

The Flight of Our Kite

- the Wycliffe Nga Tamariki Kindergarten Story

Penny Haworth, Joy Cullen, Heather Simmons, Liz Schimanski, Pam McGarva, and Eileen Woodhead

The Flight of our Kite

The Wycliffe Nga Tamariki Kindergarten Story

Haworth, P., Cullen, J., Simmons, H., Schimanski, L., McGarva, P., and Woodhead, E.

April 2003 to June 2006

The Research Team:

Massey University Research Associates:

Penny Haworth (April 2003 to June 2006)

Joy Cullen (Oct 2004 to June 2006)

Joy Mephram (April 2003 to October 2004).

Wycliffe Nga Tamariki Teacher-Researchers:

Heather Simmons, Head Teacher

Liz Schimanski, Teacher

Pam McGarva, Teacher

Linda Burch, Teacher Aide

Epenesa Fuli, Bilingual Teacher Aide (2003-2004)

Peter Fatialofa, Bilingual Teacher Aide (2005-2006)

Napier Kindergarten Association:

Eileen Woodhead



Acknowledgements

Wycliffe Nga Tamariki was one of the first six Centres of Innovation selected in New Zealand. The team would like to acknowledge the contribution of the Ministry of Education who provided funding for these projects; Massey University who reviewed and approved the ethical procedures for the project (PN Protocol 03/84); members of the Focus Group who contributed to our thinking; and the special and valuable leadership and input of the Dr Anne Meade, the national project coordinator.

© Crown Copyright Ministry of Education

ISBN 0-478-13561-0

Napier Kindergarten Association

Contents

	Page
Executive Summary	v
PART ONE: Introduction and Background	1
The Centre of Innovation Initiative	1
The Wycliffe Nga Tamariki Setting	2
Forming a Research Team	4
The Focus Group	4
Theoretical Frameworks	4
Sociocultural Underpinnings	5
Perspective on Bilingual Education	6
The Action Research Design	6
Overarching Research Question and Key Objectives	6
The WNT Approach to Action Research	8
The Action Research Procedures	9
<i>Cycle One</i>	9
<i>Cycle Two</i>	10
<i>Cycle Three</i>	12
Fitting Ethical Procedures into Kindergarten Practice	13
Analysis of Findings	15
<i>Working Theories as a Tool for Analysis</i>	18

PART TWO: Developing Working Theories	19
Working Theories on Children’s Social Interactions	19
Insights into the Children’s Friendships	19
The Role of Non-Verbal Language	22
The Significance of Belonging and Fun	22
The Importance of Names	23
Working Theories on Supporting Children’s Learning	24
Engaging in Learning through Play	24
The Significance of Cultural Values	25
The Role of Cultural Tools	25
Scaffolding and Co-construction of Working Theories	26
Vertical Grouping	27
Importance of Adults in Social Construction of Bilingualism and Learning	30
Teaching Strategies	31
Working Theories on Children Learning Language and Literacy	32
The Development of Learning, Language and Literacy	32
Mediators in Children’s Bilingual Development	34
Working Theories on Building our Community of Learners	35
Increased Interest and Commitment by Parents	35
Enhanced Links between Home and WNT	37
The Significance of Belonging	38
Expanding the Role of Adults	39
PART THREE: Conclusions and Implications	42

Key Areas of Learning from the COI Project	42
What have we Learned about Children’s Working Theories of Their World?	44
Dissemination of Findings	47
Reflections on the COI Process and its Outcomes	51
The COI Hui	51
Reconstructing Teachers as Researchers and Researchers as Teachers	51
Practical Implications	53
Practical Implications for Children	53
Practical Implications for the Wider Community	54
Practical Implications for Teaching	54
Practical Implications for Teachers	56
References	58
Appendices	
Appendix A Sample Friendship Map	63
Appendix B Sample Teaching and Learning Story	66
Appendix C Sample Video Transcript	68
Appendix D Schedule of Dissemination Activities	73

List of Figures

Figure 1 The WNT Centre of Innovation Logo

Figure 2 Friendship Indicators and Different Levels of Friendship Interactions

Figure 3 The Flight Pathway of the Data Analysis Process

Executive Summary

This report describes a Centre of Innovation research project carried out at Wycliffe Nga Tamariki Kindergarten between April 2003 and June 2006. The setting for this study was selected as one of the first six Centres of Innovation. The Kindergarten's defining characteristic was the way in which it worked to embrace families from the local Samoan Upu Amata within its community of learners. The use of information and communication technology to enhance communication between the Samoan families and the Kindergarten was another significant feature. In this way Wycliffe Nga Tamariki Kindergarten illustrated the achievability of some key aims from the government's ten year strategic plan for early childhood education, *Pathways to the Future: Nga Huarahi Arataki* (Ministry of Education, 2002).

The teachers in the Kindergarten hold an additive perspective on bilingualism, and this is also supported by members of the Upu Amata community. The emphasis on the community of learners also led, as the research evolved, to more confident use of sociocultural perspectives when analysing the findings from the study. Reflective discussion within the team focused on the broader context for learning and included input from a range of participants in the community of learners. Hence, the process was essentially advanced through a series of provocations.

The research undertaken at Wycliffe Nga Tamariki Kindergarten took a collaborative action research approach that was in itself innovative, as teachers took the lead role as teacher-researchers supported by research associates, rather than the reverse. The research team thus included teachers, researchers, and both Samoan and non-Samoan teacher aides, as well as a wider Focus Group that informed the team's reflections at critical points in the study.

The study followed three action research cycles which became increasingly intertwined as the team explored children's interactions from a number of angles. At first, children were observed in interaction with their friends. The investigation then

moved on to generate working theories about how to support children's learning, and finally their literacy development. Over the course of the study a number of useful insights were also gained into how to further enhance the community of learners at Wycliffe Nga Tamariki, and the bilingual development of all children within this setting. In addition, there was some exploration of the effects of peer support on the cognitive and language development of children from differing age groups.

As a result of the study, the teacher-researchers have generated a number of useful working theories about how to support children's friendship interactions, their learning, and their language and literacy development within a bilingual community of learners. In particular, the range of mediators that facilitate bilingual development have become more visible; six teaching strategies that support children's learning have been discovered; and a number of elements which contribute to the effectiveness of the Wycliffe Nga Tamariki Kindergarten's community of learners have been identified.

The teacher-researchers have become more confident in their positioning of bilingualism as an additive enrichment of children's learning. They have moved from an initial stance on play-based learning, to one in which there is more awareness of how peers, adults, and cultural tools contribute to children's learning. These insights not only portrayed children as active learners, but also highlighted how teachers could take a more proactive role in supporting that learning.

The six significant teaching strategies highlighted by the study include being aware of children's need to revisit their learning; moving intuitively between co-construction and scaffolding; integrating all resources available, including cultural and community resources across the curriculum; having fun as part of the learning process; the need to ask more open questions of the children to allow for their interests, rather than teachers' pre-emptive knowledge, to lead the way; and the need for teachers to actively promote peer interactions to support learning.

The study has also highlighted the significance of members of a community of learners having a sense of *belonging*. As a result, teacher-researchers have become

more aware of the need to become learners and to engage with aspects of Samoan language and culture so as to make the setting more meaningful for their wider community of learners. Roles within the community of learners have also visibly become more fluid and flexible, as all participants are in fact learners, including teachers, parents and other adults, as well as children. The study has thus resulted in many valuable practical implications for children, the wider community, for teaching, and for teachers themselves, who have become teacher-researchers in the process.

PART ONE

Introduction and Background

This report documents an action research project carried out between 2003 and 2006 at Wycliffe Nga Tamariki Kindergarten (WNT). The project is one of the first group of six Centres of Innovation, funded by the Ministry of Education, with the aim of recording, enhancing and disseminating innovative practice in early childhood education.

The report is divided into three major parts: introduction and background; insights into working theories; and conclusions and implications of the study. The first part that follows provides information about the inception of the Centre of Innovation initiatives; introduces the WNT setting, its participants and specific aims; describes the research approach and procedures that were utilized; clarifies the theoretical perspectives taken in implementing the project; and outlines the process of the data analysis, as well as explaining the application of working theories to that analysis.

The Centre of Innovation Initiative

The Centre of Innovation (COI) initiative arose from the government's ten year strategic plan for early childhood education, *Pathways to the Future: Ngā Huarahi Arataki* (Ministry of Education, 2002) which sought "to fulfil the government's vision of lifting the educational achievement of all New Zealand children" (p.2). Building collaborative relationships within early childhood communities was seen as central to achieving this goal:

Children's learning and development are fostered if the well-being of their family and community is supported, if their family culture, knowledge and community are respected and if there is a strong connection and consistency among all aspects of the child's world. (Ministry of Education, 2002, p. 16)

The innovative use of information communication technology (ICT) in early childhood education was a further aim that arose from the strategic plan, as well as the Ministry of Education priority "to build links with local Pasifika communities"

(Ministry of Education, 2002, p.16) in order to improve educational outcomes for children in these communities. The latter aim was particularly relevant in the COI project that took place at Wycliffe Nga Tamariki Kindergarten.

The Wycliffe Nga Tamariki Setting

Wycliffe Nga Tamariki Kindergarten (WNT) is a sessional kindergarten located in a low socioeconomic area of Napier. The kindergarten provides five morning and four afternoon sessions each week, attended by 30 children per session. The make-up of the afternoon group has been influenced by a collaborative, trusting relationship that had developed over a number of years between the kindergarten and a neighbouring playgroup within the Samoan Assembly of God Church. To meet the needs of its community the kindergarten invited children from the Samoan playgroup to attend the kindergarten for the four afternoon sessions. Traditionally in kindergartens younger children attend in the afternoons and older children attend in the mornings. The Samoan children stay in the afternoon session until school age, therefore children from two-and-a-half years old to five years old play and learn together in these sessions.

With the enrolment of Samoan children, participation and interest from their parents also increased. Samoan parents often shared in the activities of their children and increasingly became part of the wider community of learners. Although mid-way through the COI project the Samoan playgroup opened its own licensed full day immersion centre, the Upu Amata Early Childhood Centre, the Kindergarten and Upu Amata management committees agreed to continue their collaboration. Currently four to six of the older children who attend Upu Amata for the mornings also attend the afternoon sessions at WNT Kindergarten. The ongoing relationship with the local Samoan community continues to exert a strong influence on the philosophy and educational practices at WNT, and the bilingual environment is viewed by the community as an effective transition time, preparing the Samoan children for entry into mainstream primary school.

Up until the time of the COI project the teaching staff at WNT consisted of two trained teachers and a teacher aide. A Samoan teacher aide from the Upu Amata

church community was also funded by Ministry of Education equity funding to assist in the afternoon sessions. From the start of the project an additional trained teacher was also employed to provide release time for teachers participating in the research. This teacher became an active member of the teacher-researcher team.

The project's inception was influenced by WNT teachers' increasing awareness of ways in which the partnership between the kindergarten and the Samoan community had enhanced opportunities for the learning and development of all children in the afternoon sessions. The Samoan community church leaders and parents also expressed a high level of satisfaction with the way in which their children were immersed in first language within a church-led programme each morning, then enriched in the multi-lingual setting of Wycliffe Nga Tamariki Kindergarten in the afternoon. It is within the context of this partnership, and with the aim of furthering these particular benefits, that the action research took place.

The development of a logo at the start of the project has further encouraged a feeling of belonging and pride within the WNT community. The symbol chosen for this logo is based on a traditional Maori kite made from *toi toi*, woven with flax, with a stylised Frangipani flower (from Pacific Island culture) on top (see Figure 1). The body of the kite represents the children and the two guiding tails represent the kindergarten and the *whānau* or families. Thus, the logo signifies the close relationships found in the kindergarten environment. The inclusion of the words, "Let me Fly", down one side of the kite links to Te Whāriki, the early childhood education curriculum, and also with Podmore, May and Carr's (2001) work in this area.



Figure 1: The WNT Centre of Innovation logo

Forming a Research Team

The research team was made up of three groups of teachers and two researchers. Heading the teachers were the joint project leaders: Heather Simmons, the Head Teacher of the Kindergarten; and Eileen Woodhead, the Education Manager in the Napier Kindergarten Association. The teachers at WNT - Liz Schimanski and Pam McGarva - were also key members of the teacher-research team. In addition, Linda Burch, a teacher aide, and Epenesa Fuli (a bilingual teacher aid fluent in Samoan who was employed through the Kindergarten's equity funding), supported the work of the team. When Epenesa later left to have a baby her role was taken over by Peter Fatialofa. The teachers have been supported by two Research Associates from Massey University in Palmerston North. Penny Haworth worked with Joy Mephram in the first half of the project, and with Joy Cullen in the latter half of the project.

The Focus Group

A broader Focus Group met with the research team at key points at the end of each action research cycle. Key participants in this wider group included Nancy Faletutulu and Rose Fatialofa, from the Samoan Upu Amata community; Marieta Enticott, from the Pasifika section of Parents as First Teachers programme; Principals from contributing schools; Cherreen Exeter, Developmental Officer in the Ministry of Education; Carlyle Kindergarten staff as peer support; and Fran Hurworth, then the Massey University Professional Development Director based at Napier and now Senior Teacher at the Heretaunga Kindergarten Association.

Theoretical Frameworks

Over the course of the project two theoretical frameworks have emerged as being significant. These include the underpinning sociocultural philosophy reflected in the

community of learners approach, and the particular philosophy on bilingual education held at WNT. These theoretical aspects are briefly outlined below.

Sociocultural Underpinnings

The Centre of Innovation's central focus on a community of learners reflects the sociocultural perspectives that have increasingly influenced early childhood education during the decade since the 1996 publication of Te Whāriki, the early childhood curriculum (Anning, Cullen & Flear, 2004; Nuttall, 2003). Current sociocultural debate builds upon the early work of Vygotsky that emphasises the socially constructed nature of learning. Subsequently, post-Vygotskian researchers have developed the concept of community of learners as an educational approach, particularly in relation to school-based programmes (e.g. Brown, 1994; Rogoff, Goodman Turkanis & Bartlett, 2001).

The community of learners reaches well beyond the beyond the walls of the kindergarten classroom at WNT, encompassing not only children and teachers but also parents and other professionals. Brown (1994) emphasizes that such a community incorporates overlapping “multiple zones of proximal development” (p. 7) that involve learning for all participants (parents, children and the wider community), and involves the pursuit of learning in a way that is strategic, self-motivated and purposeful, within an environment where individual differences are legitimated and reciprocal learning and teaching occurs.

Learning and teaching depend heavily on creating, sustaining and expanding a community of research practice. Members of the community are critically dependent on each other. No one is an island; no one knows it all; collaborative learning is not just nice, but necessary to survival. This interdependence promotes an atmosphere of joint responsibility, mutual respect, and a sense of personal and group identity. (Brown, 1994, p. 10)

Within early childhood education, influential concepts such as negotiated curriculum, relationships and partnerships, co-constructed learning, community meanings and funds of knowledge, and children as competent learners are grounded in contemporary sociocultural debate. Te Whāriki's sociocultural underpinnings, as well as other associated resources for teachers, such as *Quality in action. Te mahi whai hua* (Ministry of Education, 1998) and *Kei tua o te pae Assessment for learning: Early*

childhood exemplars (Ministry of Education, 2005) have promoted a sociocultural perspective on learning and teaching that is influential in the WNT programme.

Perspective on Bilingual Education

At WNT, supporting bilingualism is viewed as a two-pronged approach which works to enhance the total language resources of the child, providing support for first language maintenance as well as building English language competence. Bilingualism develops along a parallel continuum which may not be equal on each side, so therefore “does not necessarily imply competence or fluency” in both languages (Gibbons, 1991, p. 1). Learning English at WNT essentially takes an additive rather than a subtractive approach (Lambert, 1974), thus English is not promoted at the expense of the first language of the child. The team at WNT believe that young children require abundant and rich input in their first language to support ongoing cognitive development as well as providing a firm foundation for the development of English as a second language (Baker, 1996; Cummins, 1984; Gibbons, 1991). They also acknowledge that English is likely to be an essential part of the children’s future. Such a position is strongly supported by the Samoan Upu Amata community, and by May (2005), especially in the context of working towards enhancing future academic success.

The Action Research Design

At the start of the project, the team developed one overarching research question along with three key objectives. The team also evolved its own particular approach to action research, based on theories that appeared to be most relevant to the WNT context. In addition, the team created specific foci for each action research cycle which led to the development of relevant procedures for collecting data in that cycle. These foci then took the foreground in guiding the final data analysis. Although the original key question and objectives always remained in the background, these were intertwined across the various cycles, as will be explained below.

Overarching Research Question and Key Objectives

From its inception, the COI project in WNT has been guided by one overarching question: In partnership with Upu Amata and the associated pre-school playgroup, how can learning and teaching be improved for all children in the inter-cultural setting of the afternoon sessions at Wycliffe Nga Tamariki Kindergarten? Translated into Samoan this reads: Autu O Le Su'ese'ega. E fa'apafea ona fa'aleleia a'oa'oga ma le A'oa'oina a tamati uma o lo'o i totonu o. Lenei'o o lo'o fa'atasia ai aganu'u ese'ese pei o vasega o lo'o faia i aoauli i le aoga. Fa'ata ita'i i Wycliffe? O lenei faiga a lo'o galulue so'oso otau'au ai le Ekalesia Fa'apopotoga a le. Atua, Samoa ma le aoga Fa'ata'ita'i.

In addition, three key research objectives were initially put forward and these were later interwoven through the various action research cycles.

Objective One: To increase understanding and knowledge of how and when to add English for children from non-English language immersion services

The team was interested in how to improve support for the ongoing language acquisition of *all* children in the kindergarten. The teacher-researchers had noticed children code-switching as they moved between various community languages in the course of their play but they were also aware that this was just one element of the cultural and linguistic elements of children's play interactions. In particular, they were curious about the sorts of language exchanges that might occur as friendships developed and children become *master players* (Harley, 1999). In particular, this objective underpinned the team's reflections in cycles one and three of the action research.

Objective Two: To explore how the use of ICT affects parents' and others' engagement with children's learning

The use of ICT at Wycliffe Nga Tamariki has helped bring children, and their parents and families together as a community of learners within the kindergarten. Each day's events are recorded on digital camera and these stories are made available at the end of each session in power point format. Families have therefore been able to share in their children's learning as they see the photographs and read the stories that have been recorded on the computer. The team wanted to explore further how this media

supported their communications with parents and children for whom English was a second language. This objective was intertwined through cycles two and three in the action research.

Objective Three: To increase understanding and knowledge of how to create a community of learners

The teacher-researchers aimed to further enable the community of learners to share and develop ways of learning that were effective for them. The initial intention was therefore to explore a range of meaningful interactions: children with children; children with teachers; children with families; families with families; families with teachers; and teachers with teachers. The hope was that these insights would provide greater understanding of how to enhance the participation of all members in the community of learners. This objective underpinned the team's thinking across all three action research cycles.

The WNT Approach to Action Research

Action research at WNT has evolved as a reflective process that is enhanced through frequent interchange within and across the research team, with the wider community, and through ongoing engagement with relevant literature. In addition, the WNT team aimed to utilize their emerging fresh perspectives on learning and teaching to bring about considered changes to practice, a factor which McNiff and Whitehead (2005) suggests should be a primary outcome of any action research.

It was also intended that findings from the research would have ripple effect, through dissemination to many diverse groups. This notion is supported by Burns (1999) who suggests that the theories and knowledge resulting from action research should be opened up to wider scrutiny and made available for others to use as applicable to their situation through publication. Indeed, it is such formalization of findings and their subsequent dissemination that is said to distinguish action research from the sort of ongoing reflection that occurs in everyday teaching (Kemmis & McTaggart, 1988).

Over the course of the project, the team's notions about the action research process have evolved from a simple reiterative cycle of observe, reflect, plan and act, to be

viewed as a complex process that can take many turns, branching off into new areas that take the researcher into new directions (McNiff, with Whitehead, 2002; Burton & Bartlett, 2005). In the later stages, it was also discovered that peripheral areas of interest would eventually link back into the main cycle as awareness progressively expanded and new understandings integrated with previously formed ideas. Hence, the process has evolved as emergent, reflective, collaborative, and creative.

Teachers have been referred to as *teacher-researchers* from early in the project, recognizing the fact that they are not merely the receivers of knowledge, but that they were also actively involved in the creative construction of new knowledge in the course of the investigation. Thus, there was a gradual merging of theory and practice based knowledge. Burton and Bartlett (2005) see such an approach as eminently relevant to the needs of teacher-researchers, particularly within the context of best practice research scholarship, and the Centre of Innovation projects fit well with this perspective.

The Action Research Procedures

Over the three years of the project, three action research cycles were completed, each taking insights into the interactions within the community of learners to a greater depth. This section identifies the focus for each cycle and the investigative tools and procedures that were used. Following that, the practical steps undertaken at WNT to meet the ethical requirements of the study are outlined, and the data analysis and dissemination processes are briefly outlined. At this point, it should be noted that in each action research cycle, some purpose-specific tools were selected while others were specifically developed to meet the needs of the enquiry. In addition, a number of investigative tools which were already part of the kindergarten's existing assessment and planning procedures underwent further development as part of the research process.

Cycle One

The teacher-researchers initially wanted to find a pathway to understanding and extending positive interactions between children from differing cultural and language backgrounds at WNT. Hence, children's friendship interactions became the focus for

the first action research cycle. This was in keeping with the team's objective to increase understanding and knowledge of how to create a community of learners. Four focus questions were developed for this cycle:

- How are children moving in and out of groups?
- Do non-verbal communications initiate and sustain friendships and if so how?
- Does code-switching occur in the forming of friendships?
- What other factors contribute to making friends?

Observations of each child were recorded on specifically constructed individual *Friendship Maps* (see Appendix A). This format was to some degree, influenced by the work of Bodrova and Leong (2003) who have investigated patterns of friendship interactions within early childhood education contexts. At WNT, interaction episodes were recorded using a narrative approach similar to that used in Cullen and Allsop (1999). A note was also kept of the focus child's age, the date of the observation and any pertinent details about the context on the day data were collected.

The friendship data were collected throughout October and November in 2003. Over this time, one teacher became a teacher-researcher each week. The child whose turn it was to be the focus for that day wore a small lapel microphone, enabling snippets of audio taped conversation to be later transcribed and added to the data concerning that child. However, the team later realized that this did not provide sufficient contextual detail to support the translation from the Samoan language. Frequent code-switching between first language and English also added to the translation difficulties. These issues were, however, later resolved in the design of Cycle Three.

Teacher-researchers' experiences were shared at subsequent team meetings, and this proved to be valuable for maintaining consistency of data collection procedures and facilitated collaboration. Teachers also entered their personal reflections on each child into individual journals at the end of each session of observation, including notes about the context that day, such as any changes to the routine, and ideas for preliminary data analysis. In addition, parent voices (written comments provided by parents on a child's activities on the day) were attached to the relevant friendship

maps, thus increasing the team's insights into how parents were viewing themselves and their children within the learning community.

Cycle Two

In the second phase of the study the teacher-researchers decided to look more closely at complex and sustained interactions and the development of children's working theories about their world, as well as the role of adults in facilitating this.

Observations of the friendship interactions between children as well as the team's reading suggested that social interactions may provoke higher levels of language (Bodrova & Leong, 1996) and cognition (Vygotsky, 1978), and that these factors may be enhanced through communication with adults (Black, 2004; Jordan, 2004; Rogoff, 1990).

The team therefore set out to identify and document episodes that demonstrate children developing working theories of their world. At first it was planned that each teacher would take on the role of researcher for a week at a time. However, it was quickly discovered that interesting episodes could not be predicted before these occurred. Thus, a *shifting lens* approach was ultimately employed (Wragg, 1994; Wolcott, 1988), allowing individual teachers to identify and respond to relevant episodes in-action, and to record these as they occurred naturally within the context of the kindergarten.

By the end of August 2004 the teacher-researchers had gathered a total of 41 teaching and learning stories that could be utilized in the action research. The stories were initially formatted and analysed using the curriculum strands from *Te Whāriki* and Carr's (2001) associated learning dispositions (e.g. 'taking an interest'). An additional category of adult-child interactions was added to inform the analysis of teaching interactions (see Appendix B). The interactions highlighted in Appendix B are 'joint attention' and 'investigating'. In this story, the teacher shows her commitment to responding to the child's questions through drawing on and extending his bilingual language resources, as well as her own. Highlighting teaching strategies in this way helped increase teachers' awareness of the strategies they used, and ultimately this also enabled them to identify further strategies and refine these as time went on.

The annotated stories were discussed and reflected on within the teacher-researcher team at regular intervals over the time of the data collection, as well as with the research associates. A number of theoretical frameworks for the analysis of the working theories were considered during this phase of the study, including Rogoff's (2003) three lenses of analysis (personal, interpersonal and cultural/institutional), and Jordan's (2004) differentiation of scaffolding and co-construction. The research associates also offered additional questions that could extend the analysis beyond the initial dispositional approach that was used for teaching and assessment purposes. Although the stories could be analysed using these ideas, they did not bring the data to life for the teacher-researchers in the meaningful way that had been experienced during Phase One. At this stage, a focus group meeting with community representatives and stakeholders was planned, and provided a catalyst for the analysis of the Phase 2 data.

Encouraged by the research associates who drew upon contemporary writers who argue that teacher-researchers should draw on their own practical experiences (e.g. Edwards, 2000; Eraut, 2004; O'Hanlon, 2003), the teacher-researchers persisted in their search for a personally relevant response to the question of what appears to assist children in developing working theories of their worlds. Eventually this led to five teaching strategies, supporting complex and sustained learning evident in the teaching and learning stories, being identified and shared with the focus group. As community participants talked about the stories, two further themes emerged: 'challenging cultural assumptions', and 'affirming and sharing cultural knowledge'. During the process of writing an article for publication (Simmons, Schimanski, McGarva, Cullen & Haworth, 2005), the link between the additional themes and Rogoff's (2003) community/institutional lens was acknowledged. Teacher engagement with the data and community voices worked together to reach a better understanding of what made learning and teaching effective within the intercultural community of learners at WNT. In Part Two we share these insights.

Cycle Three

In the third cycle it was decided to look more specifically at the development of children's working theories about literacy within the learning community at WNT. This was intended to provide more focused insights into the development of working theories, an issue that had not been satisfactorily resolved in Cycle Two, as well as allowing the team to revisit and make links to their initial findings from Cycle One. The team also wanted to resolve the difficulties they had encountered in the first action research cycle with translating bilingual data. They felt that these data would be critical to furthering their understanding of children's bilingual development, and in gaining more in-depth understanding of children's working theories. A decision was therefore made to introduce video taped data to provide greater contextual support in the data (see Appendix C for a sample of a video-tape transcript).

In Terms One and Two in 2005, the teacher-researchers began to collect video-taped data that captured children engaged in the active ongoing process of developing working theories about literacy. While the children were initially distracted by the new media's sudden appearance in their environment, the teacher-researchers persevered and eventually succeeded in collecting fifteen video transcripts during term two, which ultimately provided valuable bilingual data. A crucial turning point in increasing the children's comfort level with the video camera was Liz's discovery that if she turned the LCD screen around children could see what was being captured on the camera. Clearly both children and teacher-researchers were engaged in developing working theories about how to utilise video cameras at this stage of the study.

Fitting Ethical Procedures into Kindergarten Practice

A detailed application was submitted by the research team to the Massey University Human Ethics Committee, and approval (PN Protocol 03/84) was received on 11 August 2003. Ethical principles that underpinned the action research process included respect for personal dignity, individual beliefs, privacy and autonomy. There was also consideration of the need to minimise any potential for physical, emotional, or spiritual harm to participants, researchers, communities or institutions. The consideration of ethical issues by the team also involved discussion, before the study began, about how to avoid possible conflicts of interest. Teachers concluded that,

although their new roles would expand beyond teaching into research, the children's learning needs and welfare would remain paramount.

Information on rights with regard to the research was provided to all participants. Samoan parents were given translated information about the study, and an interpreter was provided to support the informed consent process for these families. In particular, care was taken to inform participants about the voluntary nature of their participation, their right to decline participation in the study without reasons or repercussions, and to withdraw from the study at any time.

The completed friendship map and other written data went into each child's individual Kindergarten Portfolio and children and families were encouraged to revisit this. It was also made clear that all data collected involving children or families, and any information included in the children's portfolios, would at all times remain the property of the child and their family, and would only be used with family consent. In line with these principles, all names of children and families used in this and other publications have been changed to protect identities. Members of the Samoan community were also consulted and provided the team with a list of appropriate pseudonyms for the children from this community who participated in the study.

The teachers created a pamphlet that briefly described the COI research project within WNT. This was given to new families upon enrolment, so that they could take it home, read it and think about what being part of the research project meant for them and their child. Time was also allowed for families to settle into the kindergarten before consent was sought. When consent was sought, the teachers fully explained the research happening in the kindergarten at the time, findings thus far were shared, and any questions from parents were answered.

Since consent to use the information was sought on a monthly basis as research data were gathered a consent form was also developed for this purpose. At that time the teachers would take time to discuss the data with the parent/s individually, and encouraged them to take the kindergarten portfolio home to share the data with other family members.

In the final phase of the project the team also had to resolve how to handle new ethical issues that related to video-taped data. For instance, it was hard to eliminate non-consenting children, and many parents had indicated that they were not happy with video taped data of their child being shared. Eventually it was decided to restrict the use of video taped data to assisting with detailed transcriptions, and these were supported by selected still photographs. Whenever video-taped data was considered to be crucial in live presentations specific permission was requested for this.

Analysis of Findings

The written, audio and visual data gathered in this study were subject to ongoing analysis, involving a reflective process that caused the team to revisit and progressively refine their understandings as each piece of data unfolded and became integrated with the whole. As travel between WNT in Napier and the university in Palmerston North takes about two and a half hours each way by car, communication was maintained by frequent email and phone contact as well as face to face meetings. In the latter stages, telephone conferencing also assisted in the planning and reflection associated with each action research cycle, as well as presentations and publications.

Reflective discussion often revolved around *critical incidents* identified in the data. The importance of such incidents in provoking changes to teachers' practices is widely supported in the literature on reflective teaching (Alton-Lee & Nuthall, 1992; Hargreaves, 1994; Richards, 1994; Wragg, 1994). Later in the project it also became evident that incidents involving particular children or themes often extended over a period of time.

The research team has likened their progress in the data analysis to the zig-zagging course of a kite in flight (see Figure 2). This image links effectively to the WNT's Centre of Innovation kite logo described earlier in this report.

The notion of *provocations* was drawn from the work of Reggio Emilia, as described in Edwards, Gandini and Forman (1998). Interestingly, we later discovered that McNiff and Whitehead (2005) also refer to action research as involving "a zig-zag process of continual review and re-adjustment" (p. 12). The team's flight pathway also reflected the changes in directions that occurred as a result of a series of *provocations* that enhanced the team's insights and provided fresh perspectives to understanding.

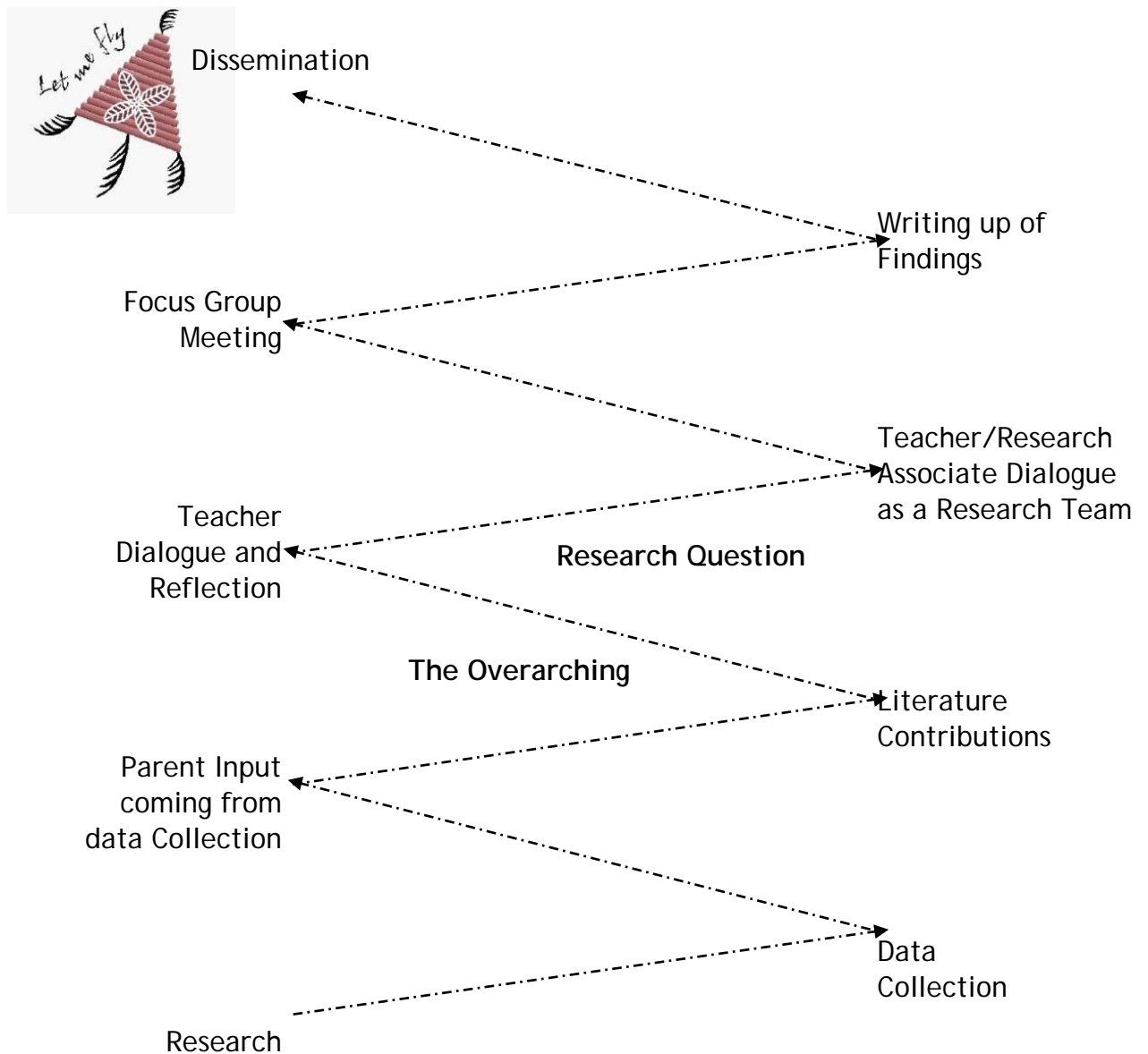


Figure 2: The Flight Pathway of the Data Analysis Process

Provocations often opened teachers' eyes to other possibilities for interpreting events they observed. For example, teachers found the work of Morton (1996) in the course of individual study, and this provided an explanation for why they had observed children and parents apparently called out names without any expectation for a response (see further details under 'The Importance of Names' in Section Two). The Focus Group meetings also provoked powerful changes in teachers' awareness of the different cultural connotations attached to various events in children's lives. For example, sharing of a Teaching and Learning story about a child's interest in bones (Rongo and Heather, 5/8/04) at a Focus group meeting moved a member of the

Samoan community to share her own story about how, as a child in Samoa, she had the responsibility of caring for her ancestors' bones. This teaching and learning story is commented on more fully under 'Expanding the Role of Adults' in Part Two of the report. Discussion of another teaching and learning story (Liam, Arapeta and Heather, 05/08/04) at the Focus Group meeting also shed more light on how Samoan adults might view cultural tools as too expensive for children to play with. This story is examined more fully under 'Scaffolding and Co-construction of Working Theories' in Part Two of the report. Such special insights alerted teachers to remaining open to different cultural interpretations that might enable them to better include the child's familial world in the ongoing learning experiences at WNT.

Key provocations for the research team have included ideas generated in the course of the face to face and telephone meetings; discussions with the wider Focus Group at the end of each cycle; sharing of ideas with other groups of teachers; individual study by teacher-researchers; as well as consideration of a number of theoretical frameworks. Reflections were also stimulated by readings which were shared by the Research Associates at relevant points in each research cycle. The national programme coordinator, Dr Anne Meade, has also provided further readings that provided a wider perspective on key issues.

To take the kite analogy a little further, it is easy to see how the unpredictable, dipping and soaring pathway of a kite might also resemble the different flying conditions that were encountered at various stages of the investigation. For example, the teacher-researcher team found the initial process of data analysis quite exhilarating as they suddenly found a bird's eye view on their practices and were stimulated by all their new insights. That initial soaring flight path was exciting for everyone in the team, and served as a useful confidence bolster when some rougher weather was encountered later in the analysis process. Whenever the team reached an impasse in the data analysis process, however, it would eventually be those vital provocations - the fresh input and perspectives from other sources - that enriched and revitalized our reflections and ultimately pushed us upward towards increased understandings.

Working Theories as a Tool for Analysis

A broad interpretation of the notion of working theories has been utilised as a tool for the data analysis in this report. Interpretive working theories evolved as the team explored, processed and sifted the data to discover the contexts, processes and outcomes of children's learning. Thus, the ongoing evolution of working theories characterizes those in-depth reflections on teaching and learning which are a feature of action research.

The notion of working theories as an analytic tool builds on the shifting lens approach (Wragg, 1994) for noticing and recording relevant episodes in action. Interpretations are dynamic, reflecting the cyclical nature of action research. An example, is the identification of a sixth teaching strategy, towards the end of Cycle Three, as the narrative records were revisited.

PART TWO

Developing Working Theories

On reflecting on the project outcomes, the team have come to realize that they have been mainly concerned with developing working theories about how to support children's learning within the range of interactions that they observed within the WNT community of learners. The development of these working theories initially focused quite broadly on children's social interactions, and most especially on friendships within the cross-cultural context. In the second cycle, the team looked more closely at how to support children's learning; and the third cycle examined ways to enhance children's language and literacy development. Over the whole project there has also been a strong focus on developing working theories about how to build up the WNT community of learners, and more particularly on finding how to further increase the participation of the Samoan families.

Working Theories on Children's Social Interactions

The WNT teaching team believe that English as an additional language is most effectively acquired when the child is an active learner engaged in a natural play-based programme (Baker, 1996; Krashen, 1982). This section describes the team's increased insights into the development of children's social interactions. This part of the analysis looks particularly at children's play and friendships, and identifies factors that seem to be important in this, such as the importance of names, the role of non-verbal language, and the significance of belonging.

Insights into Children's Friendships

In looking at the data gathered in cycle one, the team first noticed that friendship interactions occurred predominantly in the outdoor environment, with trolleys and the water trough being the most common sites for friendship encounters to take place. At this time, teachers believed their findings supported their views about unstructured access to play experiences being highly desirable, especially in relation to providing opportunities for inter-cultural friendships and more complex language interactions between peers. For example when playing collaboratively with the trolleys, children

need to use language for negotiation and turn taking in order to participate and experiment successfully. The team also decided that friendships in the WNT setting were:

- not time bound; vary in length and are sometimes transient;
- more likely to develop when the situation is perceived to be non-threatening;
- often indicated by acceptance of someone joining in another person's activities;
- about having fun together;
- sometimes the result of perseverance or desire for friendship;
- about sharing;
- not always developed sequentially from solitary to parallel, to cooperative;
- influenced by context:
- influenced by absence or presence of regular friends
- influenced by weather (e.g. decisions to play inside or outside)
- influenced by adult presence
- influenced by children's choice of activities and the location of these;
- vehicles for language development and intercultural contacts;
- used as ways to exclude or include others.

To assist in the analysis of this phase, the team looked at Rizzo's (1989) work on friendship indicators. However, their analysis revealed a much larger number of friendship indicators. They also then went on to arrange the identified indicators along a continuum that moved from passive to active overtures, and from receptive to pro-active collaboration (see Figure 3). In the centre of this continuum, the team also identified a special group of indicators illustrating familial acceptance and belonging.

This phase of the study was finally entitled 'The Dance of Friendship' highlighting the similarities between children's interaction patterns and those of a dance. Just as in dance, friendship interactions also involved changes in pace, rhythm, and volume. Similarly, periods of activity could be interspersed with calmer, quieter periods that were imbued with a sense of familial belonging. In the midst of a crescendo of noisy interaction by some groups of children, however, collaborative harmony could also

occur. At times, when children spontaneously greeted each other and negotiated their play together, they came physically closer together, and there was laughter, singing and chanting. Thus, the central zone on the continuum seems to arise from, as well as contribute to, more collaborative interactions, and particularly those involving more proactive collaboration.

The team felt that it was significant that those friendship interactions classified as proactive collaboration involved more complex language and cognitive processes. For example, Steven talked about ‘spinnny things’ at the Science table with Kahu (Friendship Map, 30/10/03). Proactive language evoking complex language and cognitive processes also occurred when children used code-switching purposefully. For example, Peteru was observed providing a peer with the words for a Samoan song (Friendship Map, 20/10/03). These insights led on to the focus for cycle two in the action research.

<i>FRIENDSHIP LEVELS</i>	<i>INDICATORS</i>
<i>Passive Overtures</i>	Turning towards/looking /watching
<i>Active Overtures</i> <i>FAMILIAL ACCEPTANCE & BELONGING</i> <i>Receptive Collaboration</i>	Smiling Calling a person’s name Approaching/moving closer Greeting others Offering an item Showing an interesting item (Hine: look at my plaster; Luka: look at my police jacket -) Showing an impressive action (e.g. look at me – e.g. Litia (20) and also others swinging upside down on bars) Dressing up (another persona perhaps gives a child more confidence in friendship overtures, e.g. Luka repeats, ‘Leoleo’ [police] showing off jacket) Introductions Copying/shadowing/following Playing/doing things along side others Laughter Sitting close (on mat or during story reading) Responding to greetings and overtures Singing and chanting (either to oneself, or in concert with others) Holding hands/hugs/cuddles/sitting on lap Accepting help Accepting items offered Accepting rejection Automatic turn-taking Making space for others to join/come alongside
<i>Pro-Active Collaboration</i>	Negotiating turn-taking Expressing concern for others Giving instructions to others Helping others Translating for others (e.g. Peteru provides Samoan words for song) providing English words for others (e.g. Tama gives the word for head). Creative dramatization

	<u>Note:</u> <i>Some friendship indicators may be unique to bilingual settings like WNT.</i>
--	--

Figure 3 Friendship Indicators and Different Levels of Friendship Interactions

A number of the interesting areas were identified by the team for further in-depth reflection: children's entrances and exits in relationships; reasons for code switching; factors influencing sustained and fleeting interactions; friendships based on shared activity; the co-construction of learning and the influence of adults in friendship interactions; longitudinal study of friendship interactions; and the influence of mixed age groups. The teacher-researchers then met in smaller groups, or mentoring pairs, to facilitate their reflective processes, and this finally culminated in a collaborative report on phase one of the study that included individual reflections on particular aspects of the data (Haworth, Mephram, Simmons, Schimanski, McGarva & Woodhead, 2004).

The Role of Non-Verbal Language

One question the research team was particularly interested in was whether non-verbal communications initiate and sustain friendships and, if so, how. From our examination of the friendship data it appears that non-verbal interactions are important as these pave the way for initial connections between children, and also provide the way into more complex friendship activities. Learning to make friends seems to begin with firstly observing others, and then making non-verbal overtures. Non-verbal interactions were also identified as a feature of the intercultural exchanges in the friendship data. Children who did not share a common first language often had no other satisfactory way of communicating with each other.

In order to move along the continuum from passive overtures to more active friendship interactions, however, it appears that 'trial and error' is a necessary phase. Hence, it is evident that teachers need to encourage dispositions, such as *taking an interest* or *persevering in the face of rejection*, as these may be significant for individual children in finally achieving friendships.

The Significance of Belonging and Fun

The team's research shows that there are many ways for children to indicate that another child is accepted and belongs within the group; for instance, moving over to make space for someone on the mat, and allowing or inviting observers to join in more active play. However, in exploring the data on children's friendship interactions the team began to realize how frequently *smiles* were noted, and the multiple contexts in which these occurred; for example, in greeting, in affirming others, and in sharing pleasure. In addition, holding hands or touching were other commonly used forms of connection during friendship interactions. Such non-verbal interactions seemed to play a significant role in creating a sense of belonging for children.

In all three cycles, laughter - in the context of having fun together - was not only a common, but also an important part of effective learning experiences. Laughter also indicated a sense of group-ness. It appears that achieving a sense of belonging through establishing connections to others may be an important motivator in young children's friendship interactions. Sometimes children would sometimes simply call out to others, inviting them to look at what they were doing or what they had. At other times, children were observed to be simply calling out the names of others. This phenomenon is discussed further in the section that follows.

The Importance of Names

The data on friendships indicated that the calling out of names, to both adults and children, was perhaps a strategy to affirm friendship rather than to achieve a purpose such as gaining someone's attention. This was evident with both the Samoan children and adults. The teacher researchers also recorded a number of instances in which non-Samoan children appeared to be adopting this practice as a means of affirming friendships with their peers.

The team engaged in much discussion about why children were calling out names of others without any apparent purpose. Then, in the course of their ongoing university study, the teacher researchers were suddenly excited to find that Morton (1996) referred to how the names of absent family members in Tongan culture would be repeated aloud to evoke their presence when comforting small children. The team therefore concluded that a similar cultural practice could be operating within the

Samoa community at WNT. It seemed very likely that the frequent calling of significant others' names provided a sense of belonging and security for the Samoan children and their families.

As a result of this finding, teachers began to place further emphasis on children knowing each other's names, and the pronunciation of names, especially in Samoan language. It is, however, recognized that this change to practice at times presents pronunciation challenges to non- Samoan people. Further teaching activities have therefore been added to the Kindergarten programme, such as teachers intentionally using names in their incidental conversations with children; singing that includes use of children's names, and using photos and Power Point stories to reinforce learning the names of all those in the community of learners.

Working Theories on Supporting Children's Learning

The team have strengthened their beliefs that children's learning comes about through engagement in play activities. However, they have also become more aware of how these activities are shaped by cultural values and the inclusion of cultural tools. Learning is also apparently enhanced through both scaffolding and co-construction with others. Vertical groupings also seem to be particularly significant in this process.

Engaging in Learning through Play

Friendship interactions are often believed to take place in a low anxiety environment. Such a context would generally be expected to increase opportunities for natural communication, thereby enhancing opportunities for bilingualism to develop (Krashen, 1982). However, since some children were observed to be repeatedly involved in friendship overtures, and encountered many rejections, it appears that children need resilience if they are to continue to persevere and to ultimately learn from their early experiments in social interaction.

One dimension that interested the research team was the capacity of friendship interactions to enhance the role that dramatic play might have in the development of effective communicative strategies. Since young children are most likely to see friends

as *playmates*, friendship interactions are often associated with fantasy play (Rizzo, 1989, p. 87). Indeed, the team discovered that dramatic play can involve situations where role-playing becomes complex, dressing up takes place, there is a development of dialogue, and environments are created whereby different roles can be taken on and familiar scenes and stories re-enacted with friends. These findings are further supported in the work of Bodrova and Leong (2003), as well as in Haslett and Samter (1997).

In the WNT setting, dramatic play was observed to be inclusive and was often not limited by language abilities. Dramatic play associated with friendships clearly enhanced children's motivation to participate and to communicate. It is also thought that such experiences facilitate cognitive de-centring through which the child takes on another's perspective, and the child's ability to operate with symbolic representations is increased (Harley, 1999). Dramatic play interactions thus contribute to the development of abstract thinking and imagination, as well as encouraging children to monitor each other and make sure informal rules are followed (Harley, 1999; Bodrova & Leong, 2003).

The Significance of Cultural Values

Taking part in the research helped to make the team more aware of the cultural aspects of children's interactions. For instance, as noted earlier, our understanding of the function of children calling out of others' names was greatly enhanced by learning more about the Samoan culture. Sharing of cultural knowledge has also become a more significant feature of the WNT community of learners. Parents already contributed songs and language before the project began, but now many adults were participating in the community of learners. One teacher (Liz) learned how to give the calls in the Samoan *sasa* (action song) while all of the children participated in this activity (Teaching and Learning Stories, 21/08/04; 24/08/04). Children were also observed sharing their expertise in using the Samoan *pate* (drum), and others, including non-Samoan children, also participated in these experiences (Teaching and Learning Story, 23/08/04). These events are referred to in Schimanski (2004), and a more extended description also appears in Simmons et al. (2005). Overall, such

activities have enhanced learning opportunities for all members of the WNT learning community: teachers, parents, and children; Samoan and *Palagi* (non-Samoan).

The Role of Cultural Tools

As the project has evolved, cultural tools have gained greater prominence in the WNT environment, and are viewed as an important way to enhance the learning of Samoan children. Cultural tools have been identified as an important mediator in supporting the bilingual development of all children in WNT (Haworth, Cullen, Simmons, Schimanski, McGarva & Woodhead, 2006, in press). Cultural tools may include songs and chants. For example, one day three boys (Tomoti, Rangatira and Charles) were seen sitting in line when it was time for Grace to be sung. Timoti and Rangatira, two Maori children, began singing the Maori version. Charles, who is neither Samoan nor Maori, joined in when it came to the last line of the Maori version, and then all three boys sang the Samoan version in unison. Afterwards, Heather, the teacher taking mat-time, told Charles that he had sung well, and his reply was, “That’s because I like that one!” indicating that he liked the Samoan version best (Video transcript, 09/06/05).

In addition, the inclusion of Samoan artefacts has helped to affirm the importance of *belonging* for Samoan members of the community of learners. The head teacher, Heather, purchased many Samoan artefacts for the Kindergarten during her 2005 trip to Samoa (where she participated in the Ulimasao Pasifika Bilingual Education Conference with Penny). Peter, the bilingual teacher aide, has since commented that Samoan parents feel more comfortable as the WNT environment more closely resembles a Samoan setting. Cultural resources at WNT now include a Samoan *ava* bowl filled with stones and shells that children can see, feel and touch, and a conch shell that often prompts parents to remember and talk about their memories of blowing these shells in their home countries. In addition, traditional musical instruments, such as a *pate* (drum) and *fala* (a rolled floor mat used as a drum), are available in the music area alongside more contemporary instruments. In particular, the presence of a *pate* has facilitated the inclusion of the traditional Samoan *sasa* (action songs) into the regular programme, and the Samoan children have helped the

other children and teachers participate and conceptualise the meaning of this traditional activity (see Simmons et al., 2005, for a more detailed account).

Scaffolding and Co-construction of Working Theories

Learning and teaching are concepts that are viewed differently by different cultures. For example, in Maori the term *ako* refers to both the concepts of learning and teaching. No clear division is made. However, in Samoan language there are different words for learning (*a'oa'oga*) and teaching (*a'oa'oina*). Some of the ways in which these cultural perceptions influence learning and teaching activities within WNT are illustrated below.

When the focus group met with the research team during the ongoing data analysis, aspects of the collected teaching and learning stories were discussed and the teacher researchers were surprised to discover that the Samoan community representatives viewed some aspects of the stories from a different perspective. This challenged the teacher-researchers' existing cultural assumptions, especially in relation to the value placed on adults and children working alongside each other and co-constructing knowledge together. For instance, in one story a teacher shows a child how to use a Spirit Level (Teaching and Learning Story, Liam, Arapeta and Heather, 05/08/04), viewing the situation as a chance to explore and learn about using real tools. In contrast, the Samoan adults at the Focus Group explained that they would not normally encourage the use of real tools as these had a specific purpose, were not toys as such, and were also expensive. Nonetheless, Samoan adults could see the importance of allowing children to explore and learn how to use real tools.

The episode above affirms the notion of clearly defined roles for learners and teachers in Samoan society. Therefore it may be expected that scaffolding, or the passing on of knowledge by an expert, may be a significant expectation in this community of learners. Nevertheless, the notion of co-construction (Jordan, 2004) may still have relevance in the Samoan culture as a high value is placed on group collaboration. While learning and teaching are regarded as separate notions, different people may take these roles at any particular moment, regardless of whether they are child or adult. So, while the teachers were aware that Jordan (2004) argues strongly in favour

of co-construction of understanding with children, they were also aware of the difficulties of using this as the sole lens for interpreting the data due to the cultural synergies within the WNT community of learners. As Jordan points out, “in practice, teachers who have access to the full range of skills move flexibly between scaffolding and those of co-constructing learning” (p. 42).

Vertical Grouping

“Ma te tuakana ka totika te taina, ma te taina ko totika te tuakana.” [note vowel sounds]

‘It is through the older sibling that the younger one learns the right way to do things and it is through the younger sibling that the older one learns to be tolerant.’

(Brougham & Reed, revised by Karetu, 1996, p. 131)

The project has made the WNT team more aware of the particular cultural constructs relevant to their early childhood setting. One of these aligns with the Maori teaching and learning principle of *tuakana-taina*, in which the more experienced, older child (*tuakana*) is a support person advisor for the younger child (*taina*), as explained in the quote above. In traditional Samoan communities older siblings also take social responsibility for younger siblings within a collective culture. Hence, educational values such as “assuming responsibility for others and identifying oneself as a responsible member with a social role in the group who relies on the co-operation of others” (Rosenthal, 2003, p. 107) are embedded in everyday cultural practices, and actively promoted by parents as a social value (Ngan-Woo, 1985).

Between October 2003 and March 2005, teacher researchers observed and recorded many incidents of older children working with younger children. These incidents were collected over several action research cycles. They were recorded as learning stories and analysed in terms of the relationships between the children. Many of these stories demonstrated that the same children stayed together throughout their time at Kindergarten. Of the 20 stories collected on this theme, all but one illustrated the nurturing of younger children by older Samoan or Maori children.

One such story tells about Abbey.

Abbey was very unsure about staying without Mum on her first day at

Kindergarten. Malia, an older girl at Kindergarten, noticing that Abbey was upset said, “Oh the poor baby,” and sat down alongside while Abbey listened to a story. Malia now seeks out Abbey, apparently to make sure she is alright, and the girls will spend time together at activities. Abbey’s Mum reports that when Abbey is unsure about coming to Kindergarten she asks in the car on the way “Will my friend Malia be there?”

(Learning Story, Malia and Abbey, New Friends, 16/10/03)

Malia and Abbey would often join a group of older Samoan girls in their activities. If Malia was away, another child would take over the caring role (e.g. Friendship Map, Silei, 13/10/03; Learning Stories: Abby and Isa, 15/11/03; Silei and Abby, 18/10/03). A further account of Abbey’s story appears in Haworth et al. (2004).

Boys were also observed to take on a nurturing, caring role; for instance, Henare, an older Maori child, looked after Tony, a new English-speaking child at the Kindergarten (Learning Story: Henare and Tony, 25/05/06). The learning story below provides a further example of a boy providing support for a younger peer:

Today when it was time for mat time Brad was a bit unsure about what to do. A teacher asked Semo who was outside, to take Brad in and help him. Semo helped Brad wash his hands and get ready for mat time. On the mat, Semo sat down next to Brad. The group started singing ‘Twinkle, Twinkle Little Star’. Brad was interested, but Semo could see that Brad was unsure about how to join in. Semo leaned towards Brad and modeled the actions carefully singing the words at the same time. With this patient modeling from Semo, Brad was able to join in and really enjoy having a big friend help him at Kindergarten.

(Learning Story, Semo and Brad, Twinkle, Twinkle, 22/06/04).

While the incidents above are perhaps more exceptional, teachers have discovered that many of the children who featured in the stories collected about peer support are related. For example, there might be a younger sibling with an older sibling or cousins attending the same session. In fact, many parents at the Kindergarten choose to bring their children to a session where they have extended family, even if this means

travelling across town and passing other early childhood centres on the way. Furthermore, this appears to be more common amongst Maori and Samoan families.

Many incidents collected on the theme of vertical grouping provide examples of a *tuakana* who is scaffolding a *taina*'s learning, providing active teaching of skills and knowledge. It appears that the *tuakana* generates some ideas about what the younger child needs to know, as with the Brad and Semo story above. Teachers believe these relationships therefore provide opportunities for the cognitive development of both participants. As the *tuakana* takes the role of teacher they affirm and express their skills and knowledge. These children therefore experience the weaving of interdependence and independence, and teachers have come to see how that the nurturing, caring *tuakana-taina* relationships result in stronger individual independence.

Importance of Adults in Social Construction of Bilingualism and Learning

Ostrosky et al. (2006) point out how relationships and interchanges with adults (such as parents and teachers) are particularly important for children whose families come from “economically poor urban areas with a high proportion of minority families” (p. 178). He also notes that “with an attentive and supportive adult, the child is the bridge that brings the persons, events, goals, dreams, and home culture into the classroom” (p. 181). The current research confirms these ideas, highlighting the significance of adults in supporting cognitive as well as language and literacy development. Within an early childhood setting adults also all play an important part in creating a closer integration of home and kindergarten experiences. As a result of these insights, the teacher-researchers at WNT have identified a number of teaching strategies that seem to have particular relevance to their work.

The teachers have also identified a visible shift from being the knowledge giver to being more of a listener to children. They now stop and pause in action more frequently rather than anticipate a child’s request or direction, and this enables them to take their teaching to a higher level. This process is supported in Ostrosky et al. (2006) who note: “In the area of literacy, the nature and level of teacher support may be adjusted before, during and after a child’s participation in any activity” (p. 179). This finding is also supported by the teachers’ increased awareness that they often moved intuitively between directed scaffolding and the more equal co-construction of knowledge.

Over the latter stages of the project it became increasingly evident that the role of *the engaged adult* is vital in literacy interactions. For example, the teaching and learning story in Appendix B (Peteru and Heather, 02/08/04) illustrates how Heather’s interaction with Peteru was critical in expanding his language. In turn, Peteru also provided Heather with more access to his Samoan language, thus creating a bridge between the two worlds. Thus, time and space need to be consciously made to work with children in developing working theories about literacy. This realization has encouraged the WNT teachers to become more purposeful about creating time and space for children to pursue learning, and they have also become more conscious of the associated benefits of this approach.

Teaching Strategies

After a shift in the team's attention, to focus on the implications of the data for learning and teaching at WNT, discussion and reflection in the teacher-researcher team identified five key teaching strategies that were illustrated in the data:

1. Teachers are aware of children's need to revisit their learning;
2. Teachers move intuitively between co-construction and scaffolding;
3. Teachers integrate all resources available, including cultural and community resources across the curriculum;
4. Teachers and learners have fun as part of the learning process;
5. Teachers are aware of the need to ask more open questions of the children to allow for their interests, rather than teachers' pre-emptive knowledge, to lead the way.

These five teaching strategies are visible in many of the teaching and learning stories collected by the teacher-researchers in the second and third cycle of the project. One episode that illustrates many of the strategies in action occurs in a Teaching and Learning Story recorded during Cycle Two (Rata and Heather and the Milkman, 29/07/04). Rata was pretending to be the milkman and approached Heather asking if she would like to buy some milk. Heather at first attempted to steer the conversation towards the milkshake flavours, but then realized that Rata's real interest was in how much each milkshake would cost (strategies 2 and 5). This led to extended discussion about which types of milkshakes were more expensive and why (strategy 3). Heather also noticed that Rata was pleased when she 'paid' for her milkshake (strategy 4). On the following day, Rata's interest in money was confirmed again when Rata came up to Heather and said: "I am going to make chocolate milkshakes and they will cost you \$8; do you want some?"(strategy 1). Further illustrations from the data that support the first four of the teaching strategies listed above, and discuss these in relation to the two themes (challenging cultural assumptions; affirming and sharing cultural knowledge) that emerged from the Focus Group contributions, are presented in Simmons et al. (2005).

Later reflection on the data at the end of the project has highlighted a further, *sixth strategy* for the team: *teachers actively promote peer interactions to support learning* (manuscript in progress). This latter insight arose from the team's deeper consideration of the learning stories shared in the earlier discussion on Vertical Grouping. Collectively, the six teaching strategies reflect the sociocultural philosophies that guide teaching at WNT (see further discussion of this under 'How Children Develop Working Theories of their Worlds, in Part Three).

Working Theories on Children Developing Language and Literacy

The later stages of the project, which focused on how children develop learning through language and literacy, led to greater awareness of the many ways in which language and literacy development is supported within the WNT setting.

The Development of Language and Literacy

The research team hold a firm belief that Samoan children achieve greater educational outcomes when they learn in a setting that embraces their language and culture (Fleer, 2002) and values prior learning experiences. For this reason, the afternoon sessions in WNT are rich in languages, including Samoan, Maori and English, and there is a print-rich environment with take-home library books available in all of these languages. *All* children are therefore exposed to and gain from rich linguistic input.

This approach upholds the Kindergarten's emphasis on maintaining children's continued development in their first language. Samoan families are especially supportive of this practice. Samoan and Maori resource teachers in the setting also bring children's heritage languages alive at the Kindergarten.

The use of digital cameras and Power Point stories have also helped with the development of relevant literacy resources, adding a visual dimension and the facility to translate stories into children's first languages to assist in their understanding. Through the use of such tools, learning experiences happening within the Kindergarten and special events in the community are able to be recorded and revisited by children and their families (manuscript in progress).

The particular code (English or Samoan) chosen by more fluent bilingual children usually varied according to the ethnic make-up of a particular friendship dyad. However, data collected in the first action research cycle suggested that English language commonly occurred in children's utterances that were just one or two words in length. Since these isolated English words generally occurred in the midst of a fluent stream of Samoan language, it may suggest that children did not always have Samoan vocabulary that was relevant to the Kindergarten context (Haworth et al., 2004). For example, Isa was heard to insert a single English word "painting" in the midst of a flow of Samoan language. (Friendship map, 13/10/03), and Selel included the English word "dinosaur" in his Samoan conversation. (Friendship map, 14/10/03).

In contrast, data collected in the later stages of the project did not include many single word code switching (Haworth et al., 2006 in press). This may suggest that increased input from the bilingual teacher aide was effectively filling the gaps identified in the Samoan children's first language. However, it is also possible that this change was influenced by the fact that younger Samoan children were not present in the second half of the project. Nonetheless, the team maintain their belief that rich input facilitates ongoing growth of the children's first language and is therefore likely to enhance the development of English as an additional language. The literature strongly supports this stance (Baker, 1996; Cummins, 1984; Foster-Cohen/Meade 2002; Stewart, 2004). Furthermore, May (2005) suggests that such an additive approach to bilingualism enhances the likelihood of children experiencing further academic success in the future.

Code-switching was another frequent feature of children's friendship interactions, and this appeared to assist fluent expression for Samoan children with limited spoken English (Haworth et al., 2004). These findings have strengthened teachers' belief that code-switching is not only desirable but also important as it enables bilingual children to draw on their total language repertoire. In addition, the literacy episodes that were captured and translated during the later part of the project confirmed the team's earlier instincts that bilingual code-switching was in fact part of on-going communication,

rather than being first language communication unrelated to the immediate task (Haworth et al., 2006, in press).

Furthermore, when reflecting on the data in the later stages of the research, it became apparent that familiarity and revisiting for children during reading out loud was important. The teacher-researchers became aware that children tended to revisit their literacy experiences because of the link to personal pleasure, the building of confidence and the 'feel good' factor. This ultimately produced a cycle of positive motivation and reinforcement. The project has therefore made teachers more aware of the value of revisiting children's language experiences. Through repetition, children are free to revisit relevant features of a particular language, thus building greater fluency and motivating ongoing learning:

Children delight in hearing and chanting short rhymes, jingles, songs and poems. With repetition, these oral texts become familiar, and children join in the choral recitation and experience the variability of in rhythm, pitch and sounds of language. (Ostrosky, Gaffney & Thomas, 2006, p. 182)

In addition, Ostrosky et al. (2006) point out that respect for each family's culture, values and beliefs is in fact critical to building the sort of relationships and oral interchanges which lead to later effective literacy learning. Indeed, the value of repetition as a valid learning strategy within Samoan culture was powerfully affirmed by a Samoan elder who commented positively on this aspect of Heather and Penny's conference presentation in Samoa (Haworth & Simmons, 2005).

Mediators in Children's Bilingual Development

Over the project certain mediators have emerged as significant in the development of children's bilingualism. Mediators (Vygotsky, 1978) are defined as agents of change in children's learning:

A mediator facilitates the child's development by making it easier for the child to perform a certain behaviour. In the Vygotskian framework, mediators become mental tools ... Like other cultural tools, mediators exist first in shared activity and then are appropriated by the child. ... Overt mediators function as

scaffolding, helping the child make the transition from maximum assisted performance to independent performance. (Bodrova & Leong, 1996, pp. 69-70)

It has become evident that children's developing bilingualism is mediated not only by adults (teachers, teacher aides and parents), but also by peers, cultural tools (including artefacts, music, song and games), and language input (including both private language and code-switching). Some examples include:

- ❖ *Adults*: Teacher awareness that children need to use their first language as a tool for thinking when playing a sound naming game (Video Transcript, Pam, 12/04/05);
- ❖ *Peers*: Mareta utilizes Samoan language to help other children follow the instructions in process baking (Video Transcript, 07/03/05);
- ❖ *Language Input*: Private language used by Tama in the sandpit helps to direct his behaviour (Friendship map, 16/10/03).

The interweaving of the roles of adults and children, teachers and learners, is also shown in the teaching and learning story in Appendix B (Peteru and Heather, 02/08/04). More detailed insights into the findings about children's bilingual development within the WNT community of learners, including how children themselves emerge as active and persistent learners in this context, have been reported in Haworth et al. (2006, in press).

Ultimately, these insights have provided specific encouragement for teachers to be confident about actively scaffolding language learning, rather than just believing that appropriate language acquisition will occur naturally. There is also a greater awareness now of the need to balance direct scaffolding of children's learning with the provision of time for children to direct their own play and hence their own learning.

Working Theories on Building our Community of Learners

As the team reflected on their work with Samoan families over the course of the project they became aware of the increased interest and commitment by parents, and

the enhanced links between home and the Kindergarten. These factors have ultimately highlighted for teachers the significance of creating and nurturing a sense of belonging within their community of learners.

Increased Interest and Commitment by Parents

Teachers have noted that the parents' interest in the Centre of Innovation project at WNT became more intense after the start of the second cycle of the action research. This increased attention by parents may have been due to the greater focus on learning and teaching in this cycle, and perhaps reflects parents' keen desire to support their children's learning. As a consequence of parents' increased involvement, teachers have been able to establish more effective home-kindergarten links, in particular leading to more in-depth discussion with parents about how children's learning on particular topics was being extended within the home. This has also been facilitated by the feedback in Parent Voice, particularly in response to items, such as the teaching and learning stories, which were placed in their children's Kindergarten portfolios. Heather also relates how the cultural relevance of some resources in the Kindergarten has captured parental interest and created greater links between the WNT teachers and parents:

At the end of each session there is quiet time, when the children need to sit down with a book or a puzzle while they wait for their parents to arrive to take them home. There are some large books in the children's library that have lots of glossy pictures, showing people, places and events in Samoa, and today Salesi curled up on the couch to read one of these books. I came over and sat down beside him, thinking that he might like to talk about the pictures. Salesi was very reluctant to talk to me about the book; but then his Dad arrived and Salesi rushed over to show him the book. He spread it out on the mat and pointed out things to get Dad interested. Pam, one of the other teachers, then suggested that Salesi might like to take the book home.

*Salesi kept the book at home for several days, and later Peter, the bilingual teacher aide, talked to Salesi's Dad about what this had meant for his son. Afterwards, Peter translated **Dad's Voice** into English so the teachers could*

record this. Salesi's Dad said that "Salesi really enjoyed reading the book on Samoa. He likes to look at the pictures of the young children wearing lava lava and other Samoan clothing." He also noted that "Salesi talks a bit about the Samoan culture and flowers."

Experiences like this helped to affirm teachers' practices, and also encouraged constructive reflection on how to further increase links to knowledge and experiences that children would be able to share in meaningful ways with their families.

Enhanced Links between Home and WNT

There have been many ways in which the project has enhanced the links between home and WNT. Early in the project, as related in Part One, the Kindergarten committee and staff worked together to develop a logo that would represent the Kindergarten, the community and the project. This process and the kite symbol that was developed allowed all members of the community - especially parents, committee and the Maori and Samoan community - the chance to express their ideas and feelings and share in the pride of the Kindergarten, as well as giving the project definition and helping to build an understanding of the unique aspects of this Kindergarten.

A COI notice board was also set up at the start of the project and this has kept families up to date regarding up coming events related to the research, such as visitors. In addition, a section has been entered for COI activities within the parent newsletter and monthly committee report. This allows parents to comment or discuss issues with the staff or other people involved in the project.

Over the course of the three year project the teacher-researchers have noticed a significant increase in parents engaging in their children's learning through ICT. In particular, information technology used within the kindergarten, such as power point stories, has helped to cross language boundaries for many Samoan parents. These increased insights have led to Samoan translations of the power point stories being provided. This has enabled parents to talk more effectively to their children about what is happening at Kindergarten, and also to talk to Peter (the Samoan teacher aide)

in Samoan, who then records their Parent Voices, thus enhancing further important links between home and kindergarten.

The opportunity for parents to share their thoughts has also created further links between WNT and home. After the data collection for each research cycle was completed parents had a chance to read what had been recorded about their child, and the teacher-researchers subsequently collected their written responses to this, thus adding Parent Voices to the data. Initially parents were unsure how to contribute and use the Parent Voice forms, but as time went on they became more familiar with the forms, and the teacher-researchers became aware that a change had occurred. Parents and families are now more confident and more prepared to add their voice to the data. The WNT team feel that this is a result of keeping families/community informed, so parents are more comfortable to offer their thoughts and ideas.

The Significance of Belonging

A sense of belonging has been nurtured at WNT as a result of the bilingual and bicultural practices which work towards creating a seamless flow between the children's homes and the kindergarten. As noted earlier, parents on the kindergarten committee became actively involved in eagerly making the *toi toi*, flax and shell kites that symbolised the project. Samoan parents also freely report that they feel comfortable and welcome when their home language is used at kindergarten. They report feeling greater trust as they are coming into a setting where Samoan adults participate, and have expressed delight that Samoan cultural decorations are now used to decorate rooms for special occasions. In fact, community members have commented on such occasions that it is just like coming into a Samoan *fale* (home). As a result of these changes, the teachers have come to view sharing of cultural differences as an enriching part of the programme.

Krashen (1982) suggests that when the affective filter is lowered, relieving the stress and anxiety that inhibit input, children feel comfortable and secure and are thus more likely to acquire a second language. The teachers also believe that when children feel they belong this lowers the affective filter, enabling greater gains to be made in language acquisition, and a heightened receptiveness to learning. One way in which

the affective filter is lowered and belonging is enhanced within the WNT context is through the *tuakana-taina* relationships which was referred to earlier. When an older child (*tuakana*) includes a younger child (*taina*) in activities or group experiences this helps the *taina* to feel he/she belongs. As belonging becomes more firmly established this leads to increased confidence, and children become more active participants. The teachers have also become aware that belonging is often typified by laughter and smiling as children happily engage in play together.

In addition, the teaching and learning stories frequently provide examples of both boys and girls showing caring and nurturing behaviour. For instance, physical closeness between children (hand holding, knee sitting, sitting very close, hugging, cuddling, carrying, applying ice packs to minor injuries) is a common theme within these stories. Physical closeness is also apparent in many of the Dance of Friendship indicators (see Figure 2). Through such observations teachers have come to recognise the value and desirability of physical closeness between children.

At the outset of this project teachers believed they should encourage vertical grouping. However, the increased consideration of cultural constructs that has occurred over the time of the project has resulted in an increased respect and deeper understanding of the rationale for promoting a vertical grouping model. There is also now a better appreciation of the differing educational aspirations that parents hold for their children in line with their specific cultural values.

The research process itself has stimulated and enhanced members of the community of learners in many ways. Parents were excited as each new phase evolved. Peter (the Samoan teachers' aide) worked enthusiastically to translate the Samoan language excerpts on video tape. Furthermore, the teacher-researchers' enthusiasm about the video data set may be partly attributed to parents' feedback indicating how impressed they were with the detailed records of Samoan/English language interchanges.

Expanding the Roles of Adults

Brown (1994) points out, the roles of teachers and learners become less rigid in a community of learners, and it has become apparent that reciprocal teaching has

become a feature of the Kindergarten practices. Learning at WNT is not regarded as the sole domain of children. Teachers have often become the learners as well. For example, teachers and children have learned about the Sasa and Samoan drums; Samoan translations have been provided; and teachers have not only attended cultural events at the Upu Amata church but have also learned Samoan language at night classes. In adopting this stance, teachers have profited from increased pedagogical and cultural insights as Samoan families bring new cultural knowledge into the Kindergarten environment.

In seeking to become more effective members of their community, teachers have also enhanced their knowledge through additional study. Two teachers have undertaken undergraduate university study in the areas of teaching and learning English as another language, and the teaching of Pacific Island students while participating in the study. This reflects their intense dedication to enhancing their effectiveness in the community. As noted in Schimanski (2004), teachers' professional study has added greater depth of understanding which has enriched the reflective processes involved in the action research.

Researchers too have added to their knowledge and understanding through participation in the project. For example, Penny reports that her increased insights into early childhood education have enriched her understanding of young children's bilingual development. In a poster presentation on the topic of professional development and practitioner research, Joy reflected:

The role of research associate differs from any previous research role I have undertaken; this is the teachers' research, and Penny and I are there to support, not to direct. In this role, there is an ethical issue of how to foreground the teachers' voices in the research process, to retain the integrity of their practice-based perspectives at the same time as forging links with the wider research community (Cullen et al., 2005).

The keen interest and involvement in the COI project by the Samoan Upu Amata community has also led to Heather, the Head Teacher, taking on a mentoring role with the Upu Amata present and future early education teachers. Student teachers have also

enriched the WNT community during their time there, and will ultimately share their increased understandings with the Upu Amata centre.

Simmons et al. (2005) reveals how the team's discussions with Samoan members of the Focus Group also provided fresh perspectives on the incoming data. Of particular note here were the different interpretations of adult roles and different approaches to learning and teaching. For example the team discovered that, due to safety concerns and the cost of replacing expensive equipment, a Samoan adult might be more inclined to remove a tool from a child if it was not being appropriately used. Different cultural attitudes with regard to the presence of various cultural artefacts, such as bones, at the Kindergarten were also shared. In turn this led to one adult sharing a fascinating story of her experiences as a Samoan child in helping to care for her ancestor's bones, and it was decided to record this story on power point so that other parents and children in the WNT learning community could read and discuss it.

Overall, through the project, the teacher-researchers report that they have become increasingly aware that the concept of a community of learners strives to create and sustain an environment that fosters in-depth thinking about powerful ideas. Powerful ideas can include reflections on how children's learning can be enhanced; how changes to teaching practices can be devised that meet diverse children's needs for language, belonging and empowerment as learners; and how members of the learning community can support each other's endeavours. The teachers feel these may be ambitious goals, but are also well worth working towards.

PART THREE

Conclusions and Implications

In this final section we recall the key areas of learning that the team have identified in the COI project at WNT, and pause to reflect a little more on the sociocultural perspective taken in understanding how children develop working theories of their world. We then proceed to summarise the ways in which knowledge acquired during the project has been disseminated, and the various audiences for this. We will move on to briefly mention the team's plans for future research initiatives, before finally identifying the important practical implications that have been identified for children, teachers, researchers and the wider community.

Key Areas of Learning from the COI Project

The COI project has aided the insights of the team in many ways, but most especially it has enabled teachers to enhance their working theories of how to support children's learning within the multicultural setting at WNT. In particular, the team's development of working theories has focused on children's social interactions, discovering more about how to support children's learning and their language and literacy development, and gaining further insights into how to build the WNT community of learners to make it more effective and more inclusive.

The first action research cycle honed the teachers' observational skills, and the resulting data gathered added to the team's understandings about children's social interactions in several important ways. As a result, the role that non-verbal language plays in establishing friendship relationships between children and helping them to initiate and negotiate cross-cultural connections has taken on greater significance for teachers. The importance of using names within Samoan culture has also been highlighted for the team, and changes to teachers' practices have resulted from these insights. The teachers have also become aware of how the sense of belonging and fun that imbues many of the children's interactions ultimately contributes positive opportunities to enhance children's learning and language development.

In the second action research cycle, the team refined their format for teaching and learning stories, and used this to assist in developing their working theories about how children's learning can be supported. The outcomes from this cycle include understanding of the importance of opportunities for children to learn through a play-based environment, as well as the significance of embedding cultural values and including cultural tools within that environment. These aspects of practice enable children to build effectively on their prior experiences and knowledge. The teachers have also become more aware of how older children assist younger children's learning within the WNT context. Adults are seen as significant members of the WNT learning community, and add to the knowledge and language experiences of the children in many ways. The teachers now feel more comfortable with the need for more directed scaffolding of learning, while still allowing opportunities for more equal co-construction of knowledge. Teachers realize the need to become learners and to engage with aspects of Samoan language and culture so as to make the setting more meaningful for their wider community of learners. Thus, roles within the community of learners have had to become more fluid and flexible, in order to accommodate diverse needs. All participants within this community are seen as learners, including teachers, parents and other adults, as well as children. Ultimately, these insights culminated in teachers identifying a number of strategies that appear to be linked to effective practice within this setting.

In the final action research cycle, the focus turned to finding out more about how children's development of language and literacy are supported. In this cycle, children emerged clearly as active learners, and it also became evident that many interdependent factors weave together to facilitate effective learning of language and literacy. In particular, this was illustrated through the identification of a range of mediators, including peers, adults, cultural tools, the influence of language input by all of these, and the engagement of the children. Learning is indeed a complex and multi-faceted phenomenon.

Throughout the study the team has also been building working theories about how to make their community of learners more effective. Parents have responded positively to these efforts, and interest has grown over the three years of the COI project.

Parents' keenness to be involved in their children's learning has encouraged teachers, and enhanced links between the home and WNT are also reflected in the more effective flow of communication that has taken place between members of the extended community of learners. The significance of belonging for all members of a community of learners has emerged as an important factor in this, and teachers have expanded on their repertoire of strategies to support that. With the increased effectiveness of these strategies more adults now participate in the WNT community of learners, and the roles they hold have expanded in many useful ways. For example, teachers have become learners of Samoan language and culture and this has enhanced their understanding of how to work more effectively with their community of learners. The inclusion of Samoan language and culture in WNT has also encouraged parents to participate more actively. The parent voices also now show more evidence of parents reflecting on how their child's learning at WNT links with their ongoing learning at home. Heather also mentions that the Kindergarten now has more Maori enrolments, perhaps suggesting a widening recognition of the responsiveness of teachers to diverse needs within this setting. It appears that there may be no limits to the ways in which the WNT learning environment can continue to expand and embrace diverse members from the wider community.

Having reached the end of the project, the team has paused to reflect on a key question that was posed at the start of the second phase of the project: how children develop working theories of their world. Some thoughts follow about how a sociocultural perspective has provided many answers to this question.

What have we Learned about Children's Working Theories of Their World?

For much of the project the research focus has been on the processes that support learning rather than the actual content of learning. In this regard, the data have emphasised for us the arbitrariness of separating the two aspects. The content of children's learning – their interests – is apparent in the narrative records (see for instance, the Spirit level story, in Simmons et al. 2005). Although the research team have not tracked individual children's learning in the project data, there are many examples of children revisiting their learning through the various mediational processes identified in the course of the project. These examples allowed the team to

speculate that the first strategy: “Teachers are aware of children’s need to revisit learning”, is the core strategy that sustains children’s working theories, in conjunction with several mediators - interactions with peers, teachers, cultural, community and centre resources (manuscript, in progress). From this perspective, the six teaching strategies in the project clearly support sociocultural perspectives on the embeddedness of learning in social and cultural contexts, particularly the concept of community of learners.

Sociocultural teaching-learning processes are illustrated in the following examples of the six teaching strategies, all of which involve technology and a focus on literacy learning. The interweaving of the different strategies is also apparent in these examples.

- *Teachers are aware of children’s need to revisit their learning experiences:* Liz scaffolds Rongo’s use of a computer programme and later reflects that it would be a good opportunity for Rongo to peer tutor other children. In this example, revisiting involves relationships with peers, as well as the tutor’s new computer skills. (Learning Story, Rongo and Liz, Pajama Sam, 31/08/04)
- *Teachers move intuitively between co-construction and scaffolding.* In the episode above, Liz illustrated a shift from the more direct strategy of scaffolding to shared co-construction, as Rongo became more confident with the programme, asking questions and showing problem solving skills (or working theories).
- *Teachers integrate all resources available, including cultural and community resources, across the curriculum.* Mareta was excited when she found Power Point slides of people she knew at the Upu Amata Centre she attended in the morning. Mareta shared this excitedly with another Samoan adult in the kindergarten, and talked with Heather knowledgeably about each slide. Heather reflected, “I suspect she had just found a link between two important parts of her life.” Subsequent records reveal Mareta revisiting the Power Point stories, assisting in making the stories for a book, and wanting to do the

writing herself. The technology, a westernised cultural tool, allowed Mareta to make links between settings and build her literacy learning on the authentic cultural tools of her Samoan life – the songs and actions performed at the Upu Amata Centre. (Teaching and learning story, The Power Point Story, 31/08/04)

- *Teachers and learners have fun as part of the learning process.* Having fun together evolves from the strength of the relationships between teachers and children, as well as the relationships between children, teachers, and parents. Heather records how she joined Morgan who was watching the ‘Kia ora, Talofa, Hello’ Power Point Story when she heard him calling out names of people he could see (Video Transcript, 07/03/06). Morgan is laughing and happy, sharing his experiences with others, including Heather. Literacy learning is embedded in this story as Morgan matches pictures, people and names, in a fun way.
- *Teachers are aware of the need to ask more open ended questions of the children to allow children’s interests, rather than teachers’ pre-emptive knowledge, to lead the way.* In the Mareta stories (above) Heather recorded that she “was surprised to discover that Mareta wanted to do all the writing herself”. This insight arose from the strategy of listening and asking, rather than assuming that Mareta just wanted to repeat (or revisit) the power point stories. Heather then switched to scaffolding, resulting in Mareta “brimming with confidence and responsibility” as she fed the pages of a book to match the power point stories, through the laminator.
- *Teachers actively promote peer interactions to support learning.* Rongo’s and Morgan’s stories (above) occur in settings in which adult awareness of the value of peer interactions is important for learning outcomes. The stories also illustrate that children engage in scaffolding and co-co-construction strategies, as well as adults.

Sfard’s (1998) debate on the two metaphors of learning (acquisition and participation) is relevant to the project data. Overwhelmingly, the data support a participation

perspective on children's learning, consistent with Rogoff's (2003) views on transformation of learning. A participation perspective on learning is indicated in the stories above through sociocultural processes such as relationships, authentic (cultural) learning, cultural tools and the interactive teaching strategies of scaffolding and co-construction. Each mediational process indicates an interpretation of learning that foregrounds *participation* in learning rather than passive *acquisition* of knowledge. This affirms and extends the findings on children's bilingual development reported in Haworth et al (2006, in press).

Over time the WNT teachers became more confident in their understanding of Samoan cultural beliefs and practices and how these could be integrated with the teaching strategies to strengthen children's participation. It seems that children's working theories develop through such participation processes. However, the focus on children's working theories also points towards the usefulness of a third metaphor of learning, that of knowledge *creation* (Paavola et al., 2004). Although the data do not focus on long-term outcomes for children, there is ample evidence to suggest that children are actively engaged in knowledge creation through the mediational processes identified by the teacher-researchers. In this way the core strategy of children revisiting their learning experiences provides the foundation for deeper and extended learning experiences which contribute to children's learning outcomes, in conjunction with peers, teachers and families. This increased understanding of how mediators strengthen children's participation in learning experiences, and contribute to their knowledge creation, has helped to clarify how the concept of community of learning applies to the WNT setting and associated settings of home and Upu Amata Centre.

Dissemination of Findings

Along with other national Centres of Innovation, the action research project at Wycliffe Nga Tamariki Kindergarten will eventually contribute to the longitudinal evaluation of the Early Childhood Education Strategic Plan. The short-term purpose particular to this project is, however, to discover how this community of learners operates, to enhance the learning and teaching process, and to disseminate knowledge

about this to the wider parent and professional community. As the Ministry of Education Strategic Plan (2002) states, “While research has taught us much we still have much to learn” (p.19).

Over the three years of the COI project, the findings from the action research have been disseminated in various ways, including workshops, conference papers, and journal articles. For instance, a summary of significant findings has been included in the regular COI Newsletter distributed regularly by the teacher-research team to the wider educational community. A presentation has also been given to local Early Childhood Education student teachers. In addition, papers have been presented at the national Kindergarten Conferences and Early Childhood Research Symposia, as well as the Ulimasao Pasifika Bilingual Education Conference in Samoa.

A summary of the various dissemination activities of the WNT team is provided in Appendix D, and includes notes on feedback from participants in various presentations. Cardno (2003) acknowledges that the reporting of action research is a significant part of the total process in that it not only substantiates the actions that have been taken and any changes that have occurred, but also validates the research experience for both participants and researchers. However, the ultimate impact of the many dissemination activities is likely to be much wider and more far-reaching. It should be noted that the process of preparing for dissemination activities, and the ensuing discussion that often eventuated prior to, during, and after such events, often provided excellent stimulus for the research team’s ongoing reflective process.

The teacher-researchers have kept a record of participants’ responses throughout the various face-to-face dissemination activities undertaken in the course of the project. These responses have helped the research team gauge interest in, and awareness of, the research. These responses have included:

- Particular interest in the first research question on children’s friendships.
- Questions about the meaning of an intercultural setting.
- Questions about the COI application process.
- Curiosity about the reaction of other Kindergartens in the Association to WNT’s increased visibility and status as a COI.

- Interest in programme issues associated with the wide age grouping at WNT.
- Queries about the funding for COI contracts and who is responsible.

Dissemination that includes data and findings from the research provoked the following comments:

- What practices have changed at the Kindergarten?
- The five teaching strategies make teaching visible.
- A Family Day Care Practitioner suggested that these findings would also be relevant when working with babies and infants.
- One of the participants told the presenters that she now understood why a Samoan child, in the Centre that she worked in, insisted in greeting all the adults by name each day.
- The Kindergarten sector needs to be flexible in their session organisation and to challenge historical assumptions about dividing sessions on the basis of particular age groupings.
- Professional Development providers and others have commented that the research findings are useful and relevant.
- One teacher commented that she is now thinking about friendships surrounding particular children.
- Another teacher said that our findings seem to affirm what she had always thought.
- A parent stated that she was now thinking about what friendships meant for her daughter as a learner.
 - Kindergarten teachers noted that they could see the reality in the findings because of how they relate to Kindergartens.
 - A teacher stated that our recent publication had made her think about what is happening in children's friendships.

The dissemination made to a mostly Samoan audience in Apia Samoa produced different responses from dissemination activities in New Zealand. An elder spoke about the importance for him in hearing us speak about memorisation as a mediator for learning another language. This reflected his positive cultural values related to this

style of learning. There was also discussion on the use of technology to create resources and the lack of suitable resources that were available in the Samoan language.

Reflections on the COI Process and its Outcomes

The research team has been influenced by the COI process. In particular, the team have highlighted the impact of the COI hui; the new roles which members of the team have taken on which reconstructed teachers as researchers and researchers as teachers; and the growth of the teachers who have been involved in the project.

The COI Hui

Part of the COI contract was for three or four research team members from each of the six COI's to attend two Hui per year. The Hui were facilitated by Anne Meade, COI Project Leader and Trisha Nally MOE. Sophie Alcock also joined the facilitating team in 2005. Most of the Hui were held in Auckland; however, there was also one Hui that was held in Wellington which the then Minister of Education, Trevor Mallard, attended. Peter, our Samoan Teacher Aide was also able to attend the Hui in May 2005, when the book *Catching the Waves* was launched by Anne Meade. These events have been very exciting for all concerned.

The Hui have helped to challenge the team's directions through monitoring progress and provoking a greater emphasis on theoretical frameworks. The Hui have also kept the WNT team informed of other COI teams' progress. In particular, it has been fascinating to note the similarities that emerged between findings from various groups (e.g. increased parent contact and participation in the programme - extending our Community of Learners).

Reconstructing Teachers as Researchers and Researchers as Teachers:

In recent times traditional educational research has often been accused of being exploitative of schools and teachers (Elbaz, 1990; Johnson, Peters & Williams, 1999; Winch, 2002; Wragg, 1994). In fact, Elbaz (1990) suggests that traditional research is: "turning teachers' knowledge into researchers' knowledge, thus colonizing it and silencing the voice of the teacher" (Elbaz, 1990, p. 17). A more collaborative style of research, that involves practitioners and researchers as partners, is believed to overcome many of these issues (Haworth, 2004). However, the collaborative relationship in the COI project is unique since teachers, rather than researchers, have been placed in the driving seat and challenged to succeed in what would normally be

perceived as researchers' traditional territory. In turn, this has also involved researchers in taking on new roles within the collaborative research partnership.

Forming a collaborative team at WNT has been an evolutionary process in which the researchers initially adopted a role as teacher, scaffolding teachers' knowledge of the research process. Initially the researchers therefore modelled how to analyse data. However, in the second phase of the study the researchers attempted to move away from scaffolding towards greater co-construction by providing a range of models but no final analysis. In this way they hoped that teachers would search for meanings that would be useful to their own practice. Two factors were critical for this process. Firstly, the inclusion of a community focus group as part of the teachers' community of practice; and secondly, making their "practice knowledge" explicit (Cullen et al., 2005; Simmons et al., 2005).

Since teachers work is typified by immediacy and complexity they need to respond intuitively on the basis of practice beliefs and knowledge that have been built up through their experiences (Feiman-Nemser & Floden, 1990). By the end of the three year project, however the teacher-researchers had become more perceptive as observers, more reflective about their practice, and more conscious of the theoretical underpinnings of their intuitive knowledge. They autonomously managed the day-to-day processes of the research, designed effective data collection tools, implemented ethically sound investigative practices and presented with admirable levels of competence and confidence to a range of audiences. Nonetheless, their transformation was not complete. The researchers still needed to actively direct and shape the team's writing, and to advance insights with greater theoretical complexity. Maybe it was never realistic to expect that the teacher-researchers would achieve such a goal which typically operates within the academic domain. In teacher-driven research, frameworks of analysis need to be meaningful to teachers, and have a direct relationship to their practice in a specific context; thus theory-based models may be secondary to practice-based insights.

This insight has caused the researchers to reflect further on the way in which roles and identities are reconstructed within such collaborative partnerships. In retrospect, for

members of the WNT research team, the process could perhaps be best described as one of enrichment rather than one that results in a major transformation of roles or identities. Thus, each person contributes their skills and knowledge to the collaborative endeavour and the product is something different from that which any one member of the team could accomplish unassisted.

“The work of collaboration differs from solo work because it is accomplished, not first in one person’s mind, and then in the other’s, but on the loom between them, in the centre of their joint space” (Donaldson & Sanderson, 1996, p.44).

The product may also constitute a *new set of narratives* (Rust & Meyers, 2006) that enable stories from the field to challenge policy and decision-making. The insights about vertical grouping exemplify this potential for teacher-research.

Practical Implications

Many significant practical implications for children, for the wider community, for teaching, and for teachers have been arisen from the COI project. These are summarised below.

Practical Implications for Children

The team have reflected on the practical implications for children, which include:

- Teachers reported at the end of the first phase that, through the intensive observation and reflective processes involved in undertaking action research, they had developed increased awareness of and deeper empathy for the children at WNT, and this has resulted in more effective advocacy for each child based on fuller knowledge and understanding.
- As children’s friendships seem to provide the initial, foundational social structures in which their learning occurs it is important for teachers and other adults to assist them in their efforts at initiating and sustaining interaction, and in maintaining their stores of resilience.
- Despite some indications that friends tend to share physical, attitudinal, and personal characteristics such as age, gender, race and IQ (Haslett & Samter,

1997) it is now thought to be more likely Rizzo (1989) is correct in stating that, in a multicultural setting, young children's interactions may promote qualities such as loyalty, acceptance and sharing.

- Value for and sharing of language and culture, and the extension of worldviews resulting from cross-cultural liaisons are also thought to positively influence not only children's immediate interaction and learning but, as Baker (1996) and May (2005) have suggested, these seem likely to influence children's long-term learning success.
- Within an effective community of learners it is likely that there will be reciprocity and shared roles; so children, along with their parents and teachers may take a turn at being learners.

Practical Implications for the Wider Community

The implications of the COI project for the wider community have included:

- An increased awareness of the Kindergarten programme and practices by the local schools.
- Increased links with the schools; for example, school principals were asked to participate in the COI Focus Group, and visits to and from the local schools are happening more frequently with more information sharing between the two services.
- The placement of Samoan student teachers at the Kindergarten as a result of the Upu Amata leaders seeing the Kindergarten as a beneficial environment.
- The increased numbers of Samoan adults in the Kindergarten resulted in members of the Samoan community reporting how welcome they felt there.
- Visitors to the Kindergarten have shared ideas and practical suggestions.

Practical Implications for Teaching

The opportunity that the COI project has afforded, to collect and examine in-depth data, has resulted in a number of significant implications for teaching. As Johnston (1992) notes, "standing where the learner stands in order to see his world is not easy, and it is something that you must want to do" (p. 552). This shift in positioning has

been made easier by the COI process, and has also contributed to more effective planning for children.

In particular, the teachers identified six strategies that have assisted them in enhancing the development of children's working theories: the need to revisit learning experiences, informed shifts between scaffolding and co-construction, the integration of resources, and the importance of having fun when learning, and the benefits of teachers actively promote peer interactions to support learning. These factors are seen as useful for teachers to keep in mind when interacting with children.

In addition, as a direct result of their participation in the COI project, the teacher-researchers have also made several important changes to their practices with children, for example:

- There are now more resources in the Kindergarten that reflect the cultures of the children.
- There is a greater awareness, appreciation and inclusion of other languages, in particular Maori and Samoan.
- Teachers place more emphasis on the use of children's names in the programme, including more opportunities to learn others' names and more stress on the correct pronunciation of these.
- More ICT tools are being used, and there is increased use of these in the day to day programme by teachers, children and their families.

The teacher-researchers have noticed an increased understanding and willingness to participate in the early childhood experience of their children by parents and families. In particular, teacher-researchers have noticed that:

- Due to the nature of the techniques for collecting data (especially the friendship maps and the teaching and learning stories), and through teachers talking to each parent about the data collected as part of the process of informed parental consent, parents appear to be more comfortable about adding their thoughts and ideas on the Parent Voice forms; more parents also add comments on the consent forms; and these comments seem to be more insightful.

- Parents have become more enthusiastic about being involved in the Kindergarten and in the project; for example, a parent stood up at a Napier Kindergarten Association council meeting and announced that “being a Centre of Innovation is fun.”
- The arrangements that have been made to transport children from Upu Amata to Kindergarten have also helped families become more aware of the possibilities for utilising a range of early childhood education services.

There has been a marked increase of Maori children and families enrolled in the Kindergarten since the beginning of the project.

Practical Implications for Teachers

The COI process gives rise to several important practical implications for teachers. At the end of the project the teachers felt they had gained immensely from the COI experience. Their comments provide an insight into these gains:

- the creation of more opportunities to relate theory to practice;
- the discovery that research or data collecting for research is fun;
- an increased awareness of how to do research (before I was unsure about how and where to start, how to analyse the data collected to make changes to practice);
- an awesome opportunity to meet people from different levels of early childhood education;
- the chance to face your fears, overcoming that dread of standing up in front of people;
- a trip to Samoa;
- furthering learning about bilingual language development, including the opportunity to undertake extramural study;
- increased links to the community;
- being able to see how research can influence and change your teaching or perhaps to affirm that what you are doing already is good, or to see the relevance to what we do;
- becoming a more reflective teacher;
- becoming a more confident teacher

- being able to network within the early childhood community and see others' innovative practices;
- seeing opportunities to present (e.g. at conferences) as a way to strengthen me personally, so I am now more able to articulate what I do and how I do it;
- the opportunity to engage in lots more reading about modern practices, theories and research than would normally have been done as a kindergarten teacher not in a COI, and this extra reading became enjoyable and exciting, reading became a pleasure rather than a drudge;
- a wonderful experience overall.

The teacher-researchers' closing words really say it all. Their growth as professionals has had amazing spin-offs for them as teachers, for children, for parents and for the wider educational community; and that has to be good news for early childhood education.

References

- Alton-Lee, A. & Nuthall, G. (1992). A generative methodology for classroom research. *Educational Philosophy and Theory*, 24(2), 29-55.
- Anning, A., Cullen, J., & Flear, M. (Eds.). (2004). *Early childhood education: Society and culture*. London: Sage Publications.
- Baker, C. (1995). *A parents' and teachers' guide to bilingualism*. Clevedon, Avon: Multilingual Matters Ltd.
- Baker, C. (1996). *Foundations of bilingual education and bilingualism*. Clevedon, Avon: Multilingual Matters Ltd.
- Baker, C. (2000). *Foundations of bilingual education and bilingualism*. Clevedon, Avon: Multilingual Matters Ltd.
- Bell, J. (1997). *Doing your research project*. Buckingham: Open University Press.
- Bodrova, E. & Leong, D. J. (2003). Chopsticks and counting sticks: Do play and foundational skills need to compete for the teachers' attention in an early childhood classroom? *Young Children*, 58(3), 10-17.
- Brierley, A. (2003) Including non-English speaking background children in the kindergarten programme. *Early Education*, 31(2): 13-21.
- Brougham, A. E. & Reed, A. W., revised by Timoti Karetu (1996). *The Reed book of Maori proverbs. Te Kohikohinga whakatauki a Reed*. Auckland: Reed Books.
- Brown, A. L. (1994). The advancement of learning. *Educational Researcher*, 23(8), 4-12.
- Burgess, F. & Mara, D. (2000). The development of Pacific Islands Early Childhood Centres: A suitable case for networking and mutual support across the sector. *Early Education*, No. 23(Winter), 19-22.
- Burns, A. (1999). *Collaborative action research for English language teachers*. Cambridge: Cambridge University Press.
- Burton, D. & Bartlett, S. (2005). *Practitioner research for teachers*. London: Paul Chapman, Sage.
- Canella, G. S. (1997). *Deconstructing early childhood education. Social justice and revolution*. New York: Peter Lang.
- Cardno, C. (2003). *Action research a developmental approach*. Wellington: New Zealand Council for Educational Research.
- Carr, M. (2001). *Assessment in Early Childhood Settings: Learning stories*. London: Paul Chapman Publishers.
- Cazden, C. C. (1998). Richmond Road: A multilingual/multicultural primary school in Auckland, New Zealand. *Language and Education*, 3(3), 143-166.
- Clay, M. M. (1998). *By different paths to common outcomes*. New York, ME.: Stenhouse.
- Corrie, L. (1995). Vertical integration: teacher's knowledge and teacher's voice. *Australian Journal of Early Childhood*, 20(3), 1-5.
- Cullen, J. & Allsop, G. (1999). Enriching the knowledge base of children's play. A paper presented at the *Seventh Early Childhood Convention*, Nelson.
- Cullen, J., with Haworth, P., Simmons, H., Schimanski, L., McGarva, P., & Woodhead, E. (2005, September). Promoting professional development and practitioner research through a Centre of Innovation. A poster presented at the *European Early Childhood Education Research Association Conference*, Dublin.

- Cummins, J. (1984). Wanted: A theoretical framework for relating language proficiency to academic achievement among bilingual students. In C. Riviera (Ed.), *Language proficiency and academic achievement*. Clevedon: Multilingual Matters.
- Donaldson, G. A., & Sanderson, D. A. (1996). *Working together in schools. A guide for educators*. Thousand oaks, California: Calwin Press.
- Edwards, A. (2000). Research and practice: Is there a dialogue? In H. Penn (Ed.), *Early childhood services: Theory, policy and practice* (pp. 184-199). Buckingham: Open University Press.
- Edwards, C. Gandini, L., & Forman, G. (Eds.) (1998). *The hundred languages of children: The Reggio Emilia approach – Advanced reflections*. Greenwich, Conn.: Ablex Publishing Corp.
- Eisner, E. W. (1998). *The enlightened eye: Qualitative enquiry and the enhancement of educational practice*. Upper Saddle River, New Jersey: Merrill, Prentice Hall.
- Elbaz, F. (1990). Knowledge and discourse: The evolution of research on teacher thinking. In C. Day, M. Pope, & P. Denicolo (Eds.), *Insight into teachers' thinking and practice* (pp.15-42). Hampshire: The Falmer Press.
- Eraut, M. (2004). Practice-based evidence. In G. Thomas & R. Pring (Eds), *Evidence-based practice in education* (pp. 91-101). Buckingham: Open University Press.
- Feiman-Nemser, S., & Floden, R.E. (1986). The cultures of teaching. In M. C. Wittrock (Ed.), *Handbook of research on teacher education* (pp. 505-526). London: Collier Macmillan.
- Fleer, M. (2002). Socio-cultural assessment in early years education: myth or reality? *International Journal of Early Years Education*, 10(2), 105-120.
- Fleer, M. (2003). Early childhood education as evolving 'community of practice' or as lived 'social reproduction': Researching the 'taken-for-granted'. *Contemporary Issues in Early Childhood*, 4(1), 64-79.
- Fleer, M. & Richardson, C. (2004). Mapping the transformation of understanding. In Anning, A., Cullen, C. & Fleer, M. (Eds.), *Early childhood education: Society and culture* (pp. 119-133). London: Sage.
- Foster-Cohen, S. H. (2003). A review of bilingualism and second language acquisition in early childhood. Part C, *Pasifika ECE Final Report*. Wellington: Anne Meade Associates (Meade, PuhīPuhī, Foster-Cohen).
- Gibbons, P. (1991). *Learning to learn in a second language*. Newton, NSW: Primary English Teaching Association.
- Hargreaves, A. (1994). *Changing teachers, changing times. Teachers' work and culture in a postmodern age*. London: Cassell.
- Harley, E. (1999). *Therapeutic model of play*. A paper presented at the Seventh Early Childhood Convention, Nelson, New Zealand.
- Haslett, B. B. & Samter, W. (1997). Conceptions of friendship: A developmental perspective. *Children communicating: The first 5 years*. London: Lawrence Erlbaum Associates.
- Haworth, P.A. (2004). *Developing praxis for a few non-English speaking background learners in the class*. Unpublished PhD thesis. Palmerston North: Massey University.
- Haworth, P., Cullen, J., Simmons, H., Schimanski, L., McGarva, P. & Woodhead, E. (2006, in press). The role of acquisition and learning in young children's bilingual development: A sociocultural approach. *International Journal of Bilingual Education and Bilingualism*, [volume, issue, and pages to come].

- Haworth, P., Mephram, J., Woodhead, E., Simmons, H., Schimanski, L., & McGarva, P. (2004, Nov.). *The Dance of Friendship*. Report on first phase of an Early Childhood Education Centre of Innovation participatory action research. Wellington: Ministry of Education. Available on www.minedu.govt.nz.
- Haworth, P. and Simmons, H. (2005). Supporting bilingual development within a community of learners. Workshop presented at *Ulimasao Pasifika Bilingual Education Conference*, held in Apia, Samoa 27-31 Sept.
- Johnson, B., Peters, J., & Williams, D. (1999). Academics working with schools: Revealing the tensions. *Journal of Education for Teaching*, 25(2), 123-133.
- Johnston, P. H. (1992). *Constructive evaluation of literate activity*. New York: Longman.
- Jordan, B.J. (2003). Teacher talk: A tool for reflection. *Early Education*, 34 (Autumn), 5-14).
- Jordan, B. (2004). Scaffolding learning and co-constructing understandings. In Anning, A., Cullen, J. & Fler, M. (Eds.), *Early childhood education: Society and culture* (pp. 31-42). London: Sage.
- Katz, L. G. (1992). *Non-graded and mixed age grouping in Early Childhood programmes*. ERIC Digest.
- Kemmis, S. & McTaggart, R. (Eds.) (1988, 3rd edition). *The action research planner*. Geelong, Victoria: Deakin University Press.
- Krashen, S. (1982). *Principles and processes of second language acquisition*. Oxford: Pergamon Press.
- Lambert, W. E. (1974). Culture and language as factors in learning and education. In F. E. Aboud & R.D. Meade (Eds.), *Cultural factors in learning and education*. Bellingham, Washington: 5th Western Washington Symposium on Learning.
- Lave, E., & Wenger, E. (1991). *Situated learning: Legitimate peripheral participation*. Cambridge: Cambridge University Press.
- Lindquist, G. (2003) The dramatic and narrative patterns of play. *European Early childhood Education Research Journal*, 11(1): 69-78.
- McNiff, J. with Whitehead, J. (2002). *Action research: Principles and practice* (2nd ed.). London: Routledge Falmer.
- McNiff, J. & Whitehead, J. (2005,). *Teachers as educational theorists: Transforming epistemological hegemonies*. A paper presented on September 16 at BERA Annual Conference at Univerisity of Glamorgan.
- May, S. (2005). *Bilingualism, bilingual education and educational achievement: implications for Samoan L1 students*. Keynote address at Ulimasao Second Pasifika Bilingual Education Conference, in Apia, Western Samoa, September 2005.
- Meade, A. Puhipuhi, H. & Foster-Cohen, S. (2002). *Pasifika Early Childhood Education*, Final Report Anne Meade Associates (unpublished)
- Ministry of Education (1996). *Te Whāriki: Early childhood curriculum*. Wellington: Learning Media.
- Ministry of Education (1998). *Quality in action. Te mahi whai hu*. Wellington: Learning Media.
- Ministry of Education (2002). *Pathways to the future: Ngā huarahi arataki. A ten year strategic plan for early childhood education*. Wellington: Learning Media.
- Ministry of Education (2005). *Kei tua o te pae Assessment for learning: Early childhood exemplars*. Wellington: Learning Media.

- Ministry of Education (2006). Research investigates youth connectedness. *Education Gazette*, 85(1), 16.
- Morton, H. (1996). *Becoming Tongan: An ethnography of childhood*. Honolulu: University of Hawaii Press.
- Ngan-Woo, F.E. (1985). *Faasamoa: The world of Samoans*. Auckland: Office of the Race Relations Conciliator.
- Nuttall, J. (Ed.) (2003). *Weaving Te Whāriki: Aotearoa New Zealand's early childhood curriculum document in theory and practice*. Wellington: New Zealand Council for Educational Research.
- Nuttall, J. (2003) Exploring the role of the teacher within Te Whāriki: Some possibilities and constraints. In J. Nuttall (Ed.) *Weaving Te Whāriki* (pp. 161-183). Wellington: New Zealand Council for Educational Research.
- O'Hanlon, C. (2003). *Educational inclusion as action research: An interpretive discourse*. Maidenhead: Open University Press.
- Ostrosky, M. M., Gaffney, J. S., & Thomas, D. V. (2006). The interplay between literacy and relationships in early childhood settings. *Reading and Writing Quarterly*, 22, 173-191.
- Paavola, S., Lipponen, L., & Hakkainen, K. (2004). Models of innovative knowledge communities and three metaphors of learning. *Educational Researcher*, 74(4), 557-576.
- Podmore, V., May, H. & Carr, M. (2001). The 'child's questions'. Programme evaluation with Te Whāriki using 'Teaching Stories'. *Early Childhood Folio*, 5, 6-9.
- Richards, J. C., & Lockhart, C. (1994). *Reflective teaching in second language classrooms*. Cambridge: Cambridge University Press.
- Rizzo, T. A. (1989). *Friendship development among children in school*. Norwood, New Jersey: Ablex Publishing Corporation.
- Rogoff, B., Goodman Turkianis, C., & Bartlett, L. (Eds). (2001). *Learning together: Children and adults in a school community*. New York: Oxford University Press.
- Rogoff, B. (2003) *The cultural nature of human development*. New York: Oxford University Press.
- Rosenthal, M. K. (2003). Quality in early childhood education and care: A cultural context. *European Early Childhood Education Research Journal*, 11(2), 101-116.
- Rust, F., & Meyers, E. (2006). The bright side: Teacher research in the context of educational reform and policy making. *Teachers and Teaching: Theory and Practice*, 12(1), 69-86.
- Saravan, V. (2004) Bilingual children's language proficiency and language choice patterns. *Journal of Australian Research in Early Childhood Education*, 11(1), 13 -25.
- Sfard, A. (1998). On the metaphors for learning and the dangers of choosing just one. *Educational Researcher*, 27(2), 135-140.
- Sharman, C. Cross, W. & Vennis, D. (2000, 2nd edition) *Observing children: A practical guide*. London: Cassell.
- Schimanski, L. (2004). Reflections on being a teacher in a Centre of Innovation. *Early Education*, 36 (Spring), 21-26.
- Simmons, H., Schimanski, L., McGarva, P., Woodhead, E., Cullen, J. and Haworth, P. (2005). Teachers researching young children's working theories. *Early*

- Childhood Folio*, 9, 18-22. Wellington: New Zealand Council of Educational Research.
- Stewart, M. R. (2004). Phonological awareness and bilingual preschoolers: Should we teach it and, if so, how? *Early Childhood Education Journal*, 32(1), 31-37.
- Vygotsky, L. (1978) *Mind in society: The development of higher psychological processes*. Cambridge, MA: Harvard University Press.
- Winch, C. (2002). Accountability and relevance in educational research. In M. McNamee & D. Bridges (Eds.), *The ethics of educational research* (pp. 151-169). Oxford: Blackwell Publishing.
- Wragg, E. C. (1994). *An introduction to classroom observation*. London: Routledge.
- Wolcott, H. F. (1988). Inside schools: Ethnographic research in education. In R. M. Jaeger (Ed.), *Complementary methods for research in education* (pp. 187-216). Washington DC: American Educational Research Association.