational risk. I had also concluded that researching the value of one language tool, the OWLD, selected by me for teacher use, would be minimally useful. Instead, teachers had specified their request for diagnostic information to be interpreted in the contexts of their classrooms and translated to practical classroom tasks that they could implement or be supported to implement.

Cycle one data also confirmed the ways in which early childhood teachers identified, described and accounted for language-based educational risk. Preliminary connections were made between teachers’ confidence in their personal constructs of early childhood language development and their ability to identify focus children. Issues arising from data collated during the first action research cycle were rewritten

as analytical statements for further questioning, data matching, analysis and interpretation.

Bassey (1999) describes the process of using questions arising from qualitative research to formulate and respond to analytical statements. He perceives the researcher's task as the unpacking of issues by cross-referencing data and analytical statements, collated from the study of a phenomenon of interest. Finally, the interaction between data and analysis is complete enough to substantiate empirical findings of a trustworthy nature. Barry (2002) regards the potential for multiple perspectives as one of the challenges of qualitative methodology. She recommends that researchers stop looking for one truth or fixed reality but "think of reality as being a dynamic concept that is re-constructed in negotiation with each of the informants to represent their own construction of their reality" (p. 32). By working with teachers in action research cycle one, I learnt that my construct of the potential usefulness of OWLD data did not match (most) teachers' points of readiness as a tool for classroom planning specific to students at educational risk.

During the first action research cycle, the teachers and I had developed and used the OWLD1. We had reflected on the OWLD1 as a classroom planning tool and interpreted teachers' feedback that this tool would be minimally useful without in-class application of the diagnostic information. Rather than continuing with "my" research, a constructivist interpretive approach to action research enabled the continuous negotiation of Language Development Project content with all of the early childhood teacher participants.

Consequently, we turned our research attention to the nuances of language content and the processes for negotiating and developing classroom language development plans. Our subsequent refining of this research focus through action research cycles two to four, is fundamental to understanding why this action research is later reported as a structured narrative, featuring four of the ten teacher participants. Our practical focus, and teachers' priority remained the effective management of students with language-based educational risk in early childhood classrooms. The teacher stories in later chapters provide insights into what changed in these teachers' thinking and classroom practice. Some description of the language development

strategies used by individual teachers is given. However, the more important research outcome is the development and justification of co-construction theory and practice.

In accepting this change in research focus from the use of diagnostic data in classroom planning to the co-construction of pedagogy for students at risk, I acknowledged teacher educators' need to reflect upon factors influencing teacher decision-making, as well as, processes for classroom-based research. Teachers know what (and who) they are ready to engage with and why (Hall & Jones, 1976). Dick (1991) believes that "people are most likely to change when they believe a better option is needed, available, achievable, and consistent with their values" (p. 13).

I began to see an opportunity to research influences shaping early childhood teachers' thought and pedagogy, from the teacher's point of view. The possibility that research into the co-construction of language development plans could be used to "develop theory" and "enhance educational policy" (Bassey, 1999, p. xi) prompted further research questions. My plan to conduct this research across one school year remained. One school year would provide access to a range of data evidencing teachers' planning and implementation for language development.

Although our regular co-constructive planning did not begin until the second action research cycle, I practised co-constructing thinking from the outset. For example, teachers were asked to comment on the speech, language, hearing, literacy, learning or behavioural characteristics of their students. I collated teachers' spontaneous comments, questions and concerns about teaching and learning. As teachers contributed work samples, records and opinions to the OWLD1, we selected terminology that represented our common understandings of student strengths and needs for all participants. As recommended by Broadley et al. (2000), I believed that "Answers provided by research need to be in a form teachers can readily identify as relevant to their style and context" (p. 138).

As we moved to co-constructive language development planning with the second action research cycle, I followed Bassey's (1999) recommendations for organizing qualitative educational research. I needed to refine the focus of this research, from my predication that OWLD could assist teachers' classroom planning; to focus on

teachers' requests for the translation of diagnostic data to practical tasks. I returned to the research questions (as presented in Chapter 1) to match data to research questions, marking issues arising for future analyses and sectioning transcripts into data items. The cyclic process of questions, field research, analysis and reflection, conclusions, recommendations for action, action (and so on) was replicated in each of the four research cycles and linked to trustworthiness indicators. Questions and continuous analysis focused the research on the phenomenon of interest in this thesis: the factors influencing change in early childhood teachers' language development practices. Although subsequent action research cycles overlap in content and process, each cycle is described separately here to maintain clarity and to ensure thorough reporting.

Action research cycle two: Negotiated thinking & pedagogy

A commitment to listening to informants includes a preparedness to change researcher thinking and practice as required (Barry, 2002). At the beginning of Term Two, I could observe and interpret but not *know* teachers' individual needs for co-constructive language planning. Research into teacher thinking indicates that teachers may not know what their thoughts and needs are until they are encouraged to articulate them (Batten & Marland, 1993). As the teachers and I worked together to select and plan classroom language development practices, teachers were encouraged to reflect on and articulate their support needs, and to suggest the content and processes for shared planning.

School Term Two began with teachers and myself working together to select and plan classroom practices for students at risk. We planned specified activities and strategies for whole classes, small groups or individual education plans within the English Learning Area. The West Australian *Curriculum Framework* (Curriculum Council, 1998) English Learning Area includes speaking & listening, reading, writing (including spelling) and viewing. Substrands of the English learning Area are: use of texts, contextual understandings, processes & strategies and conventions. Oral and written language are used in all other Learning areas.

The teachers and I negotiated who would teach planned activities, when and why. Procedures for monitoring student outcomes and for reviewing the selection and implementation of language development activities were also negotiated. Regular opportunities for teacher-researcher discussion and continued shared classroom time were critical to the action research process.

Calderhead (1984) explains how the process of gathering and interpreting empirical evidence of teachers' thinking and decision-making, is a way of "conceptualising teachers' practice... revealing the kinds of knowledge teachers have acquired, the interpretations they make of classroom events and how these guide teachers' actions" (p. 120). I observed, interpreted and verified (through documented dialogue) teachers' thoughts and pedagogy. Action research cycle two was an attempt to elicit "detailed knowledge and understanding of the lived experience" of early childhood teachers (McAllister, 2002, p. 23). These data were used to systematically plan improvements in pedagogy with, rather than for, teachers.

I facilitated co-constructed planning during the second action research cycle. Rather than assume the planning needs of individual teachers, co-construction required me to interpret each teacher's point of view. In other words to:

get inside the heads of the practitioners, to see the world as they see it, then to understand the manner in which (teachers) construct their problem spaces, their definitions of the situation, thus permitting them to act as they do (Shulman, 1987, p. 375).

Understanding teachers' actions and reactions from *their* perspective in the classroom meant that I had to attend to variations in individual teachers' data to understand links between personal constructs and classroom actions. One purpose of co-construction was to get close to teachers' personal constructs of early childhood language development and to track processes and influences of changes in constructs and pedagogy. In this way, the teachers and I shared membership of the learning community (Buchanan & Khamis, 1999). Teachers learned by reflecting on factors influencing language plans, analysing the content, and developing processes of co-construction that worked for them. I sought to give teachers a sense of ownership and

to empower them to become facilitators of change in their own teaching (Buchanan & Khamis, 1999, p. 11). Teachers could build knowledge and experiences in the context of their classrooms through our co-constructed planning, co-teaching, observing, monitoring and reviewing of classroom practice.

Although the primary purpose of action research cycle two was co-constructing classroom language plans, I continued to collect data about the influence of explicit diagnostic student data on teachers' classroom decision-making. During school Term Two, I collected audiometric data to update students' oral and written language profiles, now known as OWLD2 (Appendix H). The addition of otoscopic, tympanometric, and standard air conduction hearing assessment data (Clezy, Stokes, Whitehill, & Zubrick, 1996) for each focus child, updated the OWLD1 to the OWLD2 during the second action research cycle. Again, students were assigned to one of three cohorts. Data Group One included children with audiometric profiles outside the expected range. Data Group Two included children with audiometric profiles suggestive of fluctuating middle-ear status and fluctuating hearing levels. Data Group Three included children whose audiometric profiles were within normal limits when sampled. A description of educational risk based on the OWLD1 and OWLD2 cohorts, was documented for each focus child.

In addition, co-constructed plans were documented and actual classroom practices recorded to monitor changes to planned activities. These data provided a basis for reflection and further planning, as well as, being useful for the tracking of changes in thinking or planning. At the end of Term Two, I requested teachers' written reflections and opinions of the Language Development Project. Teachers were invited to recommend changes both to the content and process of co-constructed planning for the next school term.

By the end of the second school term, I was beginning to analyse and interpret data relevant to the second research question, *Which influential factors shape early childhood teachers' thoughts and pedagogy for students at educational risk?* Descriptive data was used to suggest the extent to which co-construction was shaping teachers' thinking and classroom practice. Data analyses and interpretations offered preliminary explanations of influential factors. However, further systematic and

critical enquiry was required to understand teachers' receptivity or resistance to change in practice. I sought to understand how further opportunities to co-construct language development plans with classroom teachers would influence change in teachers' thought and pedagogy. In action research cycle three we reviewed and refined co-construction processes and outcomes, and confirmed the importance of factors emerging as influential in change.

Action research cycle three: Refining co-construction

The third action research cycle began at the beginning of school Term Three using practices similar to those described in action research cycle two. The simultaneous analysis of Term Three data illustrated subtle further changes in teachers' practices, as well as, their personal constructs of language development and language-based educational risk. Furthermore, I revisited the issue of changes in teachers' confidence to make decisions about risk. Most teachers had been reluctant to nominate children at educational risk for co-constructed planning early in Term One. During Term Three some teachers requested my support to become more independent and competent in identifying and responding to their students at risk. From the teachers' point of view, the third action research cycle further addressed teachers' needs for practical support. My focus was on the importance of teachers' feedback and the development of teachers' "voice" as an influential factor in effective co-construction.

Until the third school term, teachers' feedback was predominantly related to the value and impact of oral and written language data provided for individual students. Such data confirmed the importance of teachers' personal constructs since teachers gave diverse responses to OWLD1 and OWLD2. Some teachers found OWLD1 too detailed and difficult to process. Others reported the level of detail in the OWLD1 and OWLD2 to be most useful in understanding the unique needs of their students.

Together, the teachers and I agreed that additional oral and written language data would be collected and used to assist classroom language planning. Further assessments of phonological abilities (Muter, Hulme & Snowling, 1997; Vardi, 1991), central auditory processing (Keith, 2000) and *Literacy Net* (Education Department of Western Australia, 1999) were completed for some focus children, as

OWLD3 (Appendix I). The decision to further assess individual children was determined by the language planning needs of the child's teacher or myself.

The teachers and I also agreed that most participants found other factors to be more influential (than the OWLD) in changing teacher thought and pedagogy. This reflection and planning was very significant to the third and fourth action research cycles because it was the point at which many teachers demonstrated an expectation and willingness to influence the content and process of co-constructed language development plans.

The third cycle included a variety of language development practices, planned by teacher-researcher dyads, and an increase in teachers' understandings of their opportunities to shape co-construction. Teachers acted to ensure that this study and the specifics of action research cycles met their particular teaching-learning needs. I regarded action research cycle three as an opportunity to improve the match between teachers' needs and action research, and to demonstrate that teachers' feedback was influential in shaping co-construction. One example is my provision of professional development sessions for teachers, as a response to their expressed needs. We were able to discuss and review our interpretations of OWLD data to date.

Well before school Term Three, every teacher had provided data about their personal constructs of early childhood language development and their responses to language-based educational risk. However, the process of linking teachers' personal constructs and classroom language development practices was complex. As expected, teachers' constructs and practices were changing as an outcome of the action research design. My remaining task was to interpret influential factors in change and to consider the potential of co-construction theory and practice. I began to consider the benefits of an integrated and structured narrative to report this action research from my perspective as a participant researcher, and as a way to include the teachers' voice.

In order to preserve teachers' meanings as accurately as possible, classroom data were recorded and collected in the format used by teachers (notes and conversations for example). In addition I recorded my interpretations of teachers' thoughts and pedagogies, and my perceptions of changes in their thinking and practice, in a

research diary (dated with teacher identification codes added). Diary entries were verified by teacher-researcher dialogue. Throughout, teacher voice was critical in interpreting classroom events. Hence, I considered structured teacher narratives as a way to accurately report the nuances of individual teacher voices on co-construction.

I reviewed Fehring's (1999) use of participant observation, interviews and case study method to "analyse the teaching act, teachers' attitudes, values and belief systems... to understand the underlying rationale of what is a complex form of human behaviour" (p. 41). Like my research, Fehring's (1999) work examined influences on teacher judgements. She included teachers' perspectives when studying teachers' judgements of students' literacy development in Victorian schools. She analysed the judgements of three teachers in three schools. Fehring's reference to recognition of "teacher's voice" or "teacher's frame of reference" (pp. 39-40) matches the intentional inclusion of teachers' opinions, perspectives, judgements and interpretations in this research. Fehring's work influenced my reporting of this study in which the ten teachers and I were all participant researchers.

Fehring (1999) purposefully selected incidents from her three teachers data and reported her findings as a collective case study. In my study, further analysis and revisiting of teachers' personal language constructs, challenged me to purposefully select incidents as Fehring had done. I made the judgement that detailed reporting on every teacher's experience of this action research would not strengthen my research conclusions. Rather, a representation of the diversity of teachers' participation and interpretations of co-construction processes would support my data interpretations, research generalizations and conclusions. I decided to highlight incidents involving individual teachers who, because of their diverse responses to this action research, had the greatest impact on my learning and research findings. Data collected during action research cycle three was particularly useful because, by this stage, research participants had experienced, influenced and reflected on the development of our co-constructed processes.

McAllister (2002) reminds researchers that every item of data potentially strengthens, challenges or adds an alternative emphasis to reported research outcomes. However, explaining the specifics of teachers' decisions, given the

number of influences and constraints operating in a classroom at any one time, is difficult. Calderhead (1984) suggests that teachers “may not themselves be aware, and therefore cannot give accounts, of (factors) that affect their classroom behaviour” (p. 100). As Batten and Marland (1993) discuss, the difficulty is to maintain balance in educational research between giving “an accurate representation of each teachers’ perspective through the use of the teachers’ own words, and looking for common elements in the teachers’ descriptions of practice in order to be able to make some general comments” (p.63). Knowing this, I interacted with all ten of the participant teachers to collect extensive data for one school year. It was not until I began to write the structured narrative that I understood the extent to which data from four of the ten teachers had influenced my learning and research conclusions.

The challenge, with all of the teachers, was in accessing their knowledge about their classroom practice. Much of this knowledge, of value to educational researchers, “resides in the minds of teachers and cannot be easily accessed. Moreover, part of it is tacit, hence teachers cannot say what they know because they do not always know what they know.” (Batten & Marland, 1993, p. 67). In the current study, I intentionally explored the co-construction of language development practices as a way of making participants’ tacit knowledge explicit. My belief was that sharing personal constructs of language development practices makes them more explicit to oneself and to others. Co-construction facilitates transformations in explicit thinking from teachers’ previous classroom experiences, beliefs, theories and observations to future language development practices. It also aims to make explicit the underlying constructs and reasons for teachers’ classroom actions.

The intentional use of co-constructive language planning processes as part of participatory action research is well supported. Sabar’s (1994) review of the work of Connelly and Clandinin (1986) attests that the highest form of teacher-thinking research is when teachers and researchers together construct knowledge. The need to address teachers’ awareness of teaching-learning content and of their thinking processes, is also supported. For example, Carlgren, Handal and Vaage (1994) propose the active involvement of teachers in educational research so that

“knowledge about teachers’ knowledge” is not “imposed on teachers as their knowledge” (p. 4).

In addition to action research cycles and on-going analyses of gathered data, teacher voice was paramount in Term Three. The involvement of third-party researchers (university staff other than myself) was a means of triangulating data and substantiating my interpretations of data to date. Teachers were invited to share their opinions and reflections with the reviewers during a staff workshop. Triangulating changes in teacher thinking and classroom practice allowed data to be matched to analytical statements and interpreted within and beyond the study context. Indeed, data collected during the third action research cycle added depth to data collated previously. Questions and issues arising earlier could be re-examined with Term Three data.

Action research cycle four: Teacher voice

The continuous participation of teachers through one school year of action research elicited an extensive database. Factors emerging as influential in action research cycles one, two and three were revisited in research cycle four. Anomalies and consistencies among teacher data, compiled during the year, enhanced teacher reflections during research cycle four. Throughout, teachers’ interpretations, and my own, were used to verify empirically based findings about the co-construction of change in participants’ thought and pedagogy.

During school Term Four, action research processes refocused this study to observation and reflection components of the cycle, rather than planning immediate changes or acting on those changes (Wadsworth, 1997). During the first five weeks of the school term, I continued to co-construct language development plans as requested by classroom teachers. In addition, teachers were invited to predict their responses to students with language-based educational risk in their early childhood classrooms in future years. They were also asked to reflect on factors that had influenced or constrained their responses (Calderhead, 1984) to the Language Development Project during the school year.

Final individual interviews with teachers and a group teacher meeting during Term Four further enriched action research data. Teachers participated in individual interviews to discuss their reflections and interpretations of the LDP over the year. Final interviews included the sharing of updated student summaries, the OWLD4, that provided summary information about students' educational risk status at the end of the 2000 school year. The OWLD4 was presented as a bar graph (Appendix J), unlike the descriptive formats of the OWLD1, OWLD2 and OWLD3.

Teachers' responses to student data contributed a further sample of teachers' thinking about early childhood language development and language-based educational risk. In later chapters, I reflect on how (and why) teachers' thinking and classroom practice for students at risk changed as an outcome of co-construction. Teachers' perceptions of the permanency of co-constructed change and their awareness of influential factors in the co-construction process are also discussed.

The final teacher meeting in Term Four, provided staff with the opportunity to discuss research outcomes as a group. The provision of individual interview and whole staff forums for teacher reflection was my response to the knowledge that teachers had personal preferences for expressing their opinions in dyads or groups. Data relating to the content and process of the LDP and suggestions for future change were elicited in this way. The Term Four data, elicited from ten teacher participants, verified interpretations formed during the year. Subsequent data analysis supported my final generalizations about the impact and potential of co-construction processes as a way to effect change in teacher thought and pedagogy.

Action research methods facilitated the layering and revisiting of data during the research year. Bassey (1999) explains how research questions elicit raw data, which become data items with locatable references. Draft analytical statements are then compared with data items and changed or eliminated as appropriate. This cyclical process continues until data analysis links have been thoroughly investigated and presented as empirical findings. Dick (1993) explains, "each turn of the action research spiral builds on the understanding at the previous turn" (p. 16). He identifies "the responsiveness to the situation, and the striving after real understanding" (ibid) as the two features that define action research as a useful research strategy. Using

these processes, data items and analytical statements in the current research are reported as trustworthy generalizations.

Wadsworth (1997) also recommends mapping iterative processes to action research cycles so that research is continuous. This recommendation was followed in the current study, as the three research questions were refined to direct action research processes and guide this exploration of co-construction with teachers. First, the examination of connections between personal constructs and classroom practice led to an exploration of factors influencing change in thought and pedagogy. In turn, the implications of co-construction as a way to effect change in teacher thought and pedagogy were discussed and interpreted with teachers. As stated by Fehring (1999), “understanding what influences teachers’ judgemental processes should precede and then facilitate change of any kind” (Fehring, 1999, p. 40).

Here, action research processes facilitated the layering and revisiting of links between data and analysis in another way. The formation of draft analytical statements and comparison with data required that analytical statements were substantiated, revised or replaced as indicated by the data. Continuous data analyses verified unusual or atypical data from cumulative constructivist interpretations. Inconsistent data could be further investigated. These processes helped to establish the limits of generalizability (Davidson & McAllister, 2002) of this study.

Term Four reflections were particularly important as a way to verify the teachers’ voices in the later structured narrative. The iterative processes used as a precursor to that narrative are summarized as Stages 4 through 7 of the Language Development Project. An alternative, graphical representation of changes to the focus of the four action research cycles of the Language Development Project is given in Appendix K.

Stage 4: Generating and testing analytical statements

The fourth research stage involved the generating and testing of analytical statements. Although preliminary data analysis and organization of data occurred during action research cycles, the formulation of analytical statements from research data provided concise answers to the research questions. Bassey (1999) accepts that

“other researchers using the same data might come up with different constructs for basing the analysis on” (p. 71). Given this possibility, Bassey recommends that researchers continue the iterative process of analysis and data testing until they are confident that the analytical statements are trustworthy.

During the fourth cycle of this action research, I drafted analytical statements to amend, reject or accept after rigorous comparison with coded data. The summary of the action research cycles above, indicates that the first research cycle addressed the first research question, the second and third research cycles focused on the second question and the fourth research cycle was most relevant to the third research question. The processes of reviewing and refining original questions during the action research and data analyses were important to study outcomes. For example, the matching of data to analytical statements often generated subsidiary questions. When this occurred, data needed to be reviewed (or additional data sought) to answer subsidiary and key questions. These iterative processes and outcomes are detailed in the teacher stories in chapters four through seven.

Stage 5: Interpreting analytical statements

Once analytical statements have been generated, they need to be tested against data prior to the interpretation or explanation of research findings. Bassey (1999) suggests that some interpretations are unique to individual research participants, others are common to groups of people, and others imply cause-and-effect relationships. Given my research purpose, to interpret the potential and limitations of co-constructed language planning; I used teachers’ voices to explain a range of responses to co-construction opportunities. I added my researcher voice to draw together multiple interpretations of the development of co-construction processes in early childhood classrooms, to relate research findings to available psychological theory (as outlined in Chapter 1), and to formulate answers to research questions. The gradual interpretation of links between data and analytical statements was like building a scaffold from which co-construction processes could be reflected upon and understood.

Here, my use of a constructivist interpretive paradigm demonstrates my intention “to elicit what different actors seem to be doing and think is happening,” in order to analyse and interpret data (Bassey, 1999, p. 44). In quantitative research the researcher’s involvement is intentionally objective and the reciprocal influence of researcher and “subjects” is minimized if not eliminated (McAllister, 2002, p. 22). By contrast, qualitative researchers acknowledge the possibility of influencing a phenomenon or being influenced by it, as part of the research process. In the current research, the teachers and I continuously planned, acted, observed and reflected on our classroom language development practices as a means to interpreting influential factors in that co-construction. Research participants expected to influence, and learn with, one another.

Stage 6: Deciding on outcomes and writing the report

Through this study, I intended to report on effective processes by which classroom teachers’ and language specialists’ experience reciprocal learning, as they share decision-making. To do so, I needed to be immersed in, co-construct and interpret classroom language development practices for students at educational risk, or whole classes. However, as this research developed, I recognized the opportunity to report also on co-construction theory, developing from co-constructed classroom practice. The purpose of this final research report is to specify and critique co-construction theory and practice as an innovative approach to teacher change.

In Chapters 4 through 7, participant teacher stories and my researcher perspectives are interwoven to one structured narrative. The stories of four of the ten teachers are reported in detail because their telling enhanced my understanding of (and readers’ access to) eventual research generalizations. I argue that the careful selection of teacher data better represents research findings than would the reporting of common outcomes for all participants. I report commonalities in data or research outcomes from the other six teachers when such reporting contributes to the understanding of co-construction processes.

Batten and Marland (1993) might challenge this rationale for action research reporting. These authors studied teachers’ knowledge of their teaching craft and

recommended that educational researchers look beyond interesting individuals to the group to develop generalizations. However, I believe their suggestion does not apply directly to the current study because I am examining processes influencing teachers' active learning and changes to their subsequent teaching. This study of teachers as active learners, engaged in pedagogical change, is not the same as Batten and Marland's generalization of teachers' knowledge about teaching.

The possible use of repertory grids to represent participant teachers' personal constructs also needs acknowledgement. In Chapter 5, I explain why and how I have organized teachers' construct data without using repertory grids. Essentially, I was interested in how teachers influenced, and were influenced by co-construction processes. The tabulation of teacher data in a repertory grid would highlight commonalities. It is possible to tabulate data to show that all teachers engaged in the co-construction process through one year of action research. However, my research interest concerns how and why co-construction processes (the 'template') needed to be modified for individual teachers. Summarizing the personal constructs held by this group of teacher participants, as with a repertory grid, is unlikely to enhance the understanding of effective co-construction processes.

Alternatively, my selective use of four teachers' data, with some reference to the other teacher participants, builds the case for co-construction as a flexible, interactive learning process that must be personalized for each participating teacher. The structured narrative in the following chapters illustrates the development of co-construction theory and practice from the point of view of classroom teachers and includes my participant researcher learning. Based on study data, analytical statements and iterative processes, these chapters satisfy Bassey's (1999) research purpose, "to advance knowledge by describing and interpreting the phenomena of the world in attempts to get shared meanings with others" (p. 44).

In the concluding chapter, I draw together insights gained from this research. I reflect on the importance of particular research processes for producing actual research outcomes, and reiterate the potential of co-construction for effecting pedagogical change in schools. The future development of co-construction (its theory and practice) relies on the use and constructive criticism of ideas presented here, in other

educational contexts. Further research reports will influence the refinement, rejection or acceptance of co-construction as a way to effect change in teacher thinking and pedagogy.

Stage 7: Finishing and publishing

As recommended by Bassey (1999) I have organized the documentation of this action research at three levels. The archive is the complete set of teacher, student and parent data such as audiotapes, work samples, planning notes and classroom records, collated during this action research and listed earlier in this chapter. The working documents are those analysed and selected for inclusion in this final report. Data from focus teachers, Penny, Toni, Jacqui and Maree are considered to be essential working documents in this research. They are supplemented by supporting data from other teachers. The OWLD were constantly referred to when co-constructing plans with teachers. They are referenced, as appropriate throughout this thesis. The thesis is the end point of the research. It includes selected citations from original data, interpretations of these and explanations of connections between original data and research conclusions.

The work of Perry (1995) and Perry and Zuber-Skerritt (1992) assisted my writing of this thesis. These authors distinguish between the conducting of action research and the process of completing an action research thesis at doctoral level. They use examples from graduate management research programs and from education, motivated by the relative usefulness of action research findings to contexts where research is participatory, collaborative and change is an expected outcome. Their work has encouraged the finishing and publication of this action research thesis at a time when the research literature appears “to ignore the complexity of presenting action research in a format required for a Masters or PhD thesis” (Perry & Zuber-Skerritt, 1992, p. 207).

Bassey (1999) states that the purpose of systematic documentation is always “to ensure that the researcher can work effectively within the ethic of trustworthiness and the ethic of respect for persons” (p. 80). Such was the intent and process within this study. Indeed, “It is through the documentation and publication of the research

that the researcher is publicly accountable for the rationale, conduct and interpretation of findings” (Ferguson and Mortensen, 2002, p. 55). There are many benefits of research-based professional discourse but “it is only when we can explain our work in lay terms that we really clarify its relevance to society” (ibid).

This research has been presented to academic and lay audiences, as outlined in Appendix L. In addition, Bassey (1999) advises regular contact with a critical friend “who plays the devil’s advocate in questioning the research process and outcomes” (p.76). In this case, the benefits of supervised research are highlighted. Despite attempts to use critical friends from the school community, the inconvenience of distance and the limited availability of research expertise in rural communities resulted in my relying upon university associates and critical friends from other centres to critique this research.

One benefit of the rural community in which this research was conducted is that many community members were directly or indirectly involved in the research processes. At regular, albeit unplanned intervals, I was required to explain and substantiate developing research methods and research outcomes as part of my interaction with community members. Wadsworth (1997) and Broadley et al. (2002) value such opportunities as another way to bring research to real contexts and because reporting to the broader community requires researchers to use formats that make sense to their audience. In this way, members of the rural community acted as critical friends with particular interest in the research context and implications for their future.

Principles of trustworthiness

Bassey (1999) recommends that researchers ask and answer questions about their respect for truth and persons in reviewing their research processes and subsequent reporting. These questions were useful before, during and after this qualitative inquiry. For example, the question, “Is the account of the research sufficiently detailed to give the researcher confidence in the findings?” (p. 76) was useful when making decisions about the balance between saying too much and too little in qualitative reporting. My rationale for focusing on four of the ten teacher stories

(Jacqui, Penny, Toni and Maree) is based on my judgement that these four teacher voices most informed the research outcomes. I am confident about the importance of these data to research findings. Data from Jacqui, Penny, Toni and Maree are extensive and sufficiently detailed to be linked to analytical statements and interpreted. My focused reporting on these four teachers reflects the importance of their data to research findings. This was not a random selection because ten teacher narratives would have made this thesis unnecessarily lengthy.

Practical ways of ensuring trustworthy use of teachers' data punctuated this study. All teacher participants gave informed consent. Purposes and procedures were described prior to data collection, data was continuously reviewed with teacher participants during the research cycles and individuals could withdraw their consent to data use during the study. Regular procedures for inviting teacher verification of data were an essential part of this constructivist interpretative study.

The systematic organization of iterative research procedures with participant teachers was another way to establish the trustworthiness of research findings. Dick (1993) discusses the trade-off between replicability and responsiveness in action research. He states, "Action research values responsiveness over replicability, because otherwise it is very difficult to achieve action as part of the research" (p. 38). My intent was to make research processes transparent for reviewers. I needed to show that participatory action research was the best methodological choice for *this* research. Here, I needed to do more than track change in teachers' thinking and practice. I needed to understand and explain influential factors in change, from participant teachers and a researcher point of view. Constructivist interpretive processes within action research cycles enabled the gathering and reporting of appropriate and trustworthy data.

Techniques to ensure respect for the truth and persons are mentioned throughout this summary of the seven stages of this research. In addition to Bassey's (1999) questions, Fehring's (1999) trustworthiness criteria of credibility, transferability, dependability and confirmability were used as practical checks throughout. Principles of trustworthiness are detailed with the presentation of original data in

chapters four through seven as links between data collection, trustworthy data analysis, interpretation and research publication are specified.

Innovative educational policy and practice, at the local or global level cannot be accepted without systematic and acceptable research method. The implications for co-constructive classroom language planning in other schools rely on the quality and rigour of this original research.

Summary

This chapter on the methodology used to conduct the Language Development Project is a response to the call for legitimate, rigorous and explicit research frameworks (Dick, 1993). I have described each of the four action research cycles to show how and why teacher data were collated, analysed and interpreted in early childhood classrooms during the study year. My intentional use of participatory action research reiterates the importance of revising and refocusing research questions during qualitative research. I also emphasize the need to selectively report qualitative data and to deal with anomalies in teachers' data when drawing research generalizations.

In the next chapter, I use Term One data to address research question one. Subsequent chapters are dedicated to further data analysis and interpretation. In this way, the story of co-construction unfolds as a way of effecting change in teacher thought and pedagogy.