One of the core aims for the implementation of teacher professional development programs is to improve student outcomes. Since 1996 the Broken Bay Catholic Diocese in New South Wales (Australia) has been utilizing the language and literacy program known as Frameworks as the staff development component for their 3-year literacy initiative. The program has two modules: the teacher module of the Frameworks program focuses on developing links between current literacy theory, teacher learning and classroom practice, while the student module focuses on three measures of student literacy acquisition implemented in the classroom by classroom teachers. In this paper, the authors explore the changes reported by both teachers and students in a range of areas, including knowledge of literacy teaching and learning, changes in classroom practices and in assessment practices. The paper also discusses some of the methodological issues used in the initial study. As a result of the initial research, a 3-year Industry grant (SPIRT, Strategic Partnerships with Industry--Research and Training) has been awarded by the Australian Research Council to assist the University of Wollongong and the Catholic School Office, Broken Bay Diocese, to complete further research in this area. This research aims to explore the links between teacher learning, student learning, and classroom practice. The paper discusses some of the theoretical and practical issues that have arisen in relation to early literacy development. Contains 39 references, and 4 figures and 4 tables of data. (Author/NKA)
Professional Development, Classroom Practice and Student Outcomes: Exploring the Connections in Early Literacy Development.

by Barbra McKenzie and Jan Turbill
Professional development, classroom practice and student outcomes: exploring the connections in early literacy development.

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One of the core aims for the implementation of teacher professional development programs is ultimately to improve student outcomes.

Since 1996 the Broken Bay Catholic Diocese in NSW has been utilising the language and literacy program known as Frameworks as the staff development component for their three year literacy initiative. The program has two modules: the teacher module of the Frameworks program focuses upon developing links between current literacy theory, teacher learning and classroom practice; and the student module focuses upon three measures of student literacy acquisition implemented in the classroom by classroom teachers.

In this paper, the authors explore the changes reported by both teachers and students in a range of areas, including knowledge of literacy teaching and learning, changes in classroom practices and in assessment practices. They also discuss some of the methodological issues used in the initial study.

As a result of the initial research a three year Industry grant (SPIRT) has been awarded by the Australian Research Council to assist the University of Wollongong and the Catholic School Office, Broken Bay Diocese to complete further research in this area. This research is attempting to explore the links between teacher learning, student learning and classroom practice.

The paper will discuss some of the theoretical and practical issues that have arisen in relation to early literacy development.

The relationship between staff development, teacher learning, classroom practice is well documented in the literature on change, school reform and curriculum implementation (Fullan, 1991; Fullan and Hargreaves, 1996; Hargreaves, 1994, Sarason 1982; 1990;1999, Duffy 1990). However ultimately the effectiveness of any staff development program must be measured in terms of student outcomes. (Sparks & Richardson, 1997; Guskey, 1986; Guskey, 1997). It is, we would argue, methodologically impossible to measure such change using a traditional 'pre-test-->treatment-->post-test' design. Indeed any attempt to use such a design to 'prove' cause-effect relationships ought to be viewed with suspicion. Schools are complex, dynamic systems in which the establishment of direct chains of cause-effect between staff development and student learning is virtually impossible.

It is however possible to measure the other factors which research has shown contribute to
improved student learning. Factors such as the teachers' beliefs and understandings about learning and teaching, their beliefs about the nature and purpose of the (literacy) curriculum, their current classroom practices, and the teachers' and/or administrators' perceptions of changes in the school culture all have the potential to contribute to increased student learning outcomes.

Paramount to such change however is effective staff development that results in teacher learning. A review of literature on teacher learning and staff development reveal the following key arguments:

- staff development is a process, not an event (Fullan, 1990; 1991; Heckenberg, 1994).
- this process takes time, often years, to show up in student learning (Fullan, 1991; Joyce & Showers, 1988; Fullan & Hargreaves, 1996, Hargreaves, 1994, Guskey, 1997).
- the process necessitates that changes in student learning are preceded by changes in teachers' beliefs, understandings, and practices. (Fullan, 1990; Guskey, 1986; Turbill, 1994; Sparks and Richardson, 1997).
- these changes are often accompanied by perceived changes in the school culture (Hargreaves, 1994; Sarason, 1982; 1990, 1999; Huberman & Miles, 1984; Hall & Hord, 1987; Joyce, 1990; Fullan & Miles, 1992).

Figure 1 below attempts to capture, in schematic form, the relationships between and among the many factors listed above that emerge from our reading of the vast literature in change and the change process, teacher learning, staff development and student learning.

See Figure 1 on following page

Essentially this model assumes that student learning, teacher learning, and classroom practice are not only interdependent, but they are all embedded in a cultural setting called 'the school'. It further argues that student learning is at the core of the school culture, and is shaped by the complex mix of, and interactions between, a series of events and processes that occur within and between all the layers of the school culture depicted in Figure 1. Part of this mix is the staff development program that schools and/or school systems decide to adopt. This theory assumes that if this 'mix' is appropriate then not only will the learning of both teachers and students be 'enabled', but that this 'enablement' will also spread across, and influence the culture of the whole school setting (Turbill, 1994; Duffy, 1990). Conversely the theory would predict that if the mix is inappropriate, then not only will learning be 'inhibited', but that these inhibitory influences will spill over to the whole school learning culture (Turbill, 1994; Duffy, 1990).

In a nutshell this theory argues that:

(i) if student learning (the inner layer in Figure 1) is to be positively influenced then
Figure 1: A schematic representation of a theoretical model that emerges from an analysis of the literature.
teaching practices must first change.

(ii) teaching practices (the next layer in Figure 1) are in turn shaped and framed by teachers' beliefs especially their beliefs about learning, teaching, and the nature and purpose of whatever they are trying to teach (in this case something called 'literacy').

(iii) thus before classroom practices can change, teachers must first be given the opportunity to examine and modify their belief systems (the next layer in Figure 1).

(iv) the outer layer of Figure 1, 'School Culture' spreads its influence in two directions, outwards and inwards. Not only does the school culture subtly determine the nature of the staff development program which a school or school systems decides to adopt ('outward influence'), it will also influence and be influenced by the inner layers which are embedded within it ('inward influence').

A vital component then is the staff development model that underpins the teacher learning process. In the project discussed later in this paper, the staff development model represented on the left hand side of Figure 1 is based on the work of Turbill (1994). It is described by Turbill as an 'integrative/interactive model of staff development' (Turbill, 1994) and underpins staff development program, Frameworks: Language and Literacy Course K-8 (Turbill, Butler and Cambourne, 1991, 1999)

This integrative/interactive model proposes that effective teacher learning results from the integration of four domains of knowledge. This integration is best demonstrated in the following diagram:

See Figure 2 on following page

These four domains can be further categorised into the personal dimension (the top layer) and the external dimension (the bottom layer). Traditionally staff development of teachers has focused mainly on this latter dimension. We introduce teachers to various theories of language and literacy and we demonstrate how these theories relate to practice. This 'outside-in' form of learning, or 'outer learning' as Fullan (1993) calls it, is obviously not enough as teachers who experience this type of transmission of knowledge and practice have demonstrated that change in practices, if they occur at all, tend to be short lived and shallow (Sarason 1999)

The personal dimension, or what Turbill (1994) has called 'inside-out learning' and Fullan (1993) calls, 'inner learning' has not always been a major component of any staff development
Figure 2:

- **My Personal Theory**
  - inside out learning

- **Theory of Others**
  - collaboration
  - reflection
  - sharing

- **My Personal Theory in Practice**
  - collaboration
  - reflection
  - sharing

- **Theory of Others in Practice**
  - outside in learning

**Teacher as Learner**

The diagram illustrates the intersection of personal theories, theories of others, and their practices, highlighting collaboration, reflection, and sharing as key components of learning.
enterprise. The importance of professionals being able to gain insights into their own thinking, beliefs and values so that they become aware of what drives their practices has long been recognised. (Schon 1983; Cambourne 1991; Brody 1994). Turbill argues that all teachers and have what she calls a 'personal theory' of that which they trying to teach. This theory frames all that they do, however for most, it is in an embryonic form, messy, often lacking in cohesion and usually subconscious or 'tacit' (Polanyi 1966).

Reflecting on their own beliefs about teaching and learning in any curriculum area is important (Duffy 1990), but our research has demonstrated that it is also important for teachers to reflect on, and make conscious, the strategies and processes they themselves use as learners in that curriculum area. Since we are concerned with language and literacy teaching and learning the aim throughout any staff development enterprise should be to help teachers gain insights into the language and literacy strategies and practices that they themselves use when engaging in literate behaviours.

This means addressing such questions as:

- What is learning and how do I learn? What strategies do I use as a learner? How do I feel when I am successful or not so successful? What does this mean for my teaching?

- What is language? How do I learn language? For what purposes do I use language? What is the role of language and literacy in my learning? What does this mean for my teaching of literacy, or science, or mathematics?

- What is reading, (writing, spelling)? How do I read(write, spell)? What skills and knowledge do I need to read (write, spell)? What does this mean for my teaching of literacy, or science and so on?

- What text types do I use? When? For what purpose? For what audience? What are the grammatical features I choose to use to create the appropriate text type? What does this mean for my teaching?

Such inside-out learning has significant implications for teachers' classroom practice. Teachers begin to 'see and experience' learning and language learning from the inside, and metaphorically 'live' in the shoes of their students. For many, they see for the first time why some of their classroom practices are either useful, or meaningless exercises. Because this 'inside-out learning' helps teachers appreciate the importance of knowing and understanding the purpose for engaging in workshops or other learning activities with respect to their own professional learning, they begin to appreciate how vital this is also for their students. They also begin to gain a sense of the role that language plays in their learning and thus the role language must play in their students' learning.

This is another way of stating that because of inside-out learning, teachers become metacognitively aware; that is, they become aware of their own learning strategies and are therefore consciously able to monitor their own learning experiences. This awareness too begins to spill over to their classroom practice.

Thus the personal dimension is vital for effective teacher learning. By giving teachers the
opportunities to focus on their own beliefs and practices, recognition is given to that which is already known. The 'intellectual unrest' which stems from the tensions created when teachers begin to make explicit their tacit knowledge about why they do what they do in their classrooms, it forces them to not only identify their own personal needs as learners, but ultimately to take responsibility for solving them. Furthermore as teachers begin to understand the implications for their own learning, they more readily empathise with their students and understand the teaching implications for their students' learning.

The challenge is in getting the right 'mix' of staff development activities and processes in place so that both the personal and external dimensions (inner and outer learning) are operationalised.

With the skilful mix of activities and processes such as:

• time for reflection, both written and spoken
• time for sharing classroom experiences and responses to readings with peers
• opportunities for collaborative learning in small groups
• opportunities to trial new classroom instructional strategies
• input (new knowledge) through a variety of media
• readings which support and extend the various concepts introduced in the courses
• opportunities to work as co-learners,

a learning culture is created in which there are sufficient enabling factors to support learners. No activity alone is sufficient, and no one activity is more important than another, but together they can operate synergistically so that any potential inhibiting factor in the learning culture will have only a temporary life span as learners work through that which they want to know.

In such learning cultures trusting and caring relationships between and among teacher-learners develop. They become highly supportive of each other's efforts and understandings. A shared meaning begins to develop amongst the learners and with it a shared language. This does not mean that everyone has the same beliefs; far from it, but it does mean that members of the culture begin to understand each other's perspective. The learning culture moves towards what Barth (1990) calls a 'community of learners'.

Staff development of this kind has the potential of changing teachers' beliefs and practices as well as impacting on the school culture (Turbill 1994, Bean and Bell (1994). While we had much anecdotal evidence that such changes contributed to increased student learning outcomes, we had no hard evidence to demonstrate these claims. In 1996 we were provided with the opportunity of gathering such data. We were invited by the Broken Bay Diocese to become a major part of their Early Literacy Initiative. This project was to run over a three year period. Each year approximately 75 teachers would participate in the Frameworks: Literacy and Learning Course in a one week program at the beginning of the school year. And here was a great opportunity to also measure student learning outcomes.
The Broken Bay Teacher Learning Project

The Broken Bay Teacher Learning Project was a joint venture between Broken Bay Catholic School Diocese and the University of Wollongong. The project commenced in September 1996 and continued through 1997, 1998, and into 1999. This joint venture project set out to address the broad question: 'How do teachers learn? A long term study of the impact of an 'integrative/interactive' model of staff development on teacher learning and student outcomes.'

In 1996 the Broken Bay Catholic Schools Diocese invited the University of Wollongong to committed itself to intensive staff development in the area of literacy as through the Frameworks 'Language and Literacy Course'.

In each of the three years of this study, teachers who participate in the Frameworks Language and Literacy Module were asked to respond to three surveys. These surveys had been designed to tap into and monitor what the teachers perceived they learned, and the changes, (if any) they perceived to have occurred in their classroom practice as a consequence of their participation in the Frameworks course.

Student learning outcomes from stratified samples of Year 2 students were also monitored through three 'teacher-friendly' classroom literacy-learning activities which teachers were asked to administer.

Research Design:

This study utilised both qualitative and quantitative methods of data analysis.

Data collection involved the implementation of a series of survey instruments and reflective journals.

Quantitatively, two units of analysis were used to analyse the data. The first unit of analysis was each individual respondent. Thus if 71 of the respondents made a certain kind of response, this response could be interpreted in such terms as '95% of the respondents'. If 35 of the respondents answered similarly, it could be reported in terms of '50% of the respondents'.

The second unit of analysis was the actual number of responses made. Except for a few 'tick the box yes-no' prompts, and a series of Likert Scale questions this survey comprised a series of prompts designed to elicit open-ended responses. Such open-ended prompts typically generate multiple responses from each respondent.

Qualitatively, then these types of open-ended responses were then analysed inductively (Denzin & Lincoln, 1998) with the categories, themes and patterns 'emerging from the data' (p.47). The validity of the categories were tested by a form of peer debriefing (Lincoln & Guba, 1985). Other researchers were provided with copies of portion of the data in order that they validate or refute the categories developed.

A major aim of this study was the exploration of changes involving both teachers and students across a range of areas. These include knowledge of literacy teaching and learning and changes
that impact upon classroom practice and assessment practices.

In order that the process of change be better understood rather than strictly quantified, the choices of paradigm was a vital one. Such a choice needed to acknowledge the distinctiveness of both the setting and the issues pertinent to educational research, a fact that Bogdan and Biklen (1982) noted,

Though schools have much in common with other organisations, they have a particular hierarchical structure and they shape interpersonal relationships that require special investigative techniques (p.xiv).

Data Collection:

In order to evaluate the impact of Frameworks on teachers, students and schools a number of instruments were designed to gather data from a range of stakeholders for each of the years of the project.

Teachers

Prior to the commencement of the Frameworks Language and Literacy Course teachers completed a Pre-Frameworks Beliefs and Practices Survey. This instrument was designed to collect information regarding:

- the beliefs that teachers currently held with respect to language and literacy.
- the classroom practices they currently used.

This information was collected prior to teachers undertaking the Frameworks Course to establish a set a baseline data that supported a pre test/intervention/post test scenario.

At the completion of their Frameworks Course teachers completed a Post Frameworks Beliefs and Practices Survey. This survey was designed to probe the changes (if any) that teachers had experienced:

- in their beliefs and practices regarding language and literacy during the initial Frameworks training.
- changes may have included the way they now thought about language, literacy and learning.
- they way they now intended to teach language and literacy.
- any insights or connections they made during the program.
- intended classroom changes which they linked directly to the Frameworks Course.

Two months after their Frameworks course teachers were asked to complete another survey instrument. The Post Frameworks Training Course Survey was designed to collect information about how the course impacted upon teachers across a range of areas. These areas included:

- classroom practice,
- student learning,
- the school,
- and the school community.
Teachers were also asked if they had changed their beliefs about:

- language,
- literacy,
- learning.

and/or if they had changed the way they taught or evaluated:

- language,
- literacy.

They were also asked about the frequency with which they now used a range of classroom instructional Language and Literacy strategies in the classroom. Information about the impact of the Frameworks course on teachers' professional development was also collected.

**Students**

A stratified random sampling technique was used to select the schools from within the school district. The schools chosen reflected the range of sizes, geographical locations, socioeconomic status and cultural characteristics of the schools within the wider district. From within this stratum of schools all Grade 2 students completed the three instruments described below.

The three measures of student literacy acquisition were designed to be both teacher-friendly and easy to complete. These instruments were:

a) The Burt Word Recognition Test.

b) The Proofreading Task.

c) The Writing Task.

All of the student instruments were designed to be administered by the teacher in a classroom situation. Each teacher received an 'instruction package' detailing how the tests were to be conducted and the tests were administered by all classroom teachers within a prescribed timeframe.

The Burt Word Recognition Test is an individual test that measures a child's word recognition skills. It is recognised that reading is a complex process made up of a range of skills. The Burt Word Recognition Test is not an indicator of reading age and it would be inaccurate to refer to the score as such (NZCER, 1981. p.3). Despite this, word recognition ability can also be an indirect indicator of degrees of control of other complementary skills involved in the reading process.

The Writing Task was a modified version of an instrument developed by Turbill (1982). Its purpose was to collect data that mirrored normal classroom procedure as much as is possible. In this task however, the teachers were not to assist students by 'conferencing' and/or assisting in the construction of the text. This was, essentially a first draft piece of writing the students had the freedom to use wall print and/or dictionaries but were not to seek the support of others or to
progress onto a second draft. This data was fundamentally providing a 'snapshot' of first draft writing across selected Year 2 classrooms that could initially be used to provide baseline data and subsequently as a form of comparison.

The Proofreading Task was a modified version of a task developed for the ELIC evaluation (Cambourne, Turbill, Keeble, Colvin & Ferguson, 1988). The purpose of the task was to provide students with the opportunity to reveal what they know and understand about conventional forms of text. Students were given a piece of text allegedly written by another Year 2 child which had a range of unconventional spellings, punctuation and grammar deliberately sprinkled throughout. Students were asked to help this child 'fix it up', which they did without assistance. Again these data were used to provide a 'snapshot' of what the student knows and understands about spelling, punctuation and sentence structure. This initial cohort data was used to provide a baseline against which subsequent grade cohorts' data could be compared.

Schools

Executive staff from each of the schools whose teachers were undergoing Frameworks training were asked to complete a School Change Survey. The object of this survey was twofold:

- To triangulate data already collected from the teachers
- To obtain data that indicated any 'ripple effect' that changes in teacher beliefs and practices may have had upon the school culture.

It was important to collect this type of data from the perception of a 'non-participant'. The executives that completed the survey were asked to make evaluative judgements on the types of changes (if any) they perceived could be attributed to teachers' participation in the Frameworks course.

Results:

Teachers

This section reports on the data collected by the Post Frameworks Training Course Survey that teachers completed two months after their Frameworks training. Five major categories emerged from the data, they were:

- Teachers perceptions of what they learned from their participation in Frameworks Staff Development Program.
- Teachers perceptions of changes in their belief systems with respect to teaching, learning and literacy.
- Teachers perceptions of how the Frameworks Staff Development Program impacted upon their classroom practices in teaching literacy.
- Teachers perceptions of their professional growth in the area of literacy education.
- Teachers perceptions of the nature of the follow-up support they needed subsequent to Frameworks and the support they actually received.

An overview of the findings within each of these categories will be briefly discussed.

Teachers' perceptions of what they learned from their participation in the Frameworks
Staff Development Program.

Teachers reported that:

- Frameworks had deepened/extended their knowledge and understandings of literacy.
- increased their awareness of the role that reflection plays in both teaching and learning practices within literacy.
- they changed their previous classroom organisation subsequent to their Frameworks training.
- they changed the physical layouts of their classrooms
- they gained an increase in confidence, motivation and affirmation subsequent to their Frameworks training.

Teachers' perceptions of changes in their belief systems regarding teaching, learning and literacy.

This survey question initially asked for a YES/NO response and then asked teachers to expand upon and explain their reasons for this response. The table below contains the percentages of YES/NO responses.

<table>
<thead>
<tr>
<th>Perceived Changes in Beliefs</th>
</tr>
</thead>
<tbody>
<tr>
<td>The nature of learning</td>
</tr>
<tr>
<td>56.3</td>
</tr>
<tr>
<td>40.6</td>
</tr>
<tr>
<td>3.1</td>
</tr>
<tr>
<td>The nature of literacy</td>
</tr>
<tr>
<td>26.6</td>
</tr>
<tr>
<td>68.8</td>
</tr>
<tr>
<td>4.6</td>
</tr>
<tr>
<td>Effective reading</td>
</tr>
<tr>
<td>32.8</td>
</tr>
<tr>
<td>64.1</td>
</tr>
<tr>
<td>3.1</td>
</tr>
<tr>
<td>Effective spelling</td>
</tr>
<tr>
<td>42.1</td>
</tr>
<tr>
<td>56.2</td>
</tr>
<tr>
<td>1.5</td>
</tr>
<tr>
<td>Effective writing</td>
</tr>
<tr>
<td>46.8</td>
</tr>
<tr>
<td>51.5</td>
</tr>
<tr>
<td>1.5</td>
</tr>
</tbody>
</table>

- Initially it appeared that Frameworks had been only marginally successful in initiating a change in the beliefs of participating teachers.
- A deeper analysis was undertaken of those teachers who indicated a 'No' response, this revealed that the overwhelming majority (97%) of these open ended responses analysed fell into the 'affirmation of my beliefs' and/or 'deepened-but-didn't-change-my existing-beliefs category. For example one of the respondents who initially indicated a 'No' response later expanded upon her answer by reporting:
'Affirming and adding to what I already knew'.

The perception of having 'broadened', 'extended' or 'adding to' rather than 'changing' beliefs in these areas was supported by earlier survey data from the Pre Frameworks Beliefs and Practices Survey. This indicated that many of the participating teachers already held beliefs about learning that were congruent with those that underpin the Frameworks program. These teachers came to this program with already firmed up beliefs in these areas. This result suggests that future surveys be amended to include three options for response to this prompt, YES, NO and AFFIRMED.

Teachers' perceptions of how the Frameworks Staff Development Program impacted on their classroom practices in the teaching of literacy.

The survey responses from both the 1997 and 1998 cohorts of teachers concerning this range of questions is illustrated by the following table.
Table 2:
Comparing Most Frequently Reported Changes In
Teaching & Evaluation Practices 97 & 98

<table>
<thead>
<tr>
<th></th>
<th>Reading</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Using more reading strategies than before (97=52.2%) (98=64.8%)</td>
<td>Experimenting with more evaluating strategies (97=45.3%) (98=50.7%)</td>
</tr>
<tr>
<td>Spelling</td>
<td>Using more spelling strategies in my teaching (97=56.7%) (98=57.7%)</td>
<td>Experimenting with more evaluation strategies (97=36.5%) (98=42.2%)</td>
</tr>
<tr>
<td>Writing</td>
<td>Using more writing strategies (97=44.6%) (98=55.1%)</td>
<td>Experimenting with using more sources of information when evaluating writing (97=30.2%) (98=36.4%)</td>
</tr>
</tbody>
</table>

Results indicate:

- A greater percentage of the succeeding cohorts of teachers have implemented changes with respect to Reading, Spelling and Writing.
- Changes are apparent within both teaching and evaluation practices.
- These changes are indicative of teachers' willingness to take risks and supports the conclusion that these teachers have increased levels of confidence after their Frameworks training.

The survey instrument also collected data from teachers regarding the types of changes (if any) they had observed in student behaviour after the teachers completed their Frameworks training. By comparing the data collected from both the 1997 and the 1998 cohort of teachers concerning
this question some interesting similarities and differences become obvious. The following table illustrates this.

Table 3:

**COMPARISON BETWEEN 1997 AND 1998 COHORTS (%)**

<table>
<thead>
<tr>
<th>Category of Student Behaviour</th>
<th>1997 Cohort</th>
<th>1998 Cohort</th>
</tr>
</thead>
<tbody>
<tr>
<td>More Student Reflection</td>
<td>34.0</td>
<td>26.2</td>
</tr>
<tr>
<td>More Student Responsibility</td>
<td>14.3</td>
<td>22.1</td>
</tr>
<tr>
<td>Positive Change in Learning Behaviour</td>
<td>15.2</td>
<td>19.7</td>
</tr>
<tr>
<td>More Student Interaction</td>
<td>8.9</td>
<td>12.3</td>
</tr>
<tr>
<td>More Individualised Learning</td>
<td>17.0</td>
<td>10.6</td>
</tr>
<tr>
<td>More Use of Wall Print</td>
<td>1.8</td>
<td>5.7</td>
</tr>
<tr>
<td>Better Monitoring of Student Learning</td>
<td>3.5</td>
<td>3.3</td>
</tr>
<tr>
<td>No Change</td>
<td>0.9</td>
<td>0</td>
</tr>
<tr>
<td>Other</td>
<td>0.9</td>
<td>0</td>
</tr>
<tr>
<td>No Response</td>
<td>3.0</td>
<td>0</td>
</tr>
</tbody>
</table>

These data indicate that:

- Subsequent to teachers completing their Frameworks training both the 1997 and the 1998 teacher cohorts reported observing positive changes in student behaviour.

- Both cohorts of teachers have identified changes in student behaviour that involves greater student reflection, responsibility, interaction and positive changes in learning behaviour.

- These aspects of student learning have a major impact within the classroom as responsibility for learning is transferred from the teacher to the student.
Teachers' perceptions of their professional growth in the area of literacy education.

This category collected data across a wide range and sought information from teachers regarding the impact of their participation in the Frameworks course upon their professional lives. This included what the course had added to their professional knowledge, their professional practice and their professional opportunities.

With respect to what the course had added to their professional knowledge the results of the data indicated that teachers:

- report increases in their professional knowledge that involve the areas that link literacy theory with classroom practice.
- indicated their readiness to both reflect upon their own classroom practices and acknowledged the need to be professionally reflective practitioners.

With respect to what the Frameworks course had added to their professional practice the results of the data indicated that teachers:

- gained greater understanding of the links between the Instructional Strategies advocated by the Frameworks program and student needs.
- gained greater understanding of the 'fit' between those instructional strategies and the classroom.
- were more ready to question their previous views of the classroom.
- gained a better understanding of the balance in literacy teaching.
- now had more understanding of the strategies used by others.

With respect to what the Frameworks course had added to their professional opportunities the results of the data indicated that teachers:

- reported greater opportunities from learn from their peers.
- valued that more opportunities were made available to reflect and share ideas with peers regarding their classroom practice.
- reported increased opportunities to share information and ideas with their colleagues.

Teachers' perceptions of the nature of the follow-up support they needed and that they actually received.

Teachers in both the 1997 and the 1998 cohort provided information concerning the types of follow-up support they felt they needed after their Frameworks training. As a component of the literacy initiative by the school district a literacy adviser well-versed in the Frameworks program was involved in a follow-up visit to each individual teachers' classroom. At this follow-up visit the literacy adviser 'sat in' on the teachers' class, observed the types of Instructional Strategies and resources being used and later discussed with the teacher their future plans for the teaching of literacy in the classroom. They also addressed any areas of concern expressed by the teacher.

The types of support that teachers requested included:
• more opportunities for professional sharing similar to that provided during their Frameworks course.
• a greater level of active support both within the classroom as they implement new structures and also from both the Principal and other school staff members.
• more time as they try to consolidate the information gathered during their Frameworks course and create a working action plan to implement those changes.
• more resources for the classroom, especially reading books and parent helpers.

The types of support that teachers felt they received included a perception that:

• the follow-up sessions would involve a more in depth out of classroom time with the Frameworks literacy advisers.
• there was a need for more than one follow-up day.
• a greater number of resources be provided at the school level to assist with improving the literacy program.
• they needed more support with respect to time. They indicated the need for support while they filter information from their Frameworks course and create classroom structures that would best enhance the literacy learning outcomes for their students.

Results:

Students

This section reports on the results of three literacy tasks formulated to measure student ability. During each year of the project the student sample was selected using a stratified random sampling technique identical to that used to select Year 2 students in both 1997 and 1996.

The Burt Word Recognition Test.

The Burt Word Recognition test is a measure of a child's word recognition skills and administered to individual students. This measurement of course identifies one part of the reading process as word recognition comprises only one aspect of the many skills required to be an effective meaning-seeking reader (Rivalland,1992). The reading process is a complex one and the Burt Word Recognition Test is not an indicator of reading age, but rather should be interpreted as an estimate of word recognition skills. Despite this, word recognition ability can be regarded as an indirect indicator of degrees of control over other complimentary skills involved in the reading process.

The matrix below illustrates the number of students in each of the cohort years who completed the testing.
<table>
<thead>
<tr>
<th>YEAR</th>
<th>COHORT N</th>
<th>MALES</th>
<th>FEMALES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1996</td>
<td>460</td>
<td>230</td>
<td>228</td>
</tr>
<tr>
<td>1997</td>
<td>410</td>
<td>200</td>
<td>203</td>
</tr>
<tr>
<td>1998</td>
<td>541</td>
<td>284</td>
<td>255</td>
</tr>
</tbody>
</table>

See Figure 3 on following page

Figure 3 illustrates a comparison of the results of each of the cohort years (1996, 1997, 1998) as compared to preceding cohort years and the New Zealand norms that accompany the test. It should be noted that several international cross-cultural studies of reading (Elley, 1992) have rated New Zealand students very highly over the past twenty five years.

These results indicate:

- All three cohorts have performed well against the New Zealand norms.
- Each cohorts has also continued to out perform each other.
- In 1996 the benchmark cohort's score was 3.8 points higher than New Zealand norms.
- In 1997 the cohort's score was 7.1 points higher than the New Zealand norms.
- In 1998 the cohort's score was 7.8 points higher than the New Zealand norms.

Note: One of the components in determining the norm scores in the Burt Word Recognition Test is the age in months of the child. Therefore each cohort will show a slight difference in their equivalent age bands that is also reflected in their New Zealand counterparts.

Given that the same criteria were used in the selection of each of the stratified samples in each of the cohort years, this result suggests that something notable continues to operate in the classrooms of each of the cohorts of students. Caution always needs to be taken in trying to identify any single direct cause-effect connection(s) to explain this continued rise in word recognition scores. One of the most plausible explanations for this type of finding relates to the complex mix of factors which mutually shape the classroom structures, processes and events that take place with respect to the teaching and learning of literacy within this school district. Just one of these many complex factors was the Frameworks Staff Development Program.

These results are supported by the findings from the teacher surveys, namely that teachers perceived that student reading and reading practices have improved.
Figure 3:

The Proofreading Task.

The purpose of this task is to provide an opportunity for students to reveal what they know and understand about conventional forms of text. It can be used to tap into the knowledge, meta-cognitive understandings and skills that learners have acquired with respect to a wide range of literacy related behaviours, namely spelling, punctuation and capitalisation.

The interpretation of these data is based on the assumption that there are certain aspects of development involving the orchestration of 'skills', 'values' and 'understandings' that are associated with becoming an effective user of the spelling, punctuation and capitalisation systems which students are expected to learn in our culture. These aspects are:

1. The ability to recognise and identify errors in text.
2. The willingness/readiness to make an attempt to correct these errors.
3. The ability to achieve a successful correction of these errors.

The ideal 'effective speller' (punctuator/user-of-capitals) is one who can identify and successfully correct every error in a text. On the other hand the 'completely ineffective speller' (punctuator/user-of-capitals) would be one who cannot identify even the simplest and/or most obvious of errors. In between these two extremes there are identifiable degrees of 'effectiveness'. For example a learner who identifies errors in a text is more advanced in spelling, punctuation and/or capitalisation than one who cannot. However, one who not only identifies errors, but makes some attempt to correct them, whether successful or not, is more advanced than a learner who simply identifies them. Finally, one who not only attempts to correct these errors, but who does so successfully, is even further along the spelling/punctuation/capitalisation developmental scale.

The table below displays a comparison of the Proofreading results for the 1996, 1997 and 1998 cohorts of students indicating the percentage of students who were successfully able to correct errors in Spelling, Punctuation and Capitalisation.

Table 4:

<table>
<thead>
<tr>
<th>Years</th>
<th>Spelling</th>
<th>Punctuation</th>
<th>Capitalisation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1996</td>
<td>16.28%</td>
<td>22.21%</td>
<td>5.5%</td>
</tr>
<tr>
<td>1997</td>
<td>33.93%</td>
<td>29.12%</td>
<td>9.7%</td>
</tr>
<tr>
<td>1998</td>
<td>38.12%</td>
<td>31.42%</td>
<td>12.0%</td>
</tr>
</tbody>
</table>

The graph shows the growth in the ability of succeeding cohorts to
successfully correct errors in text in spelling, punctuation and capitalisation.

It also attests to the continued increase in the ability of each of the successive cohorts to both successfully identify and then correct errors in text.

The Writing Task

The purpose of this task is to collect data that mirrors normal classroom procedures with the exception that teachers will not assist children by 'conferencing' with them or in the construction of the text. The children however, were free to use wall print and/or dictionaries, but not to proceed to a second draft.

In the following graph the data gathered were analysed and compared across the 1996, 1997 and 1998 cohorts.

See Figure 4 on following page

The phases within the figure are the key phases from the First Steps Writing Developmental Continuum (Education Dept of W.A. 1994) and show:

- The number of students assessed as falling within each of these phases from 1 to 5 has differed over each of the cohort years.
- The constant element remains the cluster of students assessed within phases 2, 3 and 4 in each of the cohort years.
- In the 1998 cohort year a small percentage of students were also assessed within phases 1 and 5.

Results:

Schools

The data collected by the School Change Survey from school executives indicated that a number of changes had been observed by them across a broad range of areas that impacted upon the school culture. Many of these observations were congruent with those made by teachers themselves and documented by survey data. Briefly the survey reported positive changes in:

- teachers' professional reading
- requests for resources
- staff discussions regarding literacy
- use of literacy programs and planning documents
- use of literacy strategies
Figure 4:

Comparison of Developmental Stages in 1996, 1997 & 1998 Cohorts

[Bar diagram showing the percentage comparison of developmental stages across three cohorts.]


- use of literacy assessment methods

**Conclusion:**

Teachers perceived that their Frameworks training had positively contributed to changes in their previously held beliefs with respect to teaching, learning and literacy. The majority of teachers indicated that their views with respect to what constitutes effective reading, writing and spelling had either been positively changed or affirmed by their Frameworks experiences.

These changes in teachers beliefs had resulted in a reported change in their classroom practices that in turn was seen to impact on:

- the organisational structure of the classroom
- the physical layout of the classroom
- the types of instructional strategies used in literacy within the classroom.

Changes in the organisational structures of the classroom included such things as:

- allocation of a 'block' of time for language
- reorganisation of the flow of the language block
- restructuring the components of the literacy block
- daily modelling of reading and writing practices and strategies

Changes in the physical layout of the classroom included such things as:

- greater awareness of the power of classroom displays
- the repositioning of wordbanks and general print
- greater use of partner/group activities

Changes in the types of instructional strategies used in the literacy session included greater use of such strategies as:

- modelled reading
- modelled writing
- learning journals
- text tapping
- peer proofreading

Subsequent to Frameworks, teachers reported changes to both their beliefs and practices and as a result of this, to their classroom environment. As teachers' changed their beliefs this was reflected by a consequent change in their classroom surroundings. These change in what Turbill (1994) referred to as the 'inner and outer' learning of teachers seems to have had a positive impact upon their students learning. Teachers observed a range of positive behavioural changes in their students that included such things as:

- a greater degree of student reflection
- students accepting more responsibility for their own learning
- greater level of student interaction.
These positive student changes were also complemented by the results of the three measures of student literacy, the Burt Word Recognition Test, the Writing Task and the Proofreading Task. These showed:

- increased levels of ability in each of the successive cohorts in word recognition skills
- increased ability in successive cohorts of students to successfully identify and then correct errors in text in spelling, punctuation and capitalisation
- the continued placement of children from each of the cohort years across phases 2, 3 and 4 of the developmental continuum.

Such positive changes for both teachers and students are congruent with Figure 1 above and illustrates the complex relationships among the many factors that contribute to change, the change process, and teacher and student learning.

The challenge for staff developers therefore lies in the creation of the appropriate mix of these factors encased within a framework that recognises teachers’ professional knowledge and experience and provides a forum where teachers feel supported and affirmed.

Furthermore, this study demonstrates that effective staff development is contingent upon:

- the integration of both an external dimension where various learning theories and their practical application are demonstrated and
- an internal dimension where teachers gain insights into their own thinking that contributes to their personal theory and its practical application.

The success of the 'integrative/interactive model of staff development has been illustrated by the changes observed in teachers, students and across schools in the Broken Bay Diocese.

Changes to individual teachers’ beliefs and classroom practices were identified at the school level as teachers redefined their classroom practices in the light of their increased knowledge and understanding. The ripples of these changes it was reported began to impact upon the wider school community.

Such positive changes it can be argued were outcomes of the Frameworks Staff Development Program and the integration within the program of both the 'outside-in' and 'inside-out' (Turbill, 1994) dimensions of learning. It could be further argued that Frameworks not only contributed to changes in teacher learning but also changes in and student learning.

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