



AUCKLAND AIRPORT
COMMUNITY
TRUST



Investing in People

**A series of evaluation reports commissioned by the Auckland Airport
Community Trust**

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Summary

Background to the evaluation

The Auckland Airport Community Trust (AACT) was formally established in October 2003 as a result of a decision made in the Environment Court. The Area of Benefit for the Trust is “those areas most impacted on by current and projected aircraft movements to and from Auckland International Airport”. The first of three charitable purposes to which Trust funds can be applied relates to the mitigation of effects associated with noise from aircraft operations. It is the second charitable purpose that is most directly relevant to the present context: “to ensure positive effects on the external environment to offset the other adverse effects.” This is further explained in the Trust Deed; “While physical means can go only so far in mitigating adverse effects, there is the possibility of adverse effects being “at least partially offset by providing positive effects in the form of enhanced cultural, recreational and other opportunities and facilities to those living and working in the Area of Benefit...”

Up to June 2008, the Trustees had either given, or were committed to giving around \$1,250,000, the major part of which was allocated to Literacy projects/programmes in schools, and to a lesser extent pre-schools. The Trustees commissioned the evaluation with two main objectives a) to assess the impact of the Trust's grant making decisions on the wider community and b) to evaluate the Trust's own processes and their performance of their role as custodians of the Trust Fund and grant makers into the 'Area of Benefit'. Five projects funded by the Trust were selected as a pathway into the first objective. By focusing on five projects in diverse settings it was expected that the second objective would also be accomplished. A decision to evaluate the following five programmes was made after visiting the respective locations to confirm their agreement:

- Papatoetoe South School: Equipment for Physically Impaired Inclusive Centre;
- Papatoetoe Kindergarten: ICT Literacy Project (stage 3); Making Literacy Visible for our Children and their Families;
- De La Salle College: Techno Literacy Project (SuccessMaker for year 9 and 10 students);
- Rongomai School, Otara: Computers in Homes and Effective Writing;
- Tyndale Park Christian School Trust: Books for a Phonics Based Literacy Programme.

Findings

In the event, the evaluations proved to be more of a journey of discovery than anticipated. The SuccessMaker project at De La Salle College was found to be still in its formative¹ stages. Because SuccessMaker is directed towards helping students to master the building blocks of literacy, and this takes time, impacts information that could be gleaned from the evaluation was limited.

Notwithstanding, the evaluation yielded valuable information about the collaborative processes involved in setting up a complex ICT project in a secondary school, and maximizing sustainability.

The Rongomai School evaluation underscored important lessons about community ownership of projects and emphasized that there is 'a time for every purpose'. At Rongomai, building a relationship of trust with the local community and establishing a working partnership with parents in the interests of the children were essential precursors to the Computers in Homes and Effective Writing Project. Earlier foundation building initiatives received funding support from the AACT. It is also noteworthy that new opportunities opened up after the AACT approved their funding application. The high level of communication which the AACT maintains with organizations it funds paved the way for those new opportunities to be taken up, taking programme impacts to an unanticipated level of success.

The Papatoetoe Kindergarten's funding application for ICT equipment was informed by a pilot project at another kindergarten and the experience of other kindergartens within the Auckland Kindergarten Association. The project fitted particularly well with a community with a preponderance of recent immigrant families with little or no English. Photographs taken with the digital cameras made the children's learning at kindergarten visible to the families, thus serving as a bridging language between the kindergarten and its community. There were also direct beneficial impacts for the children, facilitated by the teachers' understanding of child development and behaviour and of empowering and promoting learning and social development. The teachers' expertise became an integral part of their use of the technology. Findings here were consistent with those at Roskill South Kindergarten: that learning gains from ICT technology become probable only in the presence of certain setting-specific mediating factors working in synch.

The Principal of Papatoetoe South School was thinking along similar lines when he emphasised the importance of professional development to support the introduction of ICT in schools. He was referring to training not only in use of the technology, but in curriculum mapping to link the technology into the curriculum. Their own constantly updated intranet served as a valuable aid in linking ICT technology with the curriculum. The evaluation focus at Papatoetoe South School was on the Physically Impaired Inclusive Centre (room 10). Observations in mainstream classrooms were a necessary adjunct for gaining insights into the potential of SMART Boards as a classroom teaching tool. It emerged that, while the SMART Board was undoubtedly a useful learning tool in room 10, there were significant accessibility issues around educational software currently available, which

¹ Patton M.Q. (1987) *Qualitative Evaluation Methods*. California, USA: Sage.

meant that SMART Board use was below potential. An educational software package that has attracted positive comment from teachers of special needs children was identified.

The evaluation at Tyndale Park Christian School turned out to be disappointing. The benefits of phonics teaching methods could not be fully explored. Had we known at the outset that the school's Board of Trustees would not permit any access to an important stakeholder group (i.e. parents) the Trust Administrator and I would have proposed an alternative location for the fifth evaluation. The most valuable information to emerge from this evaluation concerned the AACT's processes.

The remainder of this report summarizes main points in the expectation that the AACT and possibly other funding providers may find them useful.

The AACT

- ◆ Generally excellent feedback about the AACT and the Trust Administrator, Janis McArdle, in particular.
- ◆ The AACT is working in an effective partnership with the community.
- ◆ Excellent communication
- ◆ The importance of accountability was acknowledged and some said that knowing that they will be monitored deters them from straying.
- ◆ The AACT is very fair, takes its responsibilities very seriously, and rightly places importance on accountability to public. They are prepared to go 'the extra mile' to hear people's perspectives (highlighted during the process of the Tyndale Park Christian School evaluation).
- ◆ Supportive but not interfering.
- ◆ Organizations have appreciated the site visits and ongoing interest shown by AACT members. (Site visits occur post funding approval).
- ◆ The funding has provided resources that recipient organizations could not have purchased otherwise/ or for which they would have had to wait a long time.
- ◆ It is appropriate that the AACT asks for more information re larger items of expenditure, e.g. Success Maker literature review.
- ◆ Sometimes applicants are asked to make a presentation to the AACT. An example of a situation where this may be required is if it is thought the project could duplicate an existing service.

Designating a specific area of activity for funding

- ◆ It is desirable to set some boundaries on what type of community projects will be funded:
 - It keeps number of applications received within manageable limits.
 - It implies less waste of time for potential applicants and puts limitations on building up of false hopes.
 - There may be greater synergy between projects e.g. Janis McArdle put a Pacifica Pre-School, Tautua Aoga Amata Charitable Trust in Otara, in touch with Papatoetoe Kindergarten re development of a digital camera project.

- In maintaining a specific focus, the AACT gains more knowledge of the community than with a 'scatter' approach.
- ◆ It is appropriate to give extra merit points for projects with potential benefits that extend beyond the recipient organisation.

Literacy as a focal area

- ◆ Literacy as a priority area emerged from AACT 's consultation with the community.
- ◆ Literacy is an appropriate area to fund in South Auckland. It can embrace all age groups; helps towards a better future for children; promotes long term, possibly intergenerational benefits.
- ◆ This is not to suggest that Literacy should be the focus forever. The focus should be reviewed from time to time so different sectors share in the benefits.
- ◆ Schools and pre-schools are centres of community. Consequently they are a productive channel for disseminating community wide benefits.

A December 2006 KPMG ² report on costs of literacy difficulties in the United Kingdom had three components a) a review of research on the long term consequences of literacy difficulties to individuals and for society; b) estimating the costs to the public purse that result; c) estimating the return on investment of early intervention to address literacy difficulties. A main conclusion was:

The research reviewed showed that literacy difficulties are linked to costly special educational needs provision, to truancy, exclusion from school, reduced employment opportunities, increased health risks and a greatly increased risk of involvement with the criminal justice system. These risks operate over and above those associated with social disadvantage in general, and those associated with lack of qualifications.

Aspects of the organisation as a consideration in decision-making:

- ◆ The AACT places appropriate importance on quality of programme staff – their track record.
- ◆ Some projects need professional development/training if they are to be maximally effective (e.g. SMART Boards in classrooms). Staff-wide professional development/ training may have sustainability benefits over high investment in a few people.
- ◆ Timeliness – e.g. Rongomai School; foundation work in building a relationship of trust and understanding with the community was a necessary precursor to Computers in Homes.
- ◆ Community context (the community served by the organisation, for example:
 - providing mini laptops for homes can be justified for a school serving a very socio-economically deprived community but not a school serving an affluent community.

² <http://www.readingrecovery.ac.nz/research/download/ECRcosts2006.pdf>

- Success Maker - extra challenges of setting up the same programme in a secondary school, compared with a primary school.
- ◆ Schools can make a contribution in turning around communities characterised by high levels of dysfunction. Projects that support schools in providing pro-social models merit funding support. The Principal of Rongomai School commented on schools as a place where children can observe other adult role models and values reflected in actions and behaviour, in contrast to what may be socially corrosive standards communicated and modelled at home.
- ◆ How a project links into the wider community is important – e.g. linkage with the Otara Computer Clubhouse Trust can potentially enhance sustainability of Rongomai School's Computers in Homes - Effective Writing project. Janis McArdle actively fosters linkages between projects.

Flexibility /accountability balance

- ◆ In the case of 3 projects, there was variation in expenditure, compared with what was set out in the funding application. New information can emerge once a project gets underway, or something may happen that requires a re-assessment. (Rongomai School, De La Salle College and Papatoetoe Kindergarten.) If variation is envisaged, the organisation should first check with the AACT Administrator.
- ◆ Responsible community ownership is desirable, so that the community makes operational decisions, e.g. Rongomai School did not ask parents to sign a written contract. This did not compromise compliance with conditions that were part of their funding application.
- ◆ Patience is in order– some projects require an extended set-up time – e.g Success Maker at De La Salle College.

Funding application form and agreement form

- ◆ The application form should have space for applicants to nominate the key person to contact should the AACT require information about operational aspects of their project/programme. Professional evaluators seek to work through the correct channels.
- ◆ The application form should incorporate a question re training: e.g. If professional development/ training is needed to implement your project, please provide a summary of what this will consist of and who will provide it.
- ◆ The agreement signed on acceptance of funding should state that if changes are considered advisable with respect to items purchased, the AACT should be contacted.
- ◆ One of the evaluations raised an important issue: What is the entitlement of custodians of public funding with regard to having access for evaluation purposes to organisations receiving funding? The AACT have now incorporated a new clause in their funding acceptance form, making openness to evaluation a condition of receiving funding.

The evaluation

It was encouraging to learn from all organisations where evaluations were completed that the evaluation had added value and understanding to their project/programme or school. A frequent comment was that reading their reports was affirming for staff members, helping them to feel appreciated and acknowledged. In the case of Papatoetoe Kindergarten, a copy of the evaluation has been passed on to the Auckland Kindergarten Association and is being seen as a useful complement to an earlier research report on a pilot ICT project at Roskill South Kindergarten. Likewise, the De La Salle College evaluation could serve as a useful reference for New Zealand educators wanting to introduce SuccessMaker into a secondary school.

Background to the Evaluation

The Auckland Airport Community Trust was formally established in October 2003. This was a direct result of a decision made in the Environment Court on 10 December 2001 that Auckland International Airport Ltd. would establish a trust fund as a condition of the company being granted approval to build a second runway. The court decision specified the amount - \$250,000 per annum adjusted by the rate of the consumer price index each year.³

The charitable purposes of the Trust are set out in a Trust Deed. The Area of Benefit for the Trust is "those areas most impacted on by current and projected aircraft movements to and from Auckland International Airport". The first of three charitable purposes to which Trust funds can be applied relates to the mitigation of effects associated with noise from aircraft operations. It is the second charitable purpose that is most directly relevant to the present context: "to ensure positive effects on the external environment to offset the other adverse effects." A later section of the Trust Deed provides further clarification. While physical means can go only so far in mitigating adverse effects, there is the possibility of adverse effects being "at least partially offset by providing positive effects in the form of enhanced cultural, recreational and other opportunities and facilities to those living and working in the Area of Benefit..."⁴

The Trustees designated support of Literacy as the focus for funding for three years commencing at the start of 2005. Importantly, the Trust's funding application form requires applicants to specify among other things, envisaged outcomes for their project/programme, who will be targeted as beneficiaries, how the project/programme will be assessed, and indicators of its success. This conveys a sense of responsibility on the part of Trustees with respect to directing Trust funding to projects/programmes that will maximize benefits for their target community, and to recipient organisation being attentive to self-monitoring.

Up to June 2008, the Trustees had either given, or were committed to giving around \$1,250,000, the major part of which was allocated to Literacy projects/programmes in schools, and to a lesser extent pre-schools. The Trustees were keen to know whether the allocated funding had made/was making a difference. In other words, what actual benefit was the community realising from the Trust's Literacy programme/ project funding? Notwithstanding reporting requirements for recipient organizations, information reported back to the Trust was likely to be just the tip of an iceberg in comparison with information not being reported. There was also potential for an inherent bias in reports from organizations, as well as unpredicted impacts that had gone unnoticed.

³ Auckland Community Trust 2006 Annual Report

⁴ *ibid*

Evaluation Objectives and Overall Strategy

The evaluation objectives were:

1. To provide objective information about direct and indirect outcomes/impacts arising from a sample of Literacy projects/programmes funded by the Auckland Airport Community Trust. Of interest are impacts on participant children/students, school teaching and/or support staff, family/whanau members, schools and/or the wider school community.
2. To express a view on the effectiveness of the Auckland Airport Community Trust's grant making and make recommendations as appropriate.
3. To offer comment to the Auckland Airport Community Trust to assist their ongoing monitoring of funding allocations.

Evaluation Strategy:

I met with the Trust Administrator, and after considering various areas of the Trust's involvement, the five following projects/programmes were included in the evaluation sample:

- Papatoetoe South School: Equipment for Physically Impaired Inclusive Centre
- Papatoetoe Kindergarten: ICT Literacy Project (stage 3); Making Literacy Visible for our Children and their Families
- De La Salle College: Techno Literacy Project (SuccessMaker for year 9 and 10 students)
- Rongomai School, Otara: Computers in Homes and Effective Writing
- Tyndale Park Christian School Trust: Books for a Phonics Based Literacy Programme.

Diversity of programmes and settings guided the choice of programmes, with a view to adding interest and value to the evaluation. All five were developments of projects/programmes funded by the Auckland Airport Community Trust in preceding years and were to be evaluated in that broader context. The evaluation depended on the full cooperation of personnel involved at an operational level with the programmes and their willingness to allow access to their setting and to children's/students' records for evaluation purposes. The Trust Administrator and I were open to revising the list of evaluation locations if such cooperation and access were not clearly evident. Although the envisaged locations remained the same, one of the programme on our original list was replaced with another to accommodate what was happening at that site. One of the realities of community settings is unforeseen eventualities that hinder programme roll-out.

The Trust Administrator made the initial contact by phone with all five locations and together we visited each one and spoke with the Principal or equivalent to seek their agreement and support for the evaluation. This involved an explanation of the rationale emphasizing the AACT's accountability to the wider community, the evaluation aims and interest in wider community impacts, and how they or their staff might be expected to contribute if they agreed to being part of the evaluation.

The AACT Administrator, Janis McArdle was available throughout as my point of contact and liaison with AACT members. I attended AACT meetings at regular intervals to personally report progress.

Types of data collected varied across the locations. Generally, data included documentation, student achievement records where appropriate, other programme reports/records; interviews with key teachers/support staff; observations of the project/programme in action; interviews/chats with students, appropriate to the age group; interviews with others, according to what emerged through the research; academic literature; searching internet web sites. I was always mindful of carrying out the evaluation in such a way as to bring the least possible disruption to work and routines in the schools and kindergarten. This was made clear to Principals and other personnel. At four of the evaluation locations, I asked for feedback on the AACT – communication, help offered, processes etc.

In August/September 2008, draft reports for their particular section of the evaluation were sent to the school Principal or person in charge of the programme/ project, inviting their comment and asking them to highlight any inaccuracies. It was made clear that their project/programme report was one of five which would be made available to the general public. In preparing the evaluation reports, care was taken not to identify children/ students/ family members unless it was seen to have significant explanatory value and to show the individual in a positive light. Where identifying information is included, often in the form of photographs (i.e. in the Rongomai School and Papatoetoe Kindergarten reports), it is with the written consent of the person concerned or a parent or caregiver.

Rongomai School: Computers in Homes and Effective Writing

INTRODUCTION

Rongomai is a decile 1⁵ year 1-6 primary school, with an enrolment of 150-170 children from approximately 110 families. Ethnic composition is: Maori 30%, Cook Islands Maori 30%, Samoan 30%, Tongan 7%, Niuean 3%. It serves a neighbourhood in Otara that is at the lowest end of the socio-economic deprivation spectrum⁶. School families, many of them single parent families, struggle with the stresses and tensions of poverty on a daily basis. Like other low decile schools, Rongomai School has to find ways of working proactively to prevent these stresses and tensions impinging negatively on children's education and development. Present Principal Tina Voordouw, took up the role in 2004, bringing with her professional experience gained in a diversity of urban and rural schools, including other South Auckland decile 1 schools. When she first commenced at Rongomai in 2004, the school's roll had dwindled from 720 in the late 1970s to 120. Rongomai School had a reputation for violence in the playground, as well as poor achievement. In December 2003, only 6% of children transitioning from Rongomai School to year 7 intermediate schooling were able to read at their chronological age level or better. The remaining 94% were lacking essential basic literacy skills. Reading and reading comprehension were key issues. This was despite the presence of two pre schools on site - a kohanga-reo and the Poetiare Cook Islands pre-school.

Tina Voordouw's approach was holistic, implying a need for the school and its community of families to work as partners in defining the issues and putting solutions in place. What was happening in the school was a reflection of a school community which lacked cohesion, as well as a lack of connection and shared vision between families and the school. Many of the parents still had unhappy memories of schooling which caused them to feel alienated. Children were picking up on their parents' feelings of alienation, a sense of disillusionment that education could make a difference for them and theirs, and a lack of hope for a better future. Some of the homes are without pen and paper. Parents also tended to underestimate the contribution that they could make. In the words of one mother who has a long association with Rongomai School, "I did not realise that parents need to work at home with the children. I thought my children's learning was a matter for the school to see to, not the family". The new Principal directed attention to building trust with the local community, fostering a shared vision of education as a path to a better future, and encouraging parents to become actively engaged in their children's education.

5 Decile rank is determined by census data and indicates the extent to which the school draws its students from low socio-economic communities. Decile 1 schools are the 10% of schools with the highest proportion of students from low socio-economic communities, whereas decile 10 schools are the 10% of schools with the lowest proportion of these students. www.mined.govt.nz

6 White P., Gunston J., Salmond C., Atkinson J., Crampton P. (2008). Atlas of Socioeconomic Deprivation in New Zealand: NZDep2006. Wellington: Ministry of Health.

She introduced a new approach to teaching literacy - the Bannatyne Programme⁷. Having observed its use in a low decile school in Papakura, she was impressed with its effectiveness, most especially in helping disadvantaged and learning impaired children with poor prognoses for literacy achievement to learn to read and write. Developed by Alexander Bannatyne, it incorporates phonics, visual/spatial skills, motor/kinaesthetic skills, listening skills, comprehension and articulation skills and humour, among other elements. It is self-paced and designed to be fun. It claims a track record of success with children ranging from gifted and mainstream beginner readers, through to those for whom acquisition of basic literacy is a major challenge (e.g. children with Attention Deficit Disorders, learning disorders, dyslexia, unmotivated and hyperactive students). The successful track record extends to children from non English speaking backgrounds, those from disadvantaged home backgrounds and teenage and adult poor readers.⁸

The Auckland Airport Community Trust provided the financial means for an important initiative aimed at strengthening home-school partnerships and showing parents how to better support their children's learning. A successful funding application to the AACT in 2005 and 2006 for *Pause, Prompt, Praise (PPP)* provided for the purchase of basic readers, sets of books for children to take home, and a parent-sized beanbag and a smaller child sized beanbag per family. The bean bags served the purpose of getting families to set aside a reading area in homes that were often sparsely furnished and with few comforts. They could also be moved to a quiet space in homes that were often noisy and busy. The beanbags and book sets to take home (children were offered a selection to choose from) were conditional on parent's participation in *PPP* training. Children, excited at the prospect of beanbags and books, naturally played their part in urging their parents to participate in the *PPP* training. The Duffy Programme⁹ adds to children's book collections each month. In 2007, there was a big influx of parents to the *PPP* programme. Rongomai teachers and teacher aides commented on a noticeable difference in on-task learning behaviours between children who commence at the school with parents doing *PPP* training and newcomers who transfer from other schools.

Another early initiative was a Parent as First Teachers Programme (PAFT)¹⁰. Planning is underway to introduce HIPPY (Home Interaction Programme for Parents and Youngsters)¹¹, dependant on financial resourcing. As a response to the level of violence that still pervades the local community, a Canadian Peace Foundation programme, Roots of Empathy (ROE), is being piloted in year 5- 6 classrooms. It is directed towards fostering caring behaviours and encouraging children to articulate feelings and emotions and to empathise. It revolves around bringing a baby into the classroom, the purpose being to communicate values and standards in a non-threatening way. Learning activities are incorporated, such as measuring and doing math calculations around weight and length, reading facial expressions from photographs, and putting feelings into words on paper.

⁷ <http://www.bannatynereadingprogram.com/home.htm>

⁸ <http://www.bannatynereadingprogram.com/home.htm>

⁹ www.booksinhomes.org.nz

¹⁰ <http://www.minedu.govt.nz/educationSectors/EarlyChildhood.aspx>

¹¹ https://www.sovereignsunshine.co.nz/index.php/charities/charity/great_potentials_foundation

A quite different and more basic initiative is a breakfast and lunch programme which operates sensitively to safeguard against children and parents feeling embarrassed or singled out.

Whereas systematic attendance records do not appear to have been kept prior to 2004, attendances are now monitored systematically, and unexplained or unjustified absences are followed up. Perfect class attendances are acknowledged at school assemblies. The local Truancy Services provide excellent back-up.

The main focus of this report, "Computers in Homes and Effective Writing" was made possible by a successful funding application to the AACT in 2007. The impacts of this particular project must be viewed within the total picture of an extremely disadvantaged community and initiatives and strategies introduced by a Principal with a vision emphasising strengths and collaboration, matched by the dedication and drive to bring it to fruition.

PROJECT RATIONALE AND GOALS

By the time that the funding application was submitted to the AACT in March, 2007, Rongomai School was showing gains in reading achievement, with 71% of children reading at or above their chronological age by the end of their year 6 schooling (compared with 6% in December 2003). While the gains were impressive, and all the more so considering the time span, they were not construed as grounds for complacency. Writing and comprehension were of particular concern. Measured against national norms, *"across Rongomai School, 16% of our students are writing at their correct level, 76% are 1-2 years behind, and 8% are 3-4 years behind. ...Precious little writing goes on in the homes. They have no reason to write. Having a computer would change that."*¹² At that time, only 10 of 110 school families had a computer. The school saw an opportunity in an offer from its sponsor, Westpac Bank, to give the school 'cleaned' 3-year old lap top and desk top computers which were due for replacement. If these computers could be placed in the homes of 100 school families, the main expense to be incurred would be in the purchase of software.

The project aim was to encourage use of computers by parents within the school community. The purpose was to accelerate progress in writing and in comprehension. An ongoing progression was envisaged, *"with computer skills and literacy going hand-in-hand...We are seeking to lift the level of literacy in our homes because the more our students see their parents utilizing literacy, the more they will see a reason for increasing their own competence."*

Three conditions were envisaged as a prerequisite for receiving a computer loaded with software: a) parent or primary caregiver must attend a training session in computer basics; b) Students required to complete a piece of writing on the computer to demonstrate competence in use; c) the student must bring to school each week at least one piece of writing that he/she has done at home.

Items Purchased with AACT 2005 Grant

AACT Grant amount: \$43,540.00

Two separate quotes were obtained and the following costings were based on the lower of the two. Prices listed below are less GST.

Microsoft Office Professional x 100	\$35,378.00
Norton Antivirus x 100	\$ 4,440.00
Encarta x 100	\$ 1,776.00
Carmen Sandiego software	\$ 1,776.00
Rewritable CDs	<u>\$ 177.00</u>
TOTAL	\$43,547.00

¹² Funding application to AACT

DATA SOURCES

- 2005, 2006 and 2007 AACT funding applications and AACT 2006 and 2007 reports .
- Several interviews with Tina Voordouw, Principal over the period April-August 2008.
- Two interviews (April and August 2008) with 2 parents and one grandparent. They are also teacher-aides, dating back 9-11 years. One was a foundation pupil in the 1970s. They were commenting as teacher-aides and as parents and grandparents of children of Rongomai School.
- Interviews with 2 Rongomai School teachers (of year 2 and year 3 classes) and a Resource Teacher Learning and Behaviour.
- Revisited school to peruse attendance data, comparing 2006, 2007 attendances with 2004. Trends in school attendances were of interest as a potential area of wider impact.
- Attended Pause, Prompt, Praise training session, including showing of a 15-20 minute video. Although wet weather meant a reduced parent turnout, it was an opportunity for me to meet and talk with a mother, a father and a grandmother.
- Interview with Manukau Libraries librarian responsible for the Tupu Library (Dawson Road branch) used by children and families. The main value of this interview, as it evolved, was finding out about the community library's outreach to children, youth and families in Otara and resources available to schools.
- Quantitative assessment data from Rongomai School: percentages of children reading at or above their chronological age level, years 1-6, covering the years 2003 through to 2007.
- A wide range of examples of writing projects children have done at home.
- Interview with Mike Usmar, founder and Executive Officer of Clubhouse 274 based at Clover Park School, Othello Drive, Otara and initiator of the Computer Clubhouse Trust.
- Interview with a class of approximately 20 year 5-6 students.

Note: Where children's work included this report comprises information that could identify the child or family (e.g. surname or photograph), family consent was obtained with the knowledge that the report would be made available to the general public.

OVERVIEW OF THE PROJECT

The project was launched along the lines envisaged in the funding application but later underwent revision in response to what emerged initially as an obstacle, but transposed into an opportunity.

The response by parents/ caregivers to participate in computer training was excellent, with 30 completing the training and 17 names still on a waiting list at the time of my first interview with Tina Voordouw in April 2008. However, the supply of 'cleaned' computers from Westpac Bank was slower than anticipated. The task of installing the new software on the computers also shifted to the computer technician who visits the school. Software installation proved to be time consuming. The result of these combined circumstances was that the flow of computers more closely resembled a trickle than a flood. Initially, the school adopted a cautious approach and three families who were in frequent contact with the school each received a computer on a trial basis. The school kept in storage another 17 'clean' computers and Westpac later added another 10, making a total of 27. Further training sessions were wisely delayed and the money for the software was set aside.

Following my interview with Tina Voordouw and having looked at product information on the Microsoft.com website, I came to the conclusion that Microsoft Office Home and Student would better suit the purposes of the project, and at half the cost of Microsoft Office Professional, which included components superfluous to requirements. I spoke with the AACT Administrator, who discussed this with Tina. Shortly afterwards, Tina received a Ministry of Education Centre for Assistive Technology circular advising of the availability of Asus Eee PCs complete with educational software. They were available with a 2 year warranty through certain local distributors at a very reasonable cost:

The Eee PC is a small lightweight laptop alternative running Linux operating system with Open Office or Windows XP with Works. The keyboard and screen are small and suitable for students who require a sturdy lightweight tool. New versions include the nine inch screen with Microsoft XP operating system or Linux.¹³

The Eee PCs offered the advantage of wireless internet, email, web browser, file manager and accessories, Skype complete with built-in web cam and microphone, and open source software encompassing word processing, PDF reader, paint, spreadsheets, typing tutor, photo manager, virus protection and fun programmes for reading and language literacy, maths and science. Wireless internet connectivity is important because many homes do not have a landline phone connection. A revised plan, which was within the budget approved by the AACT, was proposed. Rongomai School would retain the 30 computers already supplied by Westpac. The funds set aside for purchase of software would be diverted to the purchase from a local distributor of 100 Eee PCs, each with a bonus 4GB USB flash drive and lanyard. USB flash drives were favoured over CDs because of their

¹³ <http://event.asus.com>

durability, portability and memory capacity. Attached to a lanyard hanging around a child's neck, they were less likely to be lost than if they were loose in a school bag.

The revised plan was adopted and implemented with the agreement of the AACT. The computers are now with families previously without a computer, all of whom have completed a basic training. Internet connection is via a local wireless network. The only cost that falls to families is for internet services. Anti-virus etc. protection is via open source software at no cost and is ongoing (i.e. no expiry date and no renewal fees). Low cost to families is important to the sustainability of the Computers in Homes project, given that some families are struggling to pay for basic necessities such as food, shelter and electricity. However, the financial situation of some families is improving with mothers and older teenage sons and daughters finding a place in the workforce. The children save their work on their USB flash drive, obviating the need to bring the computer to school every week. The work is printed on a school printer and shown to the class teacher.

There were discussions around whether to require families to sign a written contract. It was decided not to adopt this course of action as, in Tina's words, "we want to have faith that we respect that they want the best for their children as well." This is not a 'pen and paper' community. It is a community where a spoken understanding means more than a written one. There was one instance of a child reporting that "our computer is in the money shop but Mum says we will have it back at the weekend". Fortunately, mum was true to her word. The family name and name of the school are engraved on each individual computer and it is hoped that if a computer were to be left at a loan shop and not retrieved, the shop would contact the school. Any glitches have been minor, such as an older child who registered a password and promptly forgot it, making the computer inaccessible; at least until the school technician resolved the problem. A family's relocation to another area raised the question of whether the computer should be returned. The family retained the computer with the school's blessing.

An interview with Mike Usmar, founder of Clubhouse 274¹⁴ based at Clover Park School, Othello Drive Otara and initiator of the Computer Clubhouse Trust gives cause for optimism about project sustainability into the future. The following is a transcript of my notes from an interview with Mike in May 2008:

A 2007 Manukau City Council funded survey of 1561 Otara homes found that 40% of homes had computers, the vast majority 5+ years old. 60% had connected landline phones, 17% had dial up internet, and a miniscule number had Broadband internet. In late June 2008, work will commence on the laying of fibre optic cable to provide wireless internet connection across Otara. Consultation with Netsafe will ensure that the internet will be heavily filtered to moderate online behaviours. Schools are intended as the point of access for homes in their neighbourhood.

Requests for proposals (RFPs) will be sent to Otara schools in October 2008 and schools will start to be connected next January 2009. Schools will be required to contract to pay \$9-50 per month for what is

¹⁴ www.clubhouse274.org.nz

envisaged as a very high speed connection. There will be no additional costs to homes. A simultaneous initiative will be the distribution of 3000 plastic laptops¹⁵ to children attending Otara schools. The costs of US\$187 for each computer will be funded by sponsors. Development of 'open source software' for the laptops will be guided by the RFPs from schools. To add value to teaching and learning, Clubhouse 274 are working with "Anytime Anywhere"¹⁶, an organisation focused on professional development for teachers to incorporate personal laptops as a learning tool. The process for distributing the laptops and establishing priorities will be decided in consultation with schools. The commitment of schools for their teachers to participate in professional development will be a major consideration in deciding who will get computers.

¹⁵ http://wiki.laptop.org/go/Hardware_specification

¹⁶ <https://www.microsoft.com/education/aal.msp>

OUTCOMES

As explained in the introduction, the Computers in Homes and Effective Writing Project built on a platform of positive changes in the school, realised through other initiatives. These included a range of parent engagement initiatives, strategies aimed at making Rongomai School a happier and safer place for the children, and new approaches to teaching Literacy, in the form of the Bannatyne Programme. Outcomes must be viewed in this context.

Literacy Gains

The following table, based on results obtained using PM Benchmarks¹⁷ and "PROBE" (Prose Reading Observation, Behaviour and Evaluation of Comprehension)¹⁸, shows the progress that has been achieved. PROBE was developed as an individual reading assessment tool designed for students aged from 7 to 15 years, but it may also be used as a measure of silent reading comprehension and listening comprehension at the same age levels.

<i>RONGOMAI READING: %ages of students reading at or above their chronological age</i>					
	2003	2004	2005	2006	2007
Year 6	6%	33%	35%	71%	96%
Year 5	20%	20%	35%	65%	65%
Year 4	15%	20%	30%	50%	70%
Year 3	18%	25%	21%	42%	60%
Year 2	13%	30%	15%	20%	48%
Year 1	8%	0	8%	3%	13%
Year 0	0	0	0	0	0

The literacy gains since 2003 are impressive; in 2003 only 6% of children finished year 6 with a reading age commensurate with or above their chronological age level, compared with 96% in 2007. With some allowance needing to be made for movement in and out of the school (transience is around 10%), the 96% group in 2007 were the same students who completed year 2 in 2003. As they advanced through the year levels, they steadily gained chronological reading age parity or better with peers nationwide; 13% in year 2- 2003; 25% in year 3 – 2004; 30% in year 4 – 2005; 65% in year 5 – 2006; and 96% in year 6 - 2007. Looking vertically, column by column, the general trend across the school in 2006 and 2007 was for percentages achieving parity to increase as year levels got higher, a pattern of improvement that was not evident in 2003. This would seem to bode well for the future, in terms of students being able to continue to hold their own as they progress through intermediate and secondary schooling and beyond. Tina Voordouw explained that there is a "need

¹⁷ PM Benchmarks goes to reading level 15, which equals a reading age of 6. Publishers: Wellington NZ: Nelson Price Milburn

¹⁸ PROBE: Prose Reading Observation, Behaviour and Evaluation of Comprehension
http://www.tki.org.nz/r/assessment/two/assess_tools2_e.php

for targeted learning every year to keep up the momentum. It distinguishes the families who do a good job at home.” She added that an earlier trend for children’s literacy performance to ‘drop off’ after holiday breaks, especially the long Christmas break, is not so marked now, with children doing more reading at home. It is reasonable to expect that the home computers will help maintain an unbroken learning momentum.

As indicated earlier, the Effective Writing Project had its origins in feelings of concern that writing and comprehension were lagging behind, despite demonstrated improvements in reading across the school. It is noted that PROBE incorporates assessment of comprehension. The above ‘pre home computer’ results are testament to improvements in comprehension, as well as reading. With children’s use of home computers for writing, the future looks promising. As indicated by teachers’ accounts and the accounts of parents and of children themselves, the children are doing more story writing and other written work because writing on a computer is fun. They are far more eager now to use the classroom computer. I was given a large folder of a range of written work (stories, letters, viewpoints etc) done on computers at home by children from years 1-6. Some examples are included in an appendix immediately following this report. Among the pages are children’s letters of thanks to Westpac and the AACT.

A frequent comment from teachers and teacher-aides was that children have become more confident about expressing themselves and are articulating their ideas and questions more clearly during classes and among themselves. Listening has improved. Vocabularies have expanded. An 8 year old was able to gather enough confidence to ask a teaching staff member a question that was indicative of a situation of sexual abuse in the home, enabling early intervention.

The computers give the children a wider learning base. Games included in the open source education software package are a fun way to learn and practise maths and literacy related skills. The music programmes on the computer are helping children to develop their musical talent.

School Attendances/Absenteeism

With increased engagement of parents in the school and parents becoming more actively involved in supporting their children’s education, I thought it would be worth looking at 2006 and 2007 attendance figures to compare them with 2004 when Tina Voordouw first arrived. Prior to 2004, attendance records were not kept systematically. The records confirm that attendances have improved and generally, if a child is absent from school, the absence is both explained and justified. I would suggest 3 main reasons, supported by data: a) improved monitoring and absenteeism follow-up processes; b) building trust and understanding with parents; c) children enjoy being at Rongomai School. In the words of a teacher-aide/ parent, “they (the parents) recognise the importance of not missing out on learning.” Previously, no breakfast / lunch (no bread in the house) was a reason for parents to feel justified in keeping children home from school. Parents are now more comfortable about telling the school, so the child comes to school and the school provides breakfast and lunch without any ‘loss of face’ for the child or parent. This has not fostered dependency as *“parents have become more consistent about preparing school lunches” (teacher aide)*. Enjoyment of school was

evident in the children's stories; school becomes more enjoyable when children feel that they are able to keep up with their class work.

Computers as a Family Activity

The examples of work I was shown and my interviews with parents indicated that parents and other family members are working alongside the Rongomai children on the computers. Sometimes computer use involves more than one child working with the parent; sometimes it is a parent-individual child activity; and sometimes siblings work together, usually with one providing tips or instruction. An example was a brother who is in secondary school explaining a science programme to his younger sibling. In Tina Voordouw's words, "it's like having a great excuse to work together". Some parents have been motivated to take their learning to another level. Some have progressed their computer training through courses at the Manukau Institute of Technology (MIT). Some have enrolled in MIT courses to improve their English.

Children appear to see the computers as belonging more to them than their parents. This came across very clearly when I interviewed the year 5-6 class. Part of the explanation may be that children's affinity for ICT technology means that they quickly become more proficient than their parents in using a wide variety of the computer's features. A type of role reversal ensues, with the children teaching the parents, and possibly the teachers. Being able to teach something new to an older person is affirming of a child's learning identity. I see children's possessiveness of the computers as a positive development for several reasons. As a teacher-aide described it, the children feel 'a pride in ownership' because, for most, their Eee PC is the most significant thing they have ever owned. Understanding 'pride in ownership' may foster a sense of respect for the property of other people. Another implication is that it motivates children take greater care of their computers.

Children are drawn to use the computers because they are fun. They allay boredom, thus helping to lower stress levels in homes during school holidays, especially when the weather is wet. Often the school holiday caregivers are grandparents. They can also reduce stress levels and reduce driver distraction on long car trips, because children who are occupied are less disposed to complaining and fighting. Another comment from a mother was that it's noticeable in her neighbourhood that the computers "keep the children off the streets more."

Skype and the webcam allow for low cost communication, helping to reinforce family connections. Skype facilitates cheap phone calls elsewhere in New Zealand and overseas. Many of the Rongomai children have family in the Pacific Islands and some have family in Australia. At least one family have used the webcam for a family portrait.

Emergence of Leadership

Community leadership has also emerged from the computer training classes. Three parents who were part of the classes subsequently became members of the school's Board of Trustees. Another mother is organising monthly parenting sessions covering the following programme topics: healthy lunches, budgeting, first-aid, drug/ alcohol awareness, positive parenting, coping with puberty,

reading and maths activities for families. A walking group of 12 people has emerged out of the parenting classes. Both groups are ongoing.

Children's Comments

In interviewing a class of approximately 20 year 5-6 girls and boys, I was wanting to gauge their response to the computers and find out how they are using them. The comment from one child, "We like everything about it. It makes us feel special" conveys a sense of how much the computers mean to the children. The students were unanimous that the computers are helping their learning. I did not ask specifically about learning activities but they were mentioned most frequently as a favourite activity nonetheless. Direct quotes are italicised.

Features of the computer that they like

<i>The laptop keyboard is right for our fingers.</i>	<i>Wireless internet</i>
<i>The camera – we use it at home</i>	<i>The password –it gives privacy</i>
<i>The size – you can take it wherever you want.</i>	<i>The touch pad</i>
<i>The plug in head phones</i>	Backgrounds – likes changing these.
<i>The sound recorder- we record our own voices</i>	Skype – can talk to family overseas
<i>Being able to download music</i>	<i>Notebook – able to post reminders</i>

Favourite learning activities

Maths games – challenging	<i>Hangman (word game)</i>
<i>Pasting pictures into a story</i>	<i>Fractions and geometry</i>
<i>Tux Maths and Pics</i>	The periodic table of elements
Painting – likes <i>the grass that sparkles</i>	Sending and receiving emails
<i>I like writing stories...writing about my niece</i>	<i>Photos from different countries</i>
<i>The jumbled letter game</i>	<i>Typing games and writing words</i>
<i>Writing Nana's memories (after her death).</i>	<i>Blows bubbles for the right answer.</i>
<i>The dictionary – uses it when writing to look up meanings and spelling</i>	
Timetables and maths - getting better at basic facts.	The world clock
<i>The planetarium and it tells us what liquids are made of. It makes me want to find out more.</i>	
<i>The calculator can go to trillions – more than 100 zeros.</i>	

Games (variable learning component)

Potato Guy - that you can decorate with eyes, ears, hats etc.

Solitaire	Sudoku	Penguin races	Playing Music
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CONCLUSIONS

1. The Computers in Homes and Effective Writing Project brought together two main strands: a) engaging parents in their children's education and b) giving children tools and increased incentive to work on their literacy. Building a relationship of trust with the local community and establishing a working partnership with parents in the interests of the children were essential precursors to the Computers in Homes and Effective Writing Project. Without this preparation, a well intended initiative was at risk of being misused. The way in which the Project has been administered by the school has further enhanced its relationship of trust with the community.
2. The project got off to an excellent start with thirty parents/primary caregivers completing the training and another seventeen on a waiting list as at April 2008.
3. It is appropriate that operational decisions were/ are in the hands of the Rongomai School Principal and members of the school's Board of Trustees because they know their community best. The school community has ownership of the project and takes the responsibilities entailed very seriously.
4. New information emerged when the project was in its early stages, which resulted in major revisions to the strategy outlined in the funding application to the AACT. The revisions trace back to the evaluator raising questions about the most appropriate software to meet the needs of the Effective Writing project. My concerns related to incurring unnecessary costs for superfluous components. Not long afterwards, the Rongomai School Principal received information through Ministry of Education networks about Eee PCs (very durable mini-laptops), which could be purchased within the funding grant. Following discussions between the Principal and the AACT Administrator, 100 Eee PCs complete with open source software were purchased. They were subsequently distributed to families, in compliance with conditions set out in the funding application. Substantial extra benefits have resulted from what could be considered a serendipitous turn of events.
5. The Eee PCs come equipped with wireless internet, email, web browser, file manager and accessories, Skype complete with built-in web cam and microphone, and open source software encompassing word processing, PDF reader, paint, spread-sheets, typing tutor, photo manager, virus protection and fun programmes for literacy, maths and science. The 'minimum, non-recurring costs to families' aspect is important to project sustainability. The children and families seem to be using all of the programmes.
6. The USB flash drives constitute a simple method for work done at home to be brought to school and for assignment work to be taken from school to home. Families don't need to own a printer as printing can be done at school.

7. Literacy gains at Rongomai School since 2003 are impressive; in 2003 only 6% of children finished year 6 with a reading age commensurate with or above their chronological age level, compared with 96% in 2007. Improved standards of writing and comprehension are reflected in the 2007 figures. It is reasonable to assume that home computers will help reinforce these gains.
8. A trend evident across the school in 2006 and 2007 for percentages achieving parity to increase as year levels increase bodes well for the future, in terms of students being able to continue to hold their own as they progress through higher levels of education.
9. Children have become more confident about expressing themselves and are articulating their ideas and questions more clearly during classes and among themselves. Listening has improved. Vocabularies have expanded. Home computers are a contributing but not the sole explanation.
10. Parents and other family members are working alongside children on the computers. Sometimes computer use involves more than one child working with the parent; sometimes it is a parent-individual child activity; and sometimes siblings work together, often with one providing tips or instruction.
11. Records confirm that attendances have improved. A contributing factor is increased trust and understanding with parents. In the words of a teacher-aide/ parent, "they (the parents) recognise the importance of not missing out on learning." Also, school becomes more enjoyable when children feel they are not falling behind in their learning.
12. Some of the parents/primary caregivers who completed the basic computer training at Rongomai have progressed their computer training through courses at the Manukau Institute of Technology (MIT). Some have enrolled in MIT courses to improve their English.
13. Children's affinity for ICT technology means that they can quickly become more proficient than their parents in using a wide variety of the computer's features. A type of role reversal ensues, with the children teaching the parents, and possibly the teachers. Being able to teach something new to an older person is affirming of a child's learning identity.
14. Children appear to see the computers as belonging more to them than their parents. Children's possessiveness of the computers can be seen as a positive development for several reasons. The children feel 'pride in ownership' because, for most, their Eee PC is the most significant material possession they have ever owned. Understanding 'pride in ownership' may foster a sense of respect for the property of other people. Another implication is that it motivates children to take greater care of their computers.
15. Children are drawn to leisure time use of the computers because they provide entertainment. In allaying boredom, they help to lower stress levels in homes during school holidays (as long as the children aren't fighting over the computer!). They can also reduce stress levels and reduce driver

distraction on long car trips. Another comment from a mother was that it's noticeable in her neighbourhood that the computers "keep the children off the streets more."

16. Skype and the webcam allow for low cost communication, helping to reinforce family connections. Many of the Rongomai children have family members in the Pacific Islands and elsewhere overseas. At least one family have used the webcam for a family portrait.
17. Community leaders have emerged from the computer training classes. Three parents who were part of the classes subsequently became members of the school's Board of Trustees. Another mother now organises monthly parenting sessions, which have in turn led to the formation of a walking group of 12 people.
18. Work being done by Mike Usmar and the Computer Clubhouse Trust gives cause for optimism about the continuity of the Computers in Homes-Effective Writing project well into the future. In October 2008 all Otara schools will be invited to forward their proposals. As well as linking Otara schools into a wireless network and putting mini laptop computers in homes, it will offer professional development for teachers to incorporate personal laptops as a learning tool. Mike Usmar's project would appear to offer excellent opportunities for Rongomai School.
19. The children of Rongomai School have asked me to convey their special thanks to the AACT for a gift that means so much to them. Letters of thanks to the AACT are among written work they have done on the computers.
20. It is most fitting that the children themselves should have the last word. The comment from one child, "We like everything about it. It makes us feel special" conveys a sense of how much the computers mean to the children. The students were unanimous that the computers are helping their learning. I was amazed at the range of features they are using. The computers are adding a fun element to learning and to 'homework' in its broadest sense.

Papatoetoe South School: SMART™ Board Equipment for the

Physically Impaired Inclusive Centre

INTRODUCTION

Papatoetoe South School is a decile 2¹⁹ year 1-6 contributing primary school, located on Milan Road Papatoetoe, off Puhinui Road. An expanding roll over the last few years is an ongoing trend, to the point where 2008 roll increases are exceeding projections. A roll of 510 at 2008 school start increased to 580 by the end of term 1 and is now expected to reach 640-50 by the end of the year. A new classroom and other purpose built rooms completed in August 2008 will lessen but not eliminate pressures on room space. The growth in school roll numbers reflects increased infill housing in the neighbourhood and an associated influx of Indian families with young children. It also signifies that the school has a good reputation among the Papatoetoe South community. Ethnic composition is: 30% Maori; 30% Indian/Asian; 30% Pacific Islands; 6% NZ European and 4% others. Principal, Mark Barratt, commenced at Papatoetoe South School in December 2007. The school's Board of Trustees comprises 5 community representatives (2 Maori, 2 Cook Islands and 1 European) as well as the Principal and the school's Executive Officer, Ann Yearbury. The Board of Trustees are persevering in their attempts to attract an Indian community representative to join them.

The physically impaired inclusive centre is located in room 10, alongside other class rooms encircling the school's main play area. The Senior Teacher in Charge is Julie Swale. For the sake of convenience and economy of words, the Physically Impaired inclusive Centre will often be referred to as room 10 in this report. I asked Julie Swale to provide a description of the children in room 10 while protecting their identities. Julie Swale and Mark Barratt provided the following class description:

The Children in room 10 all have some form of physical disability and most have intellectual disabilities as well. The intellectual disabilities are mainly to do with the way the children are able to process information from thinking to doing. The students all require one to one teaching and some have higher needs than others which means they need help eating and toileting. The physical disabilities range from mild coordination problem, fine and gross motor issues to being unable to walk or move unaided. Some children require a wheelchair so that they are mobile.

¹⁹ Decile rank is determined by census data and indicates the extent to which the school draws its students from low socio-economic communities. Decile 1 schools are the 10% of schools with the highest proportion of students from low socio-economic communities, whereas decile 10 schools are the 10% of schools with the lowest proportion of these students. www.mined.govt.nz

All children in room 10 have physical programmes in place to increase their independence with mobility. The children come from a mix of cultures mainly Pacifica – Tongan, Cook Island and Samoan also Maori, Indian and European cultures. There are 12 full time students in room 10 and another 3 students who are attached to room 10 for Health needs only. These students are in mainstream classrooms full time.

We have a very strong individual inclusive education goal for all children with special needs at Papatoetoe South. For this reason Room 10 follows the New Zealand curriculum and whatever the rest of the school is into. We have mainstream children coming and going in and out of room 10 throughout the day for Literacy programmes; they interact with the children in room 10. These students have issues with their learning and need extra support.

Room 10 has a high staff/student ratio, including a Special Education Assistant who looks after the children's health needs. Visiting specialist services available to the room 10 children include Physiotherapy, Occupational Therapy and Speech Language Therapy. Individual Education Programme (IEP) Meetings take place twice a year involving family, the class teacher, therapist, and room 10's Special Education Assistant. There is a sharing of information on the child's progress and goals are set for therapy and learning. Twice yearly parent/teacher whole-school interview evenings, additional to IEPs, provide another opportunity for discussion of children's learning progress.

The word 'inclusion' is pivotal to understanding the way in which room 10 merges into the total school environment at Papatoetoe South School, with an underpinning philosophy of maximizing opportunities for all children to participate fully in school life, and eventually as adult citizens within society. The room 10 children do their fair share for all events on the school calendar, including concerts and sports days. In Psychology and Social Work practice, **Social Role Valorization** (SRV) is the name given to an analysis of human relationships and human services, formulated in 1983 by Dr. Wolf Wolfensberger, Philosopher, Psychologist and Educationalist, as the successor to his earlier 1970s formulation of the principle of Normalisation.^{20 21}

"The theory is based on the idea that society tends to identify groups of people as fundamentally 'different', and of less value than everyone else. It catalogues the methods of this 'devaluation' and analyses its effects. It may be used by those seeking to counteract these methods and effects.

An understanding of Social Role Valorization can lead to ideas about how to improve the lives of people who are devalued by society. These can be seen to have two themes - firstly removing devaluing features (for instance people being segregated from society in a building along with others perceived to belong to the same group), and secondly taking action that leads to people being valued. ... the approaches of SRV involve Socially Valued persons (in allying) themselves with Socially Devalued

²⁰ Lemay, R. (1995). Normalization and Social Role Valorization. In A. E. Dell Orto & R. P. Marinelli (Eds.), *Encyclopedia of Disability and Rehabilitation* (pp. 515-521). New York: Simon & Schuster Macmillan.

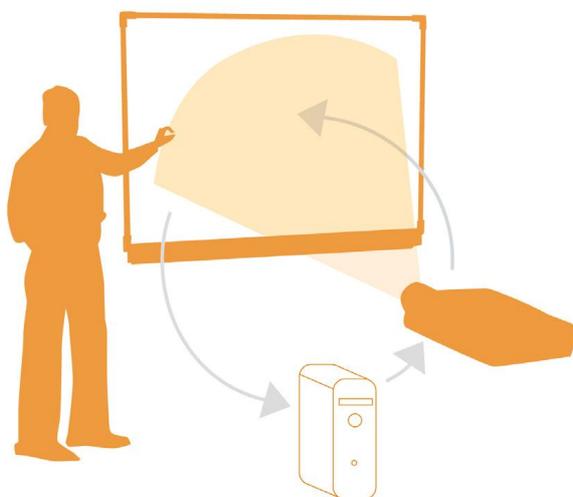
²¹ Wolfensberger, W. (1998). *A Brief Introduction to Social Role Valorization. A higher-order concept for addressing the plight of societally devalued people, and for structuring human services.* Syracuse, NY: Training Institute for Human Service Planning, Leadership & Change Agency (Syracuse University).

persons. This alliance will unify people, broaden acceptance of differences, and encourage the coexistence of people.”²²

SMART Board Description

Successful funding applications to the AACT in 2005 and 2006 saw Smart Board Interactive Whiteboard technology installed in all of the mainstream classrooms. A funding application submitted to the AACT in 2007 sought to extend the opportunities offered by Smart Board interactive technology to the room 10 children.

The **SMART Board interactive whiteboard** is a product of SMART Technologies. It is a large, touch-controlled screen that works with a projector and a computer. The projector throws the computer's desktop image onto the interactive whiteboard, which acts as both a monitor and an input device (mouse and keyboard). Users can write on the interactive whiteboard in digital ink or use a finger to control computer applications by pointing, clicking and dragging, just as with a desktop mouse. Buttons launch a popup keyboard and a right-mouse-click menu for more input options. The interactive whiteboard is usually mounted on a wall or a floor stand.²³ The interactive whiteboard allows control of any application simply by touching the screen.



From Installation and Users Guide SMARTBOARD™ 600 Series
Interactive Whiteboard²⁴

²² http://en.wikipedia.org/wiki/Social_role_valorization

²³ http://en.wikipedia.org/wiki/SMART_Board_interactive_whiteboard

²⁴ <http://www2.smarttech.com/kbdoc/1414>

PROJECT GOALS

Papatoetoe South School's 2007 funding application to the AACT envisaged that " *the installation of interactive Smart Board technology in the Physically Impaired Inclusive Centre would help the Special Needs children make " literacy gains commensurate with their 'atypical' able-bodied peers... Interactive technology engages children through touch, visual, auditory and thinking skills. Research shows that empowered children using this technology make significant gains in their learning.*"

Items Purchased with AACT 2007 Grant

AACT Grant amount: \$8,483.00

Prices listed below are less GST.

Smart Board SB660 64 inches	\$3052.00
USB audio system for Smart Board	\$ 680.00
Sanyo PLC XU47 2991mm projector	\$2760.00
AMIS AMC30 Amplifier	\$ 279.00
Projector bracket	\$ 490.00
Installation costs	<u>\$ 1072.00</u>
TOTAL	\$8,483.00

DATA SOURCES

- 2005, and 2007 AACT funding application;
- Several interviews with Mark Barratt, Principal over the period April-August 2008;
- Several discussions with Julie Swale, Senior teacher, room 10 and the Special Education Assistant;
- Observation of Room 10 children and their use of the SMART Board on 2 occasions;
- Observation of SMART Board use in five mainstream classrooms. They included a combined 2 teacher class with 55+ children and a classroom where a boy who began in room 10 is now part of mainstream education;
- The classroom observations were an opportunity to gather feedback from teachers in mainstream classrooms on the technology.
- Discussion with a member of the school's Board of Trustees.
- Interview with Denise Moyle, Senior Teacher ICT at Papatoetoe South School.
- Data from a survey on 60 students and a sample group of teachers supplied by Mark Barratt, Principal. (Thank you)

USE OF SMART BOARDS IN MAINSTREAM CLASSES

School Principal, Mark Barratt emphasised that, for SMART Boards to be used to their full potential, teachers need proper training, not only in use of the technology, but in curriculum mapping to link the SMART Board into the curriculum. He favours an inclusive team approach, so that knowledge is distributed across the whole staff group, albeit with a core group of team leaders having a higher level of proficiency. Given the reality of staff turnover in schools, it is unwise to rely too heavily on two or three people trained to high levels of expertise, who could be poached by other schools.

The school has its own intranet, which is being constantly revised and added to. It includes a wide spectrum of school information, educational material and educational software accessed via the internet, such as Rainforest Maths. An item that is of particular interest to the room 10 children is a series of photographs recording their participation in a 2008 combined schools Para Sports Day at

Mount Roskill School. Other mainstream children can also share in Para Sports Day experiences. The school's intranet offers a safe, relevant and diverse learning environment, categorised for junior, middle and senior school levels, which Papatoetoe South children can access in non-class time. It also gives teachers ready access to lesson content.

Observation of the use of SMART Boards in mainstream classrooms was helpful for gaining insights into their adaptability for classroom teaching purposes. My observations were in year 4, 5 and 6 and new entrant classrooms. Two observations were of Maths lessons, one was oral reading (new entrants), one was written expression (words that link ideas) and one related to the recording of time based on a 24 hour clock. A boy in a wheelchair who was in one of the Maths classes participated equally with other students.

The information presented on the whiteboard was a combination of information written on the board with a special pen as part of the lesson, and information accessed via the computer. The computer information included lesson material prepared by the teacher, examples recalled from an earlier lesson and new examples for students to work through. I was able to gain a more complete picture of the potential of SMART Boards when I returned on another occasion to watch a year 5 teacher using a Readers Digest 'learning' DVD with the SMART Board. Taken at face value, the DVD was a Nature Studies lesson on the eating habits of blue whales, but the teacher incorporated extra components to turn it into a lesson aimed at developing skills in identifying key words and note taking. Once the SMART Board teaching session ended, the DVD was transferred to a laptop computer so that the children could access the information for themselves.

Teachers commented that, having experienced the benefits of teaching with a SMART Board, they would not want to return to teaching without one. The following were some of the advantages mentioned by teachers:

- 1) A new set of information can be placed in front of the class immediately;
- 2) It is interactive, producing an immediate response, e.g. new entrant class observation: children's touching of the screen triggered first the sound, then a word incorporating the sound accompanied by a picture.
- 3) The advantages of the pause function of the DVD were very apparent in the year 5 lesson on key words and note taking.
- 4) There is no need for the students to spend time finding books and pieces of paper;
- 5) Earlier lessons and examples can be recalled to the screen. This is a good security net for students who are slower to grasp information – less 'loss of face' for those students;
- 6) It enables access to a wide range of educational programmes;
- 7) It encourages self-initiated learning. Children who want to probe deeper can do so. A folder at the bottom of the screen linked with an on-screen keyboard gives children easy access to class projects and the school's intranet.

- 8) Children make good use of the resource to do 'extra topic' work before school and at lunch time. For example the room 5 teacher said that 8 children had been using the SMART Board before school on the day of my visit.
- 9) The SMART Board is useful for generating and recording ideas to solve a problem. For instance, the room 5 children contributed their own ideas for solving bullying problems. The ideas were circulated across the school and some were translated into action.
- 10) It encourages group work and peer tutoring – children help one another;
- 11) It engages the children – focuses their attention.
- 12) DVDs can be transferred from the SMART board computer to classroom lap tops, enabling children to retrieve information they may have missed out on or want to recheck.

Survey conducted by Mark Barratt, Principal

Influences on learning

In a questionnaire about learning, year 5 and 6 students were asked to rank what they thought had a big impact on their learning. In the context of the survey, ICT referred to a range of technology used by children while at school: computers, SMART Board, cameras, fax machine, telephone and photocopier. Students attributed importance in the following order (most to least impact). Teachers' attributions are shown in brackets.

1. Teacher and how they are perceived by the student (6)
2. If they knew what they were meant to be learning (1)
3. ICT activities (4)
4. Hands on activities (5)
5. If they knew they had to meet a high standard (2)
6. Size of the groups (3)
7. If they had physical activity that day (7)
8. Time of the day (8)
9. Topic being studied (9)

For the students, ICT activities were clearly important, but not as important as teacher related factors. The low ranking attributed to 'topic being studied' is surprising, as one might expect that a topic of high interest to a student would have a high level of impact for that student. There was relatively close agreement between teachers and students regarding the impact of ICT. However it is noteworthy that teachers attributed a higher ranking to ICT activities than they did to 'teacher and how they are perceived by the student' impact. This was a small sample but if it suggests any abrogation of responsibility by teachers in favour of ICT technology, it would be of concern.

Student impressions of the benefits of having a SMART Board in the classroom.

Reason	Number of Student Mentions	Comment
Communication	54	Students wrote they could see more clearly
Motivating	49	Students said it was exciting. You could do 'cool' things with them
Interactive	45	Teachers could show clearly how things could be better

Teacher impressions of the benefits of having a SMART Board in the classroom.

Reason	Comment
Motivating	Students faced the whiteboard as they were afraid they might miss something.
Interaction	Teachers are able to unpack concepts more easily
Learning Links	We are able to make cross-curriculum links more easily as a result of internet access. Makes learning more pertinent.

Students identified SMART Boards as an important learning tool as they improve teacher-student communication. Teachers also saw SMART Boards as a tool to improve teacher-student interaction, as well as helping to make learning pertinent to the students.

ROOM 10'S USE OF THE SMART BOARD

Julie Swale described the SMART Board as "*a wonderful interactive tool that provides inclusion for all students*". Interactive communication technology is particularly important for room 10 children in improving their quality of life. For children who are non-verbal, key board skills are especially important. At the time of my research, only one of the families of room 10 children had a home computer, although several had X Boxes.

My first room 10 SMART Board observation was of a caterpillar game which reminded me of the popular children's book "The Very Hungry Caterpillar". There were 8 leaves and a bare branch, each numbered one to eight in random order. The challenge was to drag the leaves using finger touch on

the screen and to place each on the branch in ascending numerical order. Each child had a turn. Once the leaves were correctly placed, the caterpillar ate up all of the leaves, metamorphosed into a butterfly and flew away. The task was more than a simple maths exercise as it involved hand-eye coordination and called upon social skills, in terms of the children waiting for their turn, cheering others on and hand clapping. It was interactive, giving immediate reinforcement once the task was accomplished. As an observer, what impressed me most was the complete focus of this group of children who varied in their attention spans, and the encouragement and support shown for one another. The challenge presented by the task varied across the group of children. For example, one child, who was reluctant to even touch the SMART Board, took the hand of another child and placed it on the board, keeping his own hand on top, thus maintaining indirect control.

Digital photographs featured prominently in room 10's use of the SMART Board. The two sets of photographs I observed being used were of a walk around the local neighbourhood and the children's participation in a combined Para Sports Day at Mount Roskill School. Weather permitting, they try to do a walk around the local neighbourhood once a week, photographing items of interest, with the children themselves as central participants. The digital photographs are a way of recalling the experience and prompting discussion about what they saw on the walk, e.g. a household letterbox, power poles, cars, pedestrian crossing, birds, clouds, fences, colours, leaves, flowers etc. Because learning occurs through all of the senses, children are encouraged to touch things on the walk and talk about things that interest them. Seeing themselves and one another on the screen raises the excitement level. This was especially noticeable when they were viewing photographs of the Para Sports Day. The photographs of this day put on record the children's membership of a wider community and their efforts and successes, large and small. Learning programmes are available that link into the NZ primary schools curriculum (e.g. Kid Pix Deluxe – a simple to use drawing programme, the Magic School Bus and interactive maths games), although they are limited in number, and particularly so considering the accessibility requirements of the room 10 children.

In summary, I observed ways in which the SMART Board was a useful tool in the room 10 classroom situation. At the same time, I noted the following challenges:

- * Teachers had to cater to the education needs of children of a wide range of ages and levels of ability;
- * The limited attention span of some of the children required saint-like patience on the part of the teacher and teacher-aides.
- * Children were at varying points on a continuum of motor skills, ranging from mild coordination problems through to fine and gross motor issues. Children needed a certain minimum level of motor skills to be able to use the SMART Board.

Clicker 5 has gained a reputation among teachers of special needs children as a useful individual programme, as well as adding value to SMART Board use. The New Zealand distributors of Clicker 5 describe it as a powerful yet easy-to-use writing support and multimedia tool that enables children to write with whole words, phrases or pictures. The user clicks on words, phrases or pictures in a

'Clicker Grid' at the bottom of the screen, to send them into a talking word processor called 'Clicker Writer' at the top of the screen. They can hear words before writing them or whole sentences after writing them. Clicker 5 is ideal for primary-aged children. It is ideal for people with special needs, as it is switch accessible – it can even be used as a communication tool.^{25 26} A localised product version is available to suit the Australian/ New Zealand market. Julie Swale believes that Clicker 5 would have the following benefits for room 10 students:

The benefits for room 10 students would be around their ability to adapt to the NZ curriculum, Clicker 5 programmes cover all NZ curriculums. Students' independence would grow because they would have access to a programme that would suit their needs, not just for now but as they progress through their schooling. The need to keep students engaged in today's and tomorrow's technology is extremely important to the students in room 10 having their place in being able to be part of their community and take a place in society as a whole. I am very aware of the need to keep students included in being able to learn within their particular ability and for the students to make progress. Technology is very much part of room 10 students' world and needs to keep up with the ever changing needs of the students, Clicker 5, I believe, is one way of ensuring that the students needs are being meet.

Clicker 5 systems requirements for Windows are: Pentium II 400 or greater, Windows 98, ME, NT, 2000, XP, Vista. 128 MB RAM, 400 MB free disk space. And for Mac, Mac OS x 10.3 or above, 128 MB RAM, 400 MB free disk space.

Licence costs appear reasonable. GST exclusive costs supplied by the NZ distributor are quoted below. It is to be expected that product upgrades from time to time would involve additional fees:

Licence fees	excl . GST	Dual Mac + Windows
1 user	\$314	For one computer
5 user licence	\$480	For up to 5 computers, includes install CD
30 user licence	\$1291-74	For 30 computers, include install CD
Additional licence each	\$53-76	in addition to single user, 5 user or 30 user for each computer.

Other costs are freight/courier/insurance from a Melbourne warehouse - \$8 + GST and training books. Training booklets price per title = Single: \$30 + GST; 5 pack: \$120 + GST; 10 pack: \$210 + GST

Clicker 5 Introduction

This booklet covers the main features of Clicker 5, including Clicker Writer; using and creating Grid Sets; Pop-up grids; and talking books.

²⁵ <http://www.cricksoft.com/uk/products/clicker/default.asp>

²⁶ Norm Jager" <norm.jager@edsoft.co.nz

Clicker 5 Advanced

This booklet looks further at the multimedia features of Clicker 5 and how it can be used for to create complex learning resources.

Clicker 5 Access

This booklet covers the range of access methods available in Clicker 5 and how it can be used to address the needs of a variety of learners.

Because many of the computers at Papatoetoe South School are old and have inadequate memory capacity, a minimum of two new computers would be needed to supplement what the school can make available. This would allow for individual use of Clicker 5 by room 10 children as well as combined SMART Board use.

CONCLUSIONS

Social Role Valorization advocates for improving the lives of people who tend to be devalued by society, among them the physically and intellectually impaired. Improvement has two facets, each with implications for human relationships and human services: a) removing devaluing features (for instance people being segregated from society in a building along with others perceived to belong to the same group), and b) taking proactive action that leads to people being valued. While the philosophy of inclusion underpinning the set up and organisation of room 10 exemplifies the first category, the installation of a SMART Board in room 10 exemplifies the second category of proactive action.

Education ranks importantly as a vehicle for enabling people with physical and intellectual impairments to attain equal rights and opportunities within society. Notwithstanding, the education task is accompanied by significant challenges, some of which were noted in room 10 observations that were central to this evaluation:

- * Room 10 teachers had to cater to the education needs of children of a wide range of chronological ages and ability levels;
- * The limited attention span of some of the children required saint-like patience on the part of the Senior Teacher, Special Education Assistant and teacher-aides, all of whom merit any support that can be given towards carrying out their roles.
- * Children were at varying points on a continuum of motor skills, ranging from mild coordination problems through to fine and gross motor issues. The fact that children needed a certain minimum level of motor skills to be able to use the SMART Board, was indicative of a much broader problem of specialised educational resourcing available to New Zealand schools. It harks back to the room 10 Senior Teacher's comments on the vital importance of interactive communication technology for physically impaired children in improving their quality of life and assisting them towards independence, especially when they are non-verbal.

By way of comparison, observations in mainstream classrooms provided useful insights into the potential of SMART Boards as a classroom teaching tool. While the SMART Board was undoubtedly a useful learning tool in room 10, there were significant accessibility issues around educational software currently available, which meant that SMART Board use was below potential. In the course of the evaluation, Clicker 5 emerged as a software package that would benefit room 10 students in their ability to adapt to the NZ curriculum. Clicker 5 programmes cover all NZ curricula. The room 10 Senior Teacher expressed confidence that "students' independence would grow because they would have access to a programme that would suit their needs, not just for now but as they progress through their schooling". From my own professional perspective, I can envisage definite advantages in installing Clicker 5 for room 10 children, both for individual use and combined SMART Board use.

The SMART Board technology has added greater excitement and interest to the room 10 learning environment. Group learning activity focused on the SMART Board touch-controlled screen appears to reinforce social bonds and mutual support among class members, as well as giving practice in social skills, such as taking turns. Use of the SMART Board in conjunction with digital photographs enables children to revisit and re-examine their experiences, discuss them with others, give and receive praise, and share emotions and feelings. Because the children feature prominently in the photographs, they see themselves as participating in a wider world, often in ways that bring satisfaction and commendation. Children do not take photograph folders home (as in the case of Papatoetoe Kindergarten), but appropriate importance is placed on organising regular meetings with parents/caregivers to review progress and issues and encourage their input to forward planning for therapy and learning.

The room 10 class are a very diverse group in terms of chronological age and learning ability. Learning achievement is assessed according to individual goals set for each student. Only when SMART Board use is tied into individualised learning goals for each student, preferably with the addition of new software programmes meeting accessibility criteria, will actual learning gains facilitated by the SMART Board become discernible.

Tyndale Park Christian School Trust: Phonics Based Literacy & Vocabulary Enrichment and Extension Programmes

INTRODUCTION

Tyndale Park Christian School is a year 1-13 school with an enrolment of approximately 120 students from 80 families. It is located on Murphys Road, Flatbush amidst farmland. The school's website states as follows:

Tyndale Park Christian School Auckland (Manukau) offers an education that supports the faith and practice of the Christian home. Our school offers a Christian primary school, Christian intermediate school and Christian secondary school. From year 1 to high school, your child will find a supportive and academic home...Our curriculum is based on Christian principles. We offer small class sizes and emphasise the three Rs: reading, writing and arithmetic. Children in our school learn to read in one year using a phonetics based program.²⁷

Enrolment is not restricted to families who identify as Christian, but every student is required to participate in all aspects of the curriculum, which includes Bible studies. Twenty five percent of the families live locally. Others come from as far away as Mangere, Maraetai and Drury²⁸. School staff do not consider their families affluent; most make sacrifices to send their children to the school. Fees information is publicly available on the website. The school has developed over a 27 year time span, beginning with land and building materials for three classrooms bequeathed for the purposes of establishing a Christian school.

As an independent, non-integrated school, their state funding is minimal. There is a commitment to Literacy learning and "tried and true" phonetic teaching methods. This school does not have a Principal, but it has a School Manager who is responsible for the operation of the school and a Head Teacher who is responsible for monitoring the academic performance in the school.

The senior high school (Grades 11 and above) is offered the A.C.E. programme. Accelerated Christian Education is a complete package of individualized curriculum material, covering all grade levels from preschool through Year 13 and beyond. Each subject is presented in a series of self-instructional workbooks, called PACEs (Packets of Accelerated Christian Education), progressively graduated so that new concepts and truths build upon previously mastered ones. Some courses employ video sessions to enhance the learning process whilst others are supplemented with computer software

²⁷ www.tyndalepark.school.nz

²⁸ Information supplied by Tyndale Park Christian School

programmes. The school's reasons for choosing the ACE system in preference to others included: a) Biblical world view; b) fits within the vision for Christian Education at Tyndale Park Christian School c) ability to integrate with existing Tyndale curriculum d) the qualifications gained in the programme are recognized for entrance to Universities and Technical Institutes.²⁹

PROGRAMME RATIONALE AND GOALS

As a Christian school in name and focus, helping children to achieve literacy is a priority at Tyndale Park Christian School. God has provided a written word in the form of the Bible. Being able to access and understand the Bible requires a defined minimum standard of literacy. Beyond being a Christian school, a feature of Tyndale Park Christian School that further distinguishes it from most mainstream schools, and one that is directly relevant to the present context, is a resolute dedication to phonics methods for teaching literacy.

The school funding application to the AACT was for purposes of replacing worn out reading sets and library books, and adding improved, up to date resources seen as more effective for advancing the school's literacy programme across the school. Dictionaries and thesauruses, the subject of the 2007 funding application, were regarded as important supplements.

The following information regarding aims and objectives and projected outcomes is extracted from the school's 2006 and 2007 funding applications.

2006 Programme Title: Phonics Based Literacy Programme

Aims:

- To advance the students' God-given abilities in literacy;
- To advance students' reading writing, listening, comprehension and speaking skills using a systematic co-ordinated approach;
- To enable the students to develop competency in all areas of their education.

Objectives:

- Improvement in reading, writing, listening, comprehension and speaking skills of all pupils, especially the weaker students, through group reading cells and tutoring;
- Accuracy fluency and creativeness in reading and writing.
- An enjoyment and enthusiasm for reading and writing.

²⁹ <http://www.tyndalepark.school.nz/christian-secondary-school-ace-courses> and information provided by the school.

Projected Outcomes

- At the end of grade 1 year, the goal is for the student to read independently and fluently and write full sentences correctly.
- In the middleclasses from grade 2 to 8, the goal is for students to build on this foundation and further develop the skills necessary for the objectives listed above.
- In the senior classes, grades 9-13, the goal is for academic success for each pupil in the study programme he/she has embarked upon including ACE programme for grades 11-13.

2007 Programme Title: Vocabulary Enrichment and Extension Programme

Aims and Objectives:

- To supplement the resources obtained through the grant received in 2006;
- To enhance the opportunities for students to enrich their vocabulary and validate their choices for spelling;
- To update and increase the range of dictionaries students will have access to.

Projected Outcomes:

Improved levels in PRETOS and reading vocabulary results. (grade 1-10 pupils).

Items Purchased with AACT 2006-2007 Grants

2006 Grant Amount: \$8055-00

- Phonics teaching resources for grades 2 to 10 inclusive.
- Library books for grade 1-13 children. Literature books for the ACE programme grades 9-13.

2007 Grant Amount: \$2720-00

- an updated range of dictionaries appropriate to the different levels of students.
- 25 thesauruses for grades 7-10 students.

DATA SOURCES

- 1) Ms Janis McArdle, AACT Trust Administrator, and I visited Tyndale Park Christian School in December 2007 and met with the School Manager. The purpose of the meeting was to explain the rationale for the evaluation, what it would involve, and face-to-face introductions.
- 2) Computer assisted literature for information on Phonics and Whole Language teaching methods.
- 3) The school's November 2007 report to the AACT, including children's accounts of AACT funded books they like.
- 4) Extended interview with the Head Teacher who is also the grade 9-10 teacher.
- 5) School holiday time visit to all classrooms, library, computer room and science lab. The visit provided an opportunity to look at the books, dictionaries and thesauruses purchased with funding from the AACT, as well as children's work, especially primary school level.
- 6) Return visit to spend half an hour in all of the classrooms, new entrant to secondary, observing English/Literacy teaching and use of books funded by the AACT. The class teachers adjusted their programme so that English/Literacy teaching was timed to fit with my visit. I was able to speak briefly with some of the teachers.
- 7) Assessment data in the form of Progressive Achievement Test (PAT), accompanied by a PAT Teachers Manual, and PRETOS (spelling test) results.
- 8) Written case study information provided by the Head Teacher for one student.

Request to Interview Parents

I requested to interview 6 parents, either in 2 groups of three, or individually if requested, at a time to suit them. I was particularly interested in interviewing parents who had transferred their children to Tyndale Park from another school. The underpinning rationale was to ascertain whether the parents felt Tyndale Park Christian School offered extra benefits with respect to literacy teaching that their child's previous school did not, and exploring that further. The information was seen as an important supplement to information from teachers. An undertaking was given that names of students and parents would remain anonymous in my reporting. My request was referred to the school's Board of Trustees. I subsequently received a letter advising that the request had been declined, stating the reason: *"As it is not our policy to have outside agencies interviewing parents we are not able to assist you in this matter"*.

Evaluation is a form of research. As such it has to meet standards of methodological rigor if conclusions are to have validity. Multiple methods and triangulation of observations contribute to methodological rigor.³⁰ The logic of triangulation is based on the premise that:

*No single method ever adequately solves the problem of rival causal factors...Because each method reveals different aspects of empirical reality, multiple methods of observation must be employed. This is termed triangulation.*³¹

The present evaluation achieved a degree of methodological triangulation through use of classroom observations, interviews with teachers, a case study supplied by a teacher and some quantitative test results. Notwithstanding, the research fell short with respect to data source triangulation, in having to rely too heavily on information from one source: i.e. teachers. This is not to imply an undervaluing of the opportunities offered by the teaching staff or to suggest in any way that the teachers were distorting information – quite the contrary. All school staff were very hospitable and helpful. Special thanks are given to the Head Teacher who was most helpful and generous with her time. The point is that people have different perspectives on, insights into, and knowledge of the same subject or event. Evaluation research gains richness and validity when it incorporates multiple knowledge sources and perspectives. Teachers know things about the children they teach that parents don't know. Equally, parents know things about their children that teachers will never know. Even when there is shared knowledge, perceptions and interpretations will vary. Parents are major stakeholders in their children's education.

30 Patton MQ (1987). *Qualitative Evaluation Methods*. Beverly Hills: Sage.

31 Denzin NK (1978) *Sociological Methods: A Sourcebook*. New York: McGraw Hill. Cited in MQ Patton (1987) *Qualitative Evaluation Methods*. Beverly Hills: Sage.

LITERATURE REVIEW: PHONICS AND WHOLE LANGUAGE METHODS OF LITERACY TEACHING

Despite having “a very homogeneous education system with a uniform approach to reading instruction and intervention”³², New Zealand surveys show large disparities in literacy achievement in schools. While this observation dates back to a report written in 2002, the report’s authors are no less concerned in 2008 that disparities in literacy achievement appear not to have been significantly impacted by literacy teaching and remedial strategies. At the heart of the present evaluation are issues around the adequacy of Ministry of Education literacy teaching and intervention strategies in mainstream schools. Specifically, are the strategies broad enough to cater to the needs of children from diverse social backgrounds, who vary hugely in reading related knowledge and skills at school entry? This is a key question in assessing the contribution of the phonics teaching methods at Tyndale Park Christian School.

The Whole Language (WL) reading strategy that prevails within New Zealand state schools directs children to place emphasis on sentence contextual cues (guessing) rather than letter sound (phonics) strategies³³.

*The focus of (the Whole Language) approach is on learning to read by reading, with minimal attention being given to the development of essential word level skills and strategies. Instead, beginning readers are urged to use preceding passage content, sentence context cues, and picture cues as the primary strategies for identifying unfamiliar words in text.*³²

Reading Recovery constitutes the main thrust of the NZ Ministry of Education for reducing reading failure in schools. It is an early intervention strategy developed by Dr. Marie Clay (Auckland University) as a supplement to Whole Language Reading strategies, to help children who continue to demonstrate difficulties in learning to read after a year of formal reading instruction. Children selected for Reading Recovery are provided with 30-40 minutes “daily one-to one pull-out (i.e. from class) instruction” over a period of between 12 and 20 weeks by a specially trained Reading Recovery tutor.”³⁴ Reading Recovery is essentially a more intensive version of what occurs in regular New Zealand classrooms.³⁵

³² Tunmer WE, Chapman JW, Prochnow JE. (2002). Preventing negative Matthew Effects in at-risk readers: a retrospective study. Massey University. Final phase 1V report to the Ministry of Education, Wellington NZ.

³³ Bill Carlson. (2007). Reading Recovery: Just the Facts? AVKO Educational Research Foundation www.avko.org/Essays/reading_recovery.htm

³⁴ Tunmer WE, Chapman JW, (2004?) Reading Recovery: distinguishing myth from reality. Massey University.

³⁵ Thompson GB (1993) Reading instruction for the initial years in New Zealand schools. In GE Thompson, WE Tunmer & T. Nicholson (Eds.) Reading Acquisition Processes. Clevedon UK: Multilingual Matters.

Research by Massey University's Dept. of Learning and Teaching Professor William E Tunmer and colleagues³⁶, indicates that, while children with an abundance of literature cultural capital at school entry tend to respond well to Whole Language teaching methods, the same methods discriminate against 20-25% of NZ school children. Reading Recovery is not succeeding in lifting the poorest readers to class average, fuelling a negative Matthew Effect (the poor get poorer). Social class differences in home literacy environment underpin essential reading-related skills and knowledge at school entry.

The research highlights major shortcomings of Reading Recovery in terms of a) not adequately addressing deficiencies in phonological awareness and b) inadequacies in teacher training/ professional development to sustain and reinforce gains made during Reading Recovery following return to regular classroom learning. In a recent Radio NZ Nine to Noon interview (June 2008)³⁷, Professor Tunmer reiterated the same concerns, i.e. 2001- 2006 data show that "the gap between good readers and those who are struggling is large and persistent". Reading Recovery is not working for students who are most at risk of not learning to read. Moreover, "teachers colleges are not properly preparing teachers for the range of literacy challenges they encounter in schools." Mary Chamberlain, who was part of the same interview, offered reassurances that professional development issues are being addressed by the Ministry of Education.

NOTE:

I made some inquiries of Principals and Associate Principals (APs) of decile 1 schools in Papatoetoe, Otara and Manurewa, using my own networks. Their comments were indicative of an eclectic approach to Literacy teaching. Many families have no vision of engendering a better future for their children. Principals and teachers in these schools have learned to make things happen through being resourceful. In the words of one AP, "we use whatever works". Schools are using a range of programmes, some involving phonics, others not. An oral language programme, e.g. 'Talk to Learn', is the starting point for some schools, before embarking on reading and writing. Common themes were children commencing school with little understanding of letter names and letter sounds and lacking basic skills and strategies. This is partly a reflection of the large percentage who have not participated in pre-school education (around 80% for one school). There is variation in availability of kindergartens and pre-schools with trained Early Childhood Education teachers. For instance, a school whose children are from the most socio-economically disadvantaged families has no kindergarten in the vicinity.

It may be that higher decile schools are more disposed to Whole Language methods. Verifying this was beyond the scope of the present evaluation.

³⁶ Tunmer WE, Chapman JW, Prochnow JE. (2002). Preventing negative Matthew Effects in at-risk readers: a retrospective study. Massey University. Final phase 1V report to the Ministry of Education, Wellington NZ.

³⁷ Radio NZ Nine to Noon Kathryn Ryan 4/6/08 interview with Professor Wm Tunmer & Mary Chamberlain, Ministry of Education Group Manager for Curriculum Ed and Learning - 28 minute audio www.radionz.co.nz.

USE OF THE LITERACY RESOURCES

There are 2 levels or grades in each class at Tyndale Park Christian School. Children do not move from grade 1 for Literacy teaching until they are able to read.

All classrooms have shared in the resources purchased with the AACT funding. Class sets and study guides purchased for use in grade 1-10 classrooms were chosen to facilitate literacy teaching using a phonics method. Once children have mastered phonics fundamentals at grade 1, Christian principles are embedded in the stories. For example, I observed use of a grade 2 reader, which prompted a simple discussion of feeling left out. 'Work ethic' was the subject of a reader entitled "Mr Toil" used with a year 5-6 class. Book titles chosen for years 9-13 were from the ACE curriculum list. Some of the themes I noted were truth and wisdom, courage and being willing to take a stand, 'success' in Christian terms, humility, justice, temperance, beauty, joy and peace, faith and hope, love, time and eternity.

All children have a dictionary on their desk. They are age grade appropriate, beginning with 'Jolly (picture) dictionaries' for grade 1. Children are encouraged to use the dictionaries and thesauruses (grade 7 and above). A point of interest for me was the inclusion in grade 2 readers of words with which children would not be familiar, but which they were able to read by sounding out, e.g. retorted, retreated, parakeet, clambered.

As well as class sets, each classroom has a small mini- library of books appropriate to the grade level. I noted that some of the books being used in the school are old and showing their age.

OUTCOMES

Quantitative assessments of achievement were derived from 2008 Progressive Achievement Testing and PRETOS. Progressive Achievement Tests are intended primarily to assist classroom teachers to make decisions about the kinds of teaching materials, methods and programmes most suitable to their students.³⁸ They provide information “to assist classroom teachers in determining the levels of development attained by their students in the basic skills of reading comprehension and the use of vocabulary”.³⁹ The proof reading tests of spelling (PRETOS) devised for children aged 8-13 are broad measures of a child’s ability to discriminate between misspelt words and correctly spelt words. Presented in the context of meaningful paragraphs, the tests provide a measure of spelling achievement within the context of a proof-reading task, as well as giving diagnostic information about individual pupils’ spelling accomplishments. The abilities tapped by PRETOS are broader than those associated with the traditional assessment of spelling.⁴⁰

Progressive Achievement Test Results

Results obtained from Progressive Achievement Tests “are converted first into ten levels of achievement....These level scores can then be converted into age percentile rank norms (which) indicate the relative position of each child when compared with a nationally representative group of similar age.”⁴¹

Tyndale Park Christian School provided April 2008 PAT age percentile results for 69 grade 4-10 students. Results for reading comprehension showed that 64% of the students were equal to or above the national median. Of that 64%, a high proportion (77%) were in the top one third. PAT age percentile results for reading vocabulary for the same group showed that 61% achieved equal to or better than the median. Of that 61%, 64% were in the top one third.

With respect to reading comprehension and reading vocabulary, just under half of students who were below the median (44% and 48% respectively) had been at Tyndale Park Christian School for one year or less. Around a quarter of students who were above the median (23% and 29% respectively) had been at Tyndale Park Christian School for 1 year or less. Some commenced in January 2008 or more recently. Some of the lower percentile rankings were for children from non-English speaking backgrounds. New students (i.e. 1 year or less) were most numerous in grades 9 and 10, due a transfer in of students from another Christian school which closed its secondary teaching unit.

³⁸ Reid NA, Elley WB. (undated). Progressive Achievement Tests of Reading: Teachers Manual.

³⁹ *ibid*

⁴⁰ www.nzcer.org.nz/default.php?products_id=415

⁴¹ Reid NA, Elley WB. (undated). Progressive Achievement Tests of Reading: Teachers Manual.

PRETOS Results

The tests are devised to provide both recognition and production scores. The recognition score is a measure of the ability to recognise misspelt words. The production score is a measure of the child's ability to spell a word correctly, having recognised it as an error. Scoring is in percentiles based on a normative sample.

The school provided PRETOS recognition and production results for 42 grade 4-8 students, 2 of which I excluded because they were for students who were new to the school. 90% of the 40 remaining students (36/40) were above the median for recognition and 92.5% (37/40) were above the median for production. These are excellent results.

Case Study

A case study provided by the school showing gains made by an individual student from a non-English speaking background is not included for reasons of maintaining confidentiality.

Classroom Observations

My main conclusion from observations was that Phonics teaching methods give students a set of tools for reading. Often students are presented with words that are quite new to them and they vocalize them correctly. This was particularly noticeable in the case of grades 1-4 children. At the same time children are made aware that, while the phonics tools apply most of the time, some words are exceptions and have to be memorised. Students are encouraged to use their dictionaries, which are within easy reach on their desks.

Summary

The results indicate a high success rate at Tyndale Park Christian School in assisting children to read, comprehend and spell at their chronological age level or better. It is of interest that, for both reading comprehension and reading vocabulary, almost half of the students with a percentile ranking below the national median had been at Tyndale Park Christian School for less than a year. It is not known whether students who had been at Tyndale Park Christian School for 1 year or less had any exposure to phonics teaching methods in their previous schools.

A question that was of particular interest was whether students in general were advantaged by the phonics method of literacy teaching at the school. PAT scores on their own did not justify any conclusions on that question. For example, the same PAT score may represent excellent achievement for one student, but poor achievement for another who is not being extended. If a school population is achieving at a high level, it is always for a combination of reasons. At Tyndale Park Christian School, possible contributing factors might be that parents are actively supporting and enhancing their children's learning, that the children have superior study and homework habits, or possibly the school is attracting higher ability children, etc. The mere fact that parents are willing to make sacrifices to pay for their children's education suggests that parental interest and support is true of children at Tyndale

Park Christian School. And most certainly there is an emphasis on work ethic, which could be expected to foster good study and homework habits. Something that was evident from my classroom observations and children's accounts of books they like was that reading is an enjoyable activity for most, if not all of these children.

PAT scores show that Phonics teaching methods are working, but whether Phonics teaching methods are opening doors that would otherwise remain unopened, it is impossible to say. Interviews with parents of children who had been in schools which rely on Whole Language methods of literacy teaching would have provided a more complete picture.

The PRETOS results for spelling were more persuasive evidence of the merits of phonics teaching methods because achievement was at such a high level. Undoubtedly, children's use of dictionaries also contributed to the very commendable spelling results. The fact that children made good use of their dictionaries was a reflection of teachers' active encouragement of dictionary use, their insistence on correct spelling and not settling for less, and each child having a dictionary within arm's reach.

CONCLUSIONS

At Tyndale Park Christian School, there is a very strong emphasis on building sound foundations in the basics. As well as offering a Christian education, a feature of Tyndale Park Christian School that further distinguishes it from most mainstream schools is a resolute dedication to phonics methods for teaching literacy. A successful 2006 funding application to the AACT made possible the replacement of worn out reading sets and library books and the addition of improved, up to date resources seen as more effective for advancing the school's literacy programme across the school. In 2007 AACT funded dictionaries and thesauruses enabled all children at the school to have an age appropriate dictionary on their desk and access to a thesaurus. One to two years on, it is clear that these resources are valued and are being well cared for.

Results derived from NZCER⁴² validated assessment tools indicate a high success rate at Tyndale Park Christian School in assisting children to read, comprehend and spell at their chronological age level or better. In the absence of other information about the children, it was not possible to arrive at any conclusions from PAT results about whether or not they were advantaged by the phonics method of literacy teaching at the school. The PRETOS results for spelling were more persuasive evidence of the merits of phonics teaching methods because achievement was at such a high level. Undoubtedly, children's use of dictionaries also contributed to the very commendable spelling results. The fact that children made good use of their dictionaries was a reflection of teacher's active encouragement of dictionary use, their insistence on correct spelling and not settling for less, and each child having a dictionary within arm's reach.

The Auckland Airport Community Trust receives funding each year from Auckland International Airport Limited and distributes these funds by way of an annual contestable grants distribution process. To date the Trust has allocated \$1.25 million and it was the view of the Trustees that it was timely for processes for the distribution of grants to be independently evaluated. One of the tasks of the evaluation was to explore impacts of the AACT's funding decisions, not only on direct beneficiaries, but upon the wider community. Interest in wider community benefits was a reflection of the AACT's perception of its accountability to the general public and obligation to be open and transparent in making funding decisions.

Tyndale Park Christian School's resolute faith in phonics methods for teaching literacy, translated into practice, emerged early in the evaluation as an area where Tyndale Park Christian School was ostensibly filling a gap that existed in a community where Whole Language teaching methods held sway. Teachers offered anecdotal accounts of parents who had removed their children from other schools and enrolled them at Tyndale Park Christian School for that very reason. Unfortunately, it was not possible to explore the teachers' claims by interviewing parents. Parents would have been commenting from a different perspective and knowledge base of their child. Most importantly,

⁴² New Zealand Council for Educational Research

parents are major stakeholders in their children's education. From my own professional perspective, triangulation of data sources is a criterion for 'good' evaluation research. Despite an offer from the AACT Administrator and the evaluator to meet with them and discuss concerns (this was not taken up), the school's Trust Board adhered to its policy of "not allowing outside agencies to interview parents." The wishes of the school were respected. Consequently, while there can be little doubt that children at Tyndale Park School derived, and are still deriving benefit as direct beneficiaries of the AACT's funding grants in 2006 and 2007, there was not sufficient evidence to reach any conclusions about the contribution that Tyndale Park Christian School is making to the wider community through its methods of teaching literacy.

Papatoetoe Kindergarten Making Literacy Visible for our Children and Their Families

INTRODUCTION

Papatoetoe Kindergarten is one of 107 kindergartens within the Auckland Kindergarten Association (AKA), a charitable trust. It is located on the corner of Wilmay Avenue and St. George Street, Papatoetoe. AKA Kindergartens employ fully qualified teachers who have an early childhood teaching diploma as a minimum qualification and hold a current Teacher Registration Practising Certificate. Teachers must be involved in professional development to maintain teacher registration status. Professional development supports positive learning outcomes for children by providing teachers with new and inspirational ideas and assisting them to remain informed about current theory and teaching practice. AKA environments “reflect the diversity of New Zealand society, and are inclusive of and support all children and their families. Cultural diversity is celebrated for its ability to enhance and enrich the learning environment.”⁴³

Cultural diversity is a defining characteristic of Papatoetoe Kindergarten. At least 90% of children attending Papatoetoe Kindergarten are from non-English-speaking backgrounds. Ethnicities include Indian from India, Indian from Fiji, various Middle Eastern, Chinese (from China), Vietnamese, Cambodian, Korean, a few Pacific Islands people and a few Maori (3 currently). Forty percent of children have a grandparent as their main caregiver during the day. Some families delay starting their child at kindergarten until a family member moves in with them and can take the child to and from kindergarten. The majority of parents, grandparents and children walk to kindergarten, and in all weathers.

Recognising the special character and needs of the kindergarten community, the Auckland Kindergarten Association agreed to build a community room adjoining the main class room area. Completed mid-2007, 20 months behind schedule, it provides a separate space where parents and/or grandparents can choose to stay and relax while their children/ grandchildren are at kindergarten. Many bring a book or newspaper to read, others lie down and have a rest, or if there is a shared language, they may converse. The community room now incorporates a lending library of children’s puzzles and books in the languages of the families (English, Vietnamese, Arabic, Urdu, Hindi, Punjabi and Mandarin), purchased with a grant approved by the AACT in June 2006.

Papatoetoe Kindergarten’s roll is maintained at a constant level of 90 children, 45 enrolled in daily morning sessions, and 45 enrolled in afternoon sessions on Tuesdays, Wednesdays and Thursdays

43 Auckland Kindergarten Association website. (accessed 26/8/08) <http://www.aka.org.nz>

(12.45 to 3.15pm). With three teachers, the child/teacher ratio is 15:1. Their waiting list ranges between 250 and 310 children, the longest waiting list in New Zealand. Children begin in afternoon sessions and move to morning sessions as children turning 5 transition to school. While children's names can be placed on the waiting list as early as age 2, many children are not enrolled by their parents until they turn 4. Entry to kindergarten is in age order. On average, children spend between 9-11 months at Papatoetoe Kindergarten, compared with around 18 months average time in other New Zealand kindergartens. This comparatively short time and high turnover of children (approximately 45 each term) poses a challenge for establishing relationships with families:

Because our children do not enter kindergarten until they are approximately 4 years 3 months, families are only with us for the time their children attend kindergarten. It has been difficult to maintain continuity because by the time relationships are formed between teachers and whanau, their child is close to leaving for school. Thus the relationship/learning cycle starts over for new families.⁴⁴

Another thing that sets Papatoetoe Kindergarten apart from most other kindergartens is its expansive, well developed outdoor play area.

44 Papatoetoe Kindergarten ICT/literacy Project (2005-2007) Historical summary of events supplied to the Auckland Airport Community Trust.

ICT PROJECT RATIONALE AND GOALS

A more visual approach utilising digital camera and computer technology was seen as offering a way of achieving communication and partnership with parents and caregivers, especially in situations where there is no shared spoken language, thereby adding benefit to the education of their children. Papatoetoe Kindergarten's funding application stated as follows:

The teachers, volunteers and committee want to involve parents/whanau in their own child or children's learning. To attain this goal, we need to use a more visual approach for our families, most of whom have English as their additional language.

In early childhood, one of the major cultural tasks for children is to develop competence in, and understanding of language. Adults, for their part, should understand and encourage this, and we believe through a more "hands on" visual approach, we can encourage and teach parents to be part of their children's education and learning.⁴⁵

Specific goals:

The first of the following four were explicit aims in the kindergarten's funding application. The fifth and sixth were listed as 'anticipated continuity of benefit'. I have added numbers 7 and 8. They were not explicit in the kindergarten's funding application to the AACT in 2005. Rather, they were implicit in the way the project unfolded from the start, suggesting that they were self-evident to the teachers all along.

- 1) To build up parents' confidence and self-esteem;
- 2) To enhance the ability of parents and caregivers to see how their children interact at play;
- 3) To facilitate the creation of story booklets/ folders highlighting various aspects of children's activities and achievements at kindergarten.
- 4) To use the booklets/ folders as a way of sharing and as a vehicle for communication with others.
- 5) To further develop and make visible a "culture" (within the kindergarten) that values and promotes literacy.
- 6) To up-skill parents to help maintain literacy interests for our children;
- 7) To demonstrate a valuing of children's uniqueness and assist them to give expression to their special qualities and potentials.

⁴⁵ Papatoetoe Kindergarten's funding application to the AACT, March 2005.

- 8) To advance children's learning.

The ICT project was envisaged as synergistic with other initiatives in the kindergarten, including the building of the community room.

Items Purchased with AACT 2005 Grant

1 digital projector, 2 digital cameras, 2 Ibook computers, appropriate computer software: \$9,000-00.

The kindergarten fundraised to purchase a colour printer. A scanner and colour copier is leased from the AKA. The kindergarten pays for pages printed under a contract with Fuji Xerox.

DATA SOURCES

- Background literature: Report on a pilot project at Roskill South Kindergarten using information and communication technology (ICT) for teaching and learning. ⁴⁶ Roskill South Kindergarten is a 'Ministry of Education Centre of Innovation'.
- Documentation including AACT funding applications and Papatoetoe Kindergarten's printed reports to the AACT.
- Interview with Head Teacher, Judy Barnes and the two other teachers, Christine Suisted and Shah-Naaz Ali.
- Participation in a shared lunch for families of morning and afternoon children currently attending. A huge turnout of parent and grandparent caregivers provided a picture of kindergarten families and how they fit into the kindergarten.
- Viewing the children's folders with stories and photographs taken with the digital cameras and printed via computer. Teachers were available and contributed background information. Selected pages extracted from some of the stories are included with this report.
- Observation of children and talking with several of them about their folders.
- At the shared lunch, I took the opportunity to interview several parents, one grandparent and two Early Intervention Special Education teachers.
- Telephone interviews with Principals, Deputy Principals or New Entrant teachers at the schools to which Papatoetoe Kindergarten children are most likely to transition (Papatoetoe East, Papatoetoe Central, Holy Cross, Puhinui, Papatoetoe West Primary Schools).

Note: Where pages from children's stories contain information that could identify the child or family (e.g. name or photograph), family consent was obtained with the knowledge that the report would be made available to the general public.

⁴⁶ Ramsey K., Breen J., Sturm J., Lee W., Carr M. (2006) Strengthening learning and teaching using ICT- Roskill South Kindergarten final research report. Ministry of Education. [Hp://www.minedu.govt.nz](http://www.minedu.govt.nz)

PROCESSES AROUND ICT AT PAPATOETOE KINDERGARTEN

Preparatory Stages

The ICT Equipment Project was the subject of Papatoetoe Kindergarten's funding application to the AACT in March 2005 and approval was notified in June 2005. After receiving confirmation of funding approval, Judy Barnes spoke at length per telephone with Karen Ramsey, Head Teacher of Roskill South Kindergarten, who is highly regarded for her knowledge and skills in incorporating ICT equipment into kindergarten programmes to involve children, parents and whanau. A suggestion that emerged from the phone discussion was that consideration be given to purchasing a digital projector in place of the e-mac desk-top computer listed in the funding application. A digital projector offered the advantage of a far greater viewing area than a computer. Two computers would still be required for downloading, processing and printing. Kindergarten staff later met with Karen Ramsey to plan the project in specific detail and set realistic timelines. With approval for the variation from the AACT, the kindergarten proceeded with the purchase of a projector and other equipment. The kindergarten's ICT Manager, Ian Newson, was part of all purchase decisions. All three of the Papatoetoe Kindergarten teachers attended various workshops to up skill in ICT use.

The next step was a survey of their families, translated into five languages, to ascertain the skill base of using ICT at home and also the interest of parents in attending a planned workshop, facilitated by Ian Newson. Parents responded with enthusiasm to the surveys, with many eager to attend the workshop. The workshop, held on 11th November 2005, focused on giving families an overview of the direction the kindergarten was taking in early childhood education by viewing the DVD 'Kimihia-Nga-Pae', produced by the Ministry of Education. Families were then given the opportunity of hands-on experience with digital still-shot cameras and making slide shows using the computer.

How is the ICT Equipment used?

The digital cameras are used by the teachers, children and parents to record events, activities, achievements and interactions, with the kindergarten children, or occasionally a family member as the focus. Families may borrow a camera to record a special event such as a birthday gathering for the child or something that has special meaning for the child (e.g. his/ her bedroom, a new baby in the family, a treasured toy etc.)

Photographs are downloaded onto a computer and processed in a variety of ways, depending on how they are to be used. They may become part of a slide show with the digital projector. Slide shows are a feature of special events such as four end of term shared lunches and annual Diwali celebrations, to which all parents and caregivers are invited. In the case of photographs of a group activity or visit to a place of interest, they are displayed on a poster board within the kindergarten. Photographs also become part of children's individual story folders when they are a 'key player', a leader in the activity, or if it is *their* story. Visits to a place or event of interest may inspire an individual child to take a

theme to another level that is meaningful to them, providing an opportunity for sharing. Some stories record an event that has arisen quite spontaneously at a session, instigated by a child, but gaining impetus with encouraging input from a teacher.

The photographs are complemented by the addition of a caption or story. The stories are the work of the teachers and the child/children involved. A special skill is required of teachers in captioning and story writing. Even more important than the technical skills aspect is that story writing draws on the teachers' understanding of children and child development and behavior and promoting learning and social development. For a start, teachers have to be able to identify when there is potential in a situation that makes it worth recording. It is noticeable that the stories are written in ways that are consistently affirming of the child, highlight the specialness of the child, reinforce a bond between the teacher and the child, and sometimes between the child and other children (e.g. a budding friendship, or explaining 'how it's done'). Often there is a note of humor. Frequently they incorporate a hint or suggestion of what could happen next to keep the activity or learning alive. The stories are written in a way that encapsulates the child's world. Use of phrases and exclamations etc. that 4 year old boys/girls use helps towards that effect. Opportunities are taken for the children to have input using other modes (e.g. drawing pictures) to enhance their story. If extra information needs to be sourced from the internet, the teacher and child/children do a web search together, with the children having the final say about what will and won't be included. Sensitivity is required of teachers in pitching their input to progress children's learning while not infringing on children's ownership of their story.

Sometimes the development of a story is sustained through supportive input from the parent/s. Some stories show the child with a family member and convey a valuing of that person by the kindergarten. Many record a child's achievements. Other stories demonstrate respect for cultural traditions. For example, 'Roti for Morning Tea' records a group of children making the traditional Indian bread at kindergarten, each adding his/her own touches, as well as information about mum's embellishments of roti. The kindergarten is most fortunate to have a Muslim Indian teacher who is fluent in Urdu and English, speaks and understands some Hindi and, while not speaking Punjabi, understands it. She contributes first language input to the stories of many of the children. They have recently recruited a teacher-aide who is fluent in Mandarin and English.

Word art and fancy borders provide the final touches to photographs, children's pictures or writing, and the written narrative before they are placed inside the protective transparent leaves of a child's folder. Each child has a folder of his/her own with name clearly marked on the cover spine, kept on a shelf at the kindergarten within easy reach. Children know they can pick up their folder at any time they choose to. When the child transitions to school, the folder becomes his/hers to keep at home.

OUTCOMES

There is common ground between the outcomes observed at Papatoetoe Kindergarten and those reported for Roskill South Kindergarten. Roskill South Kindergarten, like Papatoetoe Kindergarten, serves a multicultural, multilingual community. My participation in the shared lunch at Papatoetoe Kindergarten made it abundantly clear that they have achieved an impressive level of success in involving their community of families. Estimated conservatively, at least 80% of the 90 morning and afternoon children had a family member present, sometimes more than one. The table was laden with a magnificent choice of ethnic dishes, prepared by families with obvious care and pride. I observed that the poster boards, continuing slide show and story folders were points of interest for children and families.

Building Relationships with Families

The most significant finding reflects accomplishment of the main goal of the ICT project, as stated in the funding application. It relates to the preponderance at Papatoetoe Kindergarten of first-generation immigrant families with little or no English language and the effectiveness of photographs as a vehicle for communicating with families. Photographs make the children's learning visible to families, thus serving as a bridging language. They contribute significantly to engaging families in their children's learning and social development in the wider world. While the information sharing potential of photographs is also true for English speaking families there is special salience in the case of immigrant families. A recurring phrase in the Roskill South Kindergarten report, 'reading photographs' is just as applicable here to refer to the way in which non-English speaking family members grasp information from photographs.

At Papatoetoe Kindergarten, the family identified and acted on opportunities to give tangible support to their child in developing their stories, so that the communication became two way. The stories of Gurveer and Wendy are but two of a multitude of possible examples.

The communication embraced family beyond New Zealand. Educational opportunities for children and prospects of a better lifestyle are the main reasons for many families choosing to come here. Many immigrant families keep close communication with family overseas and are keen to send news of their children's educational experiences back to the family in their country of origin. A not uncommon scenario is for a father to continue living overseas for business or employment reasons and for mother and children to reside in New Zealand. There were frequent instances of Papatoetoe Kindergarten families sending photographs of kindergarten activities and achievements to family members overseas, including children's dads. If kindergarten staff knew that children were to travel overseas, they encouraged the family to bring back some photographs to be incorporated in their child's folder. Families were responsive to teachers' requests to share their photographs of events that held significance for their child.

Relationships of trust were also strengthened when families saw aspects of their culture acknowledged. Activities such as the making of roti, children's accounts of their religious beliefs, and the incorporation of the family's first language in story folders conveyed crucial messages about richness in cultural diversity and respect for different cultural and religious traditions.

Building English Language Fluency

The addition of ICT to children's communication repertoire enhanced their motivation to participate and encouraged their use of other modes, such as talking, writing and drawing. It opened up communication across cultures among children in their day-to-day activities at kindergarten. It encouraged children from non English speaking backgrounds (NESB) to make use of their English language vocabulary and, with help from extra resources such as books and DVDs, develop it.

The story of Gurveer, whose first language is Punjabi (*pages 69-72*) is one example of a child who, according to his mother and teachers, lacked confidence and had difficulty in relating to other children in the kindergarten. That was until a teacher "*tapped into the right place at the right time...and found a new Gurveer (which he always was at home)*" (letter from Gurveer's mother). The point of connection, 'Thomas the Tank Engine' came to light when Gurveer overheard the name 'Percy' in a story that the teacher was reading to a group of children. Percy is Thomas the Tank Engine's sixth engine. In telling others about something he felt passionate about, Gurveer became increasingly confident about communicating in English. He brought each of his engines to kindergarten, drew pictures of the engines and explained in English the features which distinguished one from another. The interest shown by the teachers and other children encouraged him. Gurveer revealed a facility with English which came as a complete surprise to his mother and teachers.

What part did the digital technology play in facilitating this sequence of events, triggered coincidentally? The teacher was quick to identify the potential inherent in Gurveer's response when he heard the name 'Percy' to gain trust with him and to get him to reveal more of himself. Recording the episode using the camera and building a story around the photographs showed a valuing of and shared interest in what was important to Gurveer, initially by the teacher, and then by others. It enabled Gurveer to revisit his story and explore it further. It encouraged him to employ a range of modes of communication, including drawing, duplo modelling, bringing his engines to kindergarten to show others and using his English language to explain what needed explaining. The teacher's tracking down of a DVD encouraged the involvement of more children. An ultimate result was a strengthening of the teaching/learning partnership between the kindergarten and Gurveer's family. A letter from his mother that became part of Gurveer's folder underscored the kindergarten/family partnership.

Building Confidence and Sense of Identity

Building of self-confidence and affirmation of the children as competent learners were woven into the fabric of the stories and recording of events. Processes around writing stories and taking photographs conveyed to children that their stories were valued. Children gained in confidence through explaining their stories to other children. The stories of Wendy and Gurveer illustrate growth in self confidence.

Each folder reflects the uniqueness of the child whose photographs and stories it contains. The Deputy Principal (see next page for a précis of the interview) was clearly referring to identity when she described the photographs as “giving children a sense of who they are”, with the potential for that to change as they move into new contexts as part of their life journey. Importantly, the photographs always represent identity in a positive and affirming way. Engaging parents and building understanding with them may help resolve conflicting expectations, a potential source of identity confusion for children. One of the key aspects of identity development is ‘reconciliation’ between membership of different ‘communities of practice’:

“It is a matter of making connections across communities to make the learning context at kindergarten more meaningful by ‘reconciling’ it with other spheres of the children’s lives. And vice –versa, that other spheres of children’s lives are enriched by connections to their kindergarten experience.”⁴⁷

The photographs were also a way of affirming and placing on record social connections and friendships between children. One of the mothers I interviewed said that this was a particularly important benefit for her son, who lacked social confidence and friends when he started kindergarten. Sometimes events recorded in the photographs and stories, although unhappy, need acknowledgement. One mother described how writing about the death of his cat helped her son to express and cope with his sadness. It was helpful that the folders were stored within easy reach of the children so that they could revisit their learning and social accomplishments and special memories when they felt a need to do so.

Expertise with Technology

Children gained knowledge and practical experience in using the internet as a tool for gathering information. They also gained expertise using the digital cameras and computer technology to prepare their own learning stories. I saw many photographs and stories where children’s quick acquisition of ICT skills was the subject matter of the story.

Children’s Learning Gains

The photographs and stories gave tangible expression to the children’s achievements, with potential to revisit the achievement. This is conducive to self-efficacy⁴⁸. In simple terms, self efficacy refers to the tendency for people to build further successes using their appraisals of their previous successes as a frame of reference. Self-efficacy aligns with self-confidence but is not the same thing.

With the digital technology, children could see immediate results. This was helpful in capturing and maintaining their interest.

47 Wenger E. (1998) *Communities of Practice: Learning, Meaning and Identity*. Cambridge: Cambridge University Press.

48 Bandura, A. (1982) Self-efficacy mechanism in human agency. *American Psychologist*; 37: 122-4.

Children developed their story-telling abilities by telling visual stories (often about their own or other children's learning).

The digital technology enabled children to 'read' and revisit their learning, strengthening their identities as confident and competent learners.

Children gained expertise in explaining their stories and areas of knowledge to others.

ICT added excitement and interest to the learning in many areas and topics.

Teachers used websites and commercial DVDs to add to the knowledge of topics of interest to children, and to introduce new angles.

Transition to School

The two Special Education Early Intervention Visiting Teachers I interviewed were at the time involved with four children (morning and afternoon sessions). They commented on the usefulness of the folders for children's transition to school. *"They are a valuable aid to new entrant teachers in becoming acquainted with the children and knowing their special interests and talents."*

One mother said that she has continued with the photo/story folder idea since her daughter started school *"as a type of diary of events for her to refer back to"*.

The following is a précis of my interview with the Deputy Principal of one of the schools to which Papatoetoe Kindergarten children transition.

Approximately 80% of their children attend some form of pre- school, often for only a very short time. The digital cameras make an important contribution in transition to school. Photographs are very important. Potentially, starting school is quite daunting for children as it involves a much bigger environment with 500 children instead of 40 or so. Children make a visit to their nominated school before their time at kindergarten has ended. As far as this particular school is concerned, one of the important things to happen is that on the pre-enrolment visit to the school, they take a photograph of the child in what will become their new room with their new teacher. The child receives two laminated copies, one for their folder at kindergarten, the other to take home to promote discussion with the family. This helps towards the child building a new identity – i.e. a sense of who they are and where they will be next in their life journey. They also photograph all the children on their first day at school and the family receives a copy of that photo. The photos are a tool by which the child can revisit the experience of the school visit. Folders that the children bring with them when they start school help the school in gaining some understanding of the child- what their interests are, how confident they are socially, their interaction with other children. (The family keeps the folder.) The school also provides the kindergarten with a series of photographs of the school to help familiarise children with the school they will attend – toilets, library, classrooms, teachers etc. Parents can access this information through the kindergarten.

Teaching/Learning Partnerships: Children and Teachers; Teachers and Parents

ICT took teachers into domains of knowledge where the children were the experts. It added ways in which children could take responsibility in the learning and teaching process. Children took up these opportunities with enthusiasm. This is suggestive of a power shift, which could be regarded as confidence building for children.

It included families and whanau in a mutual learning and teaching endeavour with the teachers and children. Children and families became teachers as well.

Teachers honed their skills in recognising and responding to the children's learning in more thoughtful, intuitive, and often innovative ways.

CONCLUSIONS

The Roskill South Kindergarten report noted that learning outcomes are invariably the result of a combination of factors. Attributes of the technology, family participation and teacher approach towards empowering the child were highlighted as significant mediating influences. The strengthening of children's learning using ICT became probable only when mediating influences were in synch or working together with the same principles and vision in mind.

This applies equally in the case of Papatoetoe Kindergarten. The outcomes listed in the preceding section were a reflection of the commitment of Papatoetoe Kindergarten staff to their children and community of families. The processes around the introduction and roll-out of ICT technology set the scene for successful outcomes. The Roskill South Kindergarten Pilot offered a frame of reference and source of expertise that the Papatoetoe teachers wisely tapped into and adapted to suit the needs of their unique community. The ICT venture would not have succeeded in the many ways that it did were it not for the teachers' ability to recognise the potential in small incidents and to take story writing to another level. The project drew on the teachers' understanding of child development and behavior and of empowering and promoting learning and social development, as well as a valuing of their community.

In a community where a majority of families had little or no English, photographs taken with the digital cameras were a vehicle for communicating with families. They made the children's learning visible to the families, thus serving as a bridging language. They contributed significantly to engaging families in their children's learning and social development in the wider world. Relationships of trust were strengthened when families saw aspects of their culture acknowledged. The incorporation of cultural traditions and language in story folders conveyed crucial messages about richness in diversity and respect for different cultural and religious traditions.

The photographs and stories gave tangible expression to the children's achievements, with potential to revisit the achievement.

*By the time this (early childhood) period is over, children will have formed conceptions of themselves as social beings, as thinkers and as language learners, and they will have reached important decisions about their own abilities and their own worth.*⁴⁹

Building of self-confidence and affirmation of the children as competent learners and social beings were woven into the fabric of the stories and recording of events. Story folders reflected the uniqueness of each child. Processes around writing stories and taking photographs conveyed to the

⁴⁹ Donaldson M., Grieve R., Pratt C. (1983). Early childhood development and education. Readings in Psychology. Oxford: Blackwell. (Cited in Ramsey et al, 2006)

children that their stories were valued. Children developed their story-telling abilities and gained in confidence through explaining the subject of their stories to other children.

The addition of ICT to children's communication repertoire enhanced their motivation to participate and encouraged their use of other modes, such as talking, writing and drawing. It opened up communication across cultures among children in their day-to-day activities at kindergarten. It encouraged children from non English speaking backgrounds to make use of their English language vocabulary and, with help from extra resources such as books and DVDs, to develop it.

Children gained knowledge and practical experience in using the internet as a tool for gathering information. They also gained expertise in the use of the digital cameras and computer technology to prepare their own learning stories. The digital technology offered the advantage of immediate results, which contributed to capturing and maintaining their interest.

One school has adopted the practice of photographing prospective new entrant children on a pre-enrolment visit to the school. The children receive a print to take home and one for their folder. The idea is to stimulate family discussion and encourage the child to envisage him/herself in the new setting. They have also found the photograph folders to be a valuable aid to new entrant teachers in becoming acquainted with the children and knowing some of their special interests and talents. There is potential for other schools to use the folders to a greater extent than is the case at present, to ease children's transition to school.

Children and families became teachers as well. ICT took teachers into domains of knowledge where the children were the experts. It added ways in which children could take responsibility in the learning and teaching process. Children took up these opportunities with enthusiasm. This is suggestive of a power shift, which could be regarded as confidence building for children. It included families and whanau in a mutual learning and teaching endeavour with the teachers and children.

The funding grant from the AACT was indeed well directed. The digital camera and ICT technology is valued by the kindergarten community and being put to ongoing use with excellent results.

DE LA SALLE COLLEGE: TECHNO-LITERACY PROJECT

INTRODUCTION

De La Salle College is an integrated Catholic year 7-13 decile 1⁵⁰ school, located on Grays Avenue Mangere, South Auckland, with a roll of 900 plus boys (98% Pacific Islands ethnicity). Its Samoan male enrolment is the largest, numerically, in the world. Most are from NESB (non English speaking background) families. The vast majority live in Papatoetoe, Otara, Mangere, Otahuhu or Manurewa. Eighty percent of students on first entering the college have a literacy level 2 years or more below their chronological age. Some new enrollees are 5-6 years below. Deficits in literacy are characteristic of communities which are low on the index of socio-economic deprivation, including South Auckland.⁵¹ Because issues affecting literacy range from micro to macro level, it is to be expected that the impacts of an intensive multi-pronged strategy currently in place to improve literacy levels will be gradual. For some years yet, teachers at De La Salle College will be faced with the challenge of raising students who arrive at the school poorly equipped academically, to a level where they can achieve success in an NCEA programme which requires intensive, independent work.

Central to the college's literacy strategy has been the establishment, nine years ago of an onsite Literacy Centre, which aims to improve reading, writing and listening comprehension of students at year 7 and year 8 level. This is an ongoing programme. With initiatives like the Duffy Reading Programme⁵², questioning skills and literacy skills, and working in partnership with Pacific Effective Learning Team Solutions (Ministry of Education) the Literacy Centre delivers specialised courses at years 7-8 level. A focal area is taken each year according to how the results of the previous year are reported.⁵³

College staff identified SuccessMaker interactive educational software as a means for extending the Literacy Centre programme to year 9 and 10 levels to reinforce the gains made to the end of year 8. It was also seen as a way of catering to the needs of newly enrolled year 9 students, some of whom are new arrivals in New Zealand. Their funding application to the AACT was approved in June 2006.

⁵⁰ Decile rank is determined by census data and indicates the extent to which the school draws its students from low socio-economic communities. Decile 1 schools are the 10% of schools with the highest proportion of students from low socio-economic communities, whereas decile 10 schools are the 10% of schools with the lowest proportion of these students. www.mined.govt.nz

⁵¹ White P., Gunston J., Salmond C., Atkinson J., Crampton P. (2008). Atlas of Socioeconomic Deprivation in New Zealand: NZDep2006. Wellington: Ministry of Health.

⁵² www.booksinhomes.org.nz.

⁵³ De La Salle College's 2006 funding application to the AACT.

Items included in AACT funding grant for the SuccessMaker Techno-Literacy Project (approved June 2006):

Desktop computers	SuccessMaker software	Smartboard
Projector	Administration	Professional development

AACT Grant: \$74,473-00

DATA SOURCES

1. Literature search.
2. Interviews with teachers: Several interviews with Rafi Kadher, Faculty Head of Languages and Literacy, and project coordinator for SuccessMaker; interview with Carey Joe-Hartley, Head of ESOL and Special Needs Education Coordinator; Interview and several discussions with Fran McGinn, Teacher Aide to lower level literacy classes and SuccessMaker room supervisor;
3. Interview with Marshall Gass, technical advisor, who wrote the SuccessMaker funding application to the AACT.
4. Personal try-out of SuccessMaker Spelling Skills, Readers Workshop and Reading Adventures;
5. Four hours of observation of year 9 students using SuccessMaker in 4 different groups;
6. Interviews with 13 SuccessMaker students. All interviews were in the SuccessMaker classroom with the supervising teacher-aide present at all times;
7. Achievement data in the form of SuccessMaker reports and collated results for two courseware programmes, Readers Workshop and Spelling Skills, for 16 and 18 students respectively.
8. Written comments on SuccessMaker from De La Salle College English Department teachers.

DESCRIPTION OF SUCCESSMAKER

The research underlying SuccessMaker® interactive educational software was initiated by Psychologist and Philosopher, Professor Patrick Suppes, and colleagues at Stanford University during the 1960's in experiments using computers to teach mathematics and reading to schoolchildren. The purpose of the research was "to emulate a human expert tutor who discerns and responds to the individual instructional needs of each student and provides essential information to the classroom teacher."⁵⁴

*It is widely agreed that the more an educational curriculum can adapt in a unique fashion to individual learners - each of whom has his own characteristic initial ability, rate and even "style" of learning-the better the chance is of providing the student with a successful learning experience. The computer makes the individualization of instruction easier because it can be programmed to follow each student's history of learning successes and failures and to use his past performance as a basis for selecting the new problems and new concepts to which he should be exposed next.*⁵⁵

The groundbreaking research was continued by Mario Zanotti at the Computer Curriculum Corporation and further extended by Pearson Digital Learning.⁵⁶ Although a computer cannot fully emulate interactions between a human tutor and a pupil, research has contributed to an understanding of key features of tutor-pupil interactions that maximize learning outcomes. SuccessMaker was designed "to equip the classroom teacher with an instructional aide who is expert, affordable and educationally effective".⁵⁷ The concept of an expert tutor, as incorporated in SuccessMaker, is further elaborated:

*An expert human tutor continuously adjusts the content and mode of presentation based on the student's recent responses and the tutor's instructional goals and prior knowledge of the student. Similarly, the courseware presents the student with objectives at selected levels from a mix of curriculum strands in a selected mode, be that a question, a tutorial, brief feedback, or other form of instruction. The tutor model (is)... guided by the principle of engaging and pleasantly challenging the student as the student gains knowledge of the subject.*⁵⁸

SuccessMaker courseware allows for input from the class teacher. Essentially, this means that teachers are able to incorporate their goals for the student, within the context of the curriculum and

⁵⁴ Thrall, T., Tingey, B. (2003). SuccessMaker® Motion: A research summary. USA: Pearson Digital Learning.

⁵⁵ Suppes, P. (1966). The uses of computers in education. Collected Works of Patrick Suppes
<http://suppes-corporus.stanford.edu/index.html>

⁵⁶ Suppes, P., Zanotti, M (1996). Foundations of Probability: Selected Papers, 1974-1995. New York: Cambridge University Press.

⁵⁷ Thrall, T., Tingey, B. (2003). SuccessMaker® Motion: A research summary. USA: Pearson Digital Learning.

⁵⁸ *ibid*

relative to the student's peers. There is an exchange of information insofar as the courseware reporting system should provide feedback to the teacher about the student's academic progress.

SuccessMaker provides courses "that build essential math, reading and writing skills and courses that encourage exploration and discovery". Although SuccessMaker was initially directed towards new entrant through to year 8 students, it was later adapted and extended to cater to students who enter secondary school lacking the fundamental knowledge and skills to progress their education, and also to adult learners. It has frequently been used in home schooling. Use of SuccessMaker has spread beyond the United States of America to include Australia, New Zealand, Canada, the United Kingdom and many other countries.⁴

SuccessMaker courseware features are the culmination of the research by Suppes and his successors in educational research. The following features are generic to the range of courses and age levels.

- Initial Placement Motion (IPM) finds the student's appropriate level in the course, a level that is appropriate for learning, neither too easy nor too difficult for the individual.
- Mastery decisions are based on the probability of the student answering the next exercise correctly, not merely on the student's current percentage of correct answers. The courseware therefore responds to student understanding, resulting in a more efficient use of the student's time.
- Dynamic sequencing of content adjusts to the individual student. When the student experiences repeated difficulties with new material, the material is set aside ("delayed") for subsequent presentation. Again, the goal is to challenge the student without frustrating him/her, and thereby maintain engagement in the courseware.
- The proportion of instruction across concept areas is adjusted for the individual so that weaker areas receive more emphasis, thereby reducing the gap between the student's areas of relative weakness and strength.
- Tutorial intervention guides individual student learning. When the student encounters difficulties, the system employs various instructional strategies, including sequential practice within the area of difficulty, presentation of brief tutorials, and/or review of prerequisite material.
- By periodically checking the student's recollection of previously mastered material, the system assures the student's firm basis for further learning.
- The time a student requires to achieve specified gains is estimated and reported to the teacher. The estimate is initially based on data from past users of the courseware. Then, as the system analyses the individual student's rate of progress, it adjusts the estimate.

Implicit in the foregoing is the capacity for SuccessMaker to affirm the student and encourage perseverance so that he/she accrues experiences of earned success. The suggestion that people build on their previous experiences of success is central to Self-Efficacy Theory in Psychology, which has been shown to have explanatory power in a wide range of contexts. It states that individuals' judgment of their capabilities to perform a task determines which behaviours they will engage in, their persistence in the face of obstacles and temptation, and how much effort they will expend to achieve their goals. An important influence on self-efficacy is previous mastery experience in all areas of an individual's life⁵⁹. The affirming aspect of SuccessMaker takes on special importance when one envisages the situation of adolescents deficient in the basic skills of literacy trying to cope with the escalating learning and social challenges of secondary school.

SuccessMaker has been available in New Zealand since 1992, with reported use of its courseware in more than 100 schools a decade later. Its distributors have highlighted the relevance of SuccessMaker in the context of present day education:

*In recent years teaching has become more challenging than ever. Class sizes are larger and student needs are more diverse. The pressure to "demonstrate results" has increased. There is a growing national focus on the need to improve core skills in numeracy and literacy. In addition, motivating students is more and more difficult in today's multimedia world.*⁶⁰

SuccessMaker has been the subject of evaluation in a range of international contexts^{e.g. 61; 62; 63}, including research directly commissioned by Pearson Digital Learning, pilot studies commissioned by local school authorities to inform spending decisions, and pre/post achievement measures in schools. Dates are important as ongoing evaluation has been integral to SuccessMaker product improvement, raising the possibility that shortcomings identified in earlier evaluation studies may have been addressed subsequently. Most of the reported findings relate to the use of SuccessMaker in primary schools, the focus is worldwide, and some pertain to the Math component. Evaluation research on SuccessMaker falls within a wider category of research on computer assisted learning (CAL) systems. The following content and implementation factors appear to play a part in optimising class work gains made by students through the use of CAL systems in schools:

- Manipulation of the CAL environment to attain a good curriculum match and integration with class work. An evaluation of the use of SuccessMaker at Rutherford High School,

59 Bandura A. (1982) Self-efficacy mechanism in human agency. *American Psychologist*; 37: 122-4.

60 SuccessMaker New Zealand (2002). Product information on SuccessMaker: addressing numeracy and literacy concerns for students of all ages and abilities, culture and gender, in an individual and cost effective manner. www.successmaker.co.nz

61 Pearson Education (2002). Successmaker: Evidence of effectiveness- selected evaluation studies.

62 Parr J.M. (1995). How successful is "Successmaker"? Issues arising from an evaluation of computer-assisted learning in a secondary school. *Australian Journal of Educational Technology*. 11 (1). 20-27.

63 Knipe D. (2002). An evaluation of SuccessMaker ILS in two primary schools. A report produced for the Department for Social Development: Belfast Regeneration Office
<http://www.stmarys-belfast.ac.uk/downloads/research/successmakerpaper.pdf>

Wellington, observed that *"The educational integrity of any innovation is dependent on the extent to which it complements and extends curricula goals and melds with the school's philosophy of teaching and learning and accepted pedagogical models."* ⁶⁴

- CAL content that is sufficiently varied, relevant to engage the student's interest and allay boredom;
- The CAL package is sensitive to the student's progress and adjusts the level of challenge accordingly.
- Frequency and length of use: Use of the CAL package for a minimum of 1 hour per week, and preferably more, over a time span to suit a student's individual needs. A literature review of evaluations of use of SuccessMaker with school grade levels from 1-12 ⁶⁵ noted significant gains with a full year's use (1.4 years with SuccessMaker, compared with 1 year without SuccessMaker). An evaluation at Rutherford High School, Wellington involving 379 year 8 and 9 students found that the most marked gains were demonstrated by lower level students who had intensive time (4 hours per week over 1-2 terms) on SuccessMaker, with specialist teacher support. However, the trend was for the gains to occur at a slower rate than for others in the sample. ⁶⁶
- Supervision around the student's use of the CAL system. Supervision should be supportive but sufficiently detached to strengthen the student's sense of him/herself as an independent learner. At Rutherford High School, one of the features that attracted favourable comment from students was *"perceived lack of teacher monitoring and control. This reaction was particularly marked among learning achievers and may reflect some of their experiences of education to date. In reality, the students controlled neither content nor pace to any extent."* ⁶⁷
- Class teachers' use of reports generated by the CAL system to make modifications to classroom instruction and assign interventions. The Rutherford High School evaluation observed that few teachers used the diagnostic features of SuccessMaker. This underscores the importance of basic teacher professional development around the introduction of a CAL system.

64 Parr J.M. (1995). How successful is "Successmaker"? Issues arising from an evaluation of computer-assisted learning in a secondary school. *Australian Journal of Educational Technology*. 11 (1). 20-27.

65 Kulik J A (1994) Meta-analytic studies of findings on computer-based education. In *Technology, Assessment in Education and Training*, eds. E. Baker and H. O'Neill, New Jersey: Lawrence Erlbaum Associates.

66 Parr J.M. (1995). How successful is "Successmaker"? Issues arising from an evaluation of computer-assisted learning in a secondary school. *Australian Journal of Educational Technology*. 11 (1). 20-27.

67 *ibid*

One of the main benefits associated with pupils using SuccessMaker reported by teachers is an increase in self confidence when approaching literacy and numeracy in classroom situations.⁶⁸ This is a consistent finding from research in primary and secondary school contexts that has extended to reporting on wider gains from the use of SuccessMaker. For example:

Partly as a result of experiencing success, but perhaps also because they felt they had some control over the process, many students developed more positive perceptions of themselves as learners. They were achieving at their own level and felt pleased with their progress "on the computer". Some comments (by students and teachers), at interview, suggested there were other spinoffs in terms of a more confident approach to learning in the normal classroom.⁶⁹

Growth in confidence and self-esteem are also frequent themes of numerous teacher endorsements of SuccessMaker which can be found on the internet, including via product web pages. Central to the vision behind SuccessMaker was the challenge of re-igniting interest and motivation among young people whose expectations of success had been eroded by previous experiences of 'failure', leading them to be easily distracted and to give up too easily.

SUCCESSMAKER AT DE LA SALLE COLLEGE

SuccessMaker was introduced at De La Salle College in mid 2007. A mix of literacy experts (Rafi Khader, Carey-Jo Hartley and Amanda Chapman) and technical experts (John Singh and Marshall Gass) were involved in initial discussions that culminated in an application for funding to the AACT. The set up phase involved the same team. More recently, Rafi Khader, as Language Faculty Head and Literacy Coordinator, has assumed day-to-day coordination responsibility, assisted by Carey-Jo Hartley (Head of ESOL and Special Education Needs Coordinator) and supported by the school's technical experts. College Principal, Brother Steve Hogan has overall responsibility and Rafi Khader reports on SuccessMaker to him and to the College's Board of Trustees.

Much thought went into how to set up SuccessMaker in a way that would ensure its ongoing use. It was to be expected that the set up and management processes would raise more complex issues in a secondary school than in primary school settings where children stay with the same teacher for most, if not all of their lessons. Notice was taken of anecdotal reports from another South Auckland secondary school where SuccessMaker became a little used resource for reasons related to inadequate planning and limited staff interest and support. Importance was placed on having a

⁶⁸ Knipe, D. (2002). An evaluation of SuccessMaker ILS in two primary schools. A report produced for the Department for Social Development: Belfast Regeneration Office
<http://www.stmarys-belfast.ac.uk/downloads/research/successmakerpaper.pdf>

⁶⁹ Parr J.M. (1995). How successful is "Successmaker"? Issues arising from an evaluation of computer-assisted learning in a secondary school. Australian Journal of Educational Technology. 11 (1). 20-27.

dedicated room within the English teaching block and dedicated computers for SuccessMaker, thus giving the guaranteed access needed to be able to put plans in place. This resulted in some expenditure variation from the budget that was part of the funding application approved by the AACT. The creation of a separate facility for SuccessMaker required the gutting of an English resources room, the purchase and installation of a server, benches to be built for the computers and the room to be secured with security bars. Setting up a dedicated room took priority over a screen and projector, which were considered non-essential and were not purchased. The fact that SuccessMaker emphasises individualised tuition lends support to this assessment of priorities. The room houses 15 computers, 10 with a SuccessMaker licence. Initially, 15 of the computers had SuccessMaker licences but 5 of these were part of a set up offer and expired after a year.

The nature of the curriculum and processes around its delivery also gives rise to a greater divergence of priorities in secondary schools, compared with primary schools. With external examinations on the horizon, teachers at De La Salle College, like their colleagues in other secondary schools, are inclined to be defensive about class time allocated to their particular teaching subject. They are more likely to be receptive to a student being diverted to SuccessMaker if they see a connection between basic literacy competence and achievement in their own subject area. The Principal and the Board of Trustees, recognising the importance of fundamental literacy skills, have given priority status to SuccessMaker, enabling nominated lower stream form 9 students to be diverted from other classes without the consent of the class teacher. Because it can involve missing some classes, parental consent is required for participation in SuccessMaker classes.

Courseware was chosen to address areas of weakness identified through asTTle⁷⁰. The following descriptions of courseware used at De La Salle College are from the SuccessMaker website (www.successmaker.co.nz).

Initial Reading (approximate reading age 6-8)

Initial Reading develops comprehension, vocabulary and word analysis. Intended to follow on from the Reading Readiness Course, students learn letter identification, patterns, phonics and sight words. It joins content and colourful animated graphics to help students develop strong skills. At De La Salle College, Initial Reading is currently being used by 2 students to enhance their ESOL learning, in conjunction with Readers Workshop.

Readers Workshop (approximate reading age 7-13)

With more than 12,000 activities, this major course supplements the classroom reading programme by promoting reading and critical thinking skills in a multimedia environment.

⁷⁰ Assessment Tools for Teaching and Learning
<http://www.minedu.govt.nz/educationSectors/Schools/CurriculumAndNCEA/AssessmentToolsForTeachingAndLearning.aspx>

Two of the strands, Passage Comprehension and Thematic Lessons develop integrated and content area reading. Five additional strands contain courseware that develop and apply specific skills in a variety of reading contexts. Courseware levels 2.8 (RA or reading age of 7 years) to 7.5 (RA 13 years).

Spelling Skills (approximate reading age 7-14)

With over 3200 words in this module graded by year, it comprises three activities, quiz, word study and learning games. Spelling skills uses picture and word animations, contains audio and online help and also a sophisticated error analysis system. Its purpose is to develop spelling skills by combining practice, tutoring and learning games. It helps students achieve spelling mastery. Courseware levels 2.0 (RA 7 years) to 8 (RA 14 years)

Reading Adventures (approximate reading age 8-11)

Reading Adventures includes more than 100 award winning multicultural titles. Online writing activities are integrated before, during and after reading. Students can use online writing tools to organise their thoughts and improve writing skills. Teachers can build lessons around themes or subjects making it easy to integrate the courseware with other classroom activities. Courseware levels 3 (RA 8 years) to 6 (RA 11 years).

Reading Adventures was incorporated in May 2008 to add extra interest and challenge as some students were showing signs of boredom with the two courseware packages they were using up until then. There is capacity to make adjustments within courseware packages. The Spelling Skills audio has an American accent, which may be a source of confusion for some students, possibly all the more so if English is not their first language. Most students start at courseware levels 2-4.

A dilemma that is being kept under review at De La Salle College concerns how to best allocate the resource to bring maximum benefits to students. Analysis of SuccessMaker reports from the first six months at the College indicated that the lowest achievers showed gains that were significant for them but not so marked as the gains made by those whose literacy was slightly better, although still significantly below their chronological age. It was noted that the lowest achievers engaged with it for longer, compared with other students for whom it became less challenging and a little boring – so they started to waste time. Another consideration is allocating students to SuccessMaker in a way that does not label it as for “the dummies”. Including a range of lower stream students with varying levels of literacy deficit was seen (and adopted) as a way of negating these assumptions.

At the time of writing, SuccessMaker is timetabled for use for a total of seventeen hours weekly by 7 groups of year 9 students and 1 group of year 10 students. The 7 groups of year 9 students are scheduled for 2 x 1 hour periods and the year 10 group have 3 x 1 hour periods. Each period (50 minutes on task) is divided between 3 different courses (Readers Workshop, Spelling Skills and since term 3 commencement, Reading Adventures) to incorporate different literacy skills and maintain interest and engagement. Groups range in size from 5-10, (previously 5-11).

Teacher-aide, Fran McGinn, provides supervision and support at all times when SuccessMaker is being used. The room is locked when there is no teacher or teacher-aide in attendance. Fran introduces the students to SuccessMaker, monitors their attendance and use of SuccessMaker, assists in sorting out computer and software problems, prints the individualised monthly reports generated by the software and discusses them with the students. At the end of each term, data for all current students are collated into a spreadsheet, which forms the basis of reports to the Principal and Board of Trustees. The spreadsheet format encapsulates key information that enables students to see clearly the progress they have achieved.

Professional development and software support are specified in the licensing contract between SuccessMaker NZ and the college. An annual subscription of \$2,000-00 paid by the school assures ongoing access to upgrades and product support. At set-up time, SuccessMaker NZ provided professional development for 7 year 9 teachers over 3 days. Of those 7, four are still at the College. Comments on ongoing product support and responsiveness from SuccessMaker NZ were positive. Since 2007, the coursework range has been expanded to add interest, depth and challenge and a SuccessMaker representative came to the school in April-May 2008 to provide staff members who are directly involved (Carey-Joe and Fran) with training for Reading Adventures. Indications are that De La Salle College can expect to benefit from SuccessMaker's ongoing evaluation, development and expansion of their software.

Variation in Expenditure

The difficulties of detailing in advance and costing a project as complex as this are clear. It is noted that a projector and screen were part of the funding approved by the AACT. Subsequent to submitting the funding application to the AACT, the importance of having a dedicated space with dedicated server and computers came into sharper focus. With consideration to the fact that a main purpose of SuccessMaker is its delivery of individualised tuition, achieving a dedicated SuccessMaker facility was prioritised over a projector and screen. In effect, there was variation in what was actually purchased from what was designated within the AACT funding approval. I fully support the college's revised priorities as adding strength to the core project. However, there was an oversight on the part of the college insofar as there was a lack of communication with the AACT Administrator about the revised priorities. (See appendix 1- list of expenditure supplied by De La Salle College)

It also worth noting that half of the twenty licences initially allocated by SuccessMaker NZ were for one year only, at the end of which the college would have the option of paying another not insignificant fee to convert those licences to permanent status. The year recently came to an end. With ten SuccessMaker computers now in use, the College is considering purchase of another five permanent licences at a cost of \$17,000. The decision requires technical input regarding the capacity of the server to handle 15 computers using SuccessMaker at the same time. The interactive nature of SuccessMaker places extra demands on the server. The College's main computer suite is already operating to full capacity so including extra SuccessMaker computers in that area is not an option.

EFFECTS

Teachers' Perspective on SuccessMaker

At this point in time, only teachers within the English Department have enough familiarity with SuccessMaker to be able to provide feedback with any degree of conviction. By far the most important benefits observed to date by teachers are enhanced self confidence and being more willing to speak out in class. This takes on extra significance, given the importance of traditions of oratory in Pacific cultures.

Staff within the English Department provided the following report with their combined feedback on SuccessMaker:

Reflections from Teachers with students who attend SuccessMaker.

Students are withdrawn to attend SuccessMaker from cross curricular classes. All teachers are aware of and know of the students who are part of the program. However greater interest in the achievement of these students is obviously from the English teacher. The following are some of the observations made by the classroom teachers.

- * Students display a greater confidence when interacting with a piece of text.
- * They read more confidently – some improvement in their understanding.
- * Some improvement in their writing especially with regard to spelling/ grammar.
- * Greater willingness to talk about what they are reading.

These changes cannot be solely attributed to the program as teaching/ learning is a multi faceted activity and there are multiple areas of input. It is however a contributor to the improved performance and achievement.

Students' Perspective on SuccessMaker

Of the thirteen students I interviewed, six were Samoan and two were Tongan. Eleven were 13 years of age and two were 14. Most striking was the high proportion of students from families who do not speak English at home: Samoan only (5); Tongan only (2); Samoan and English (3); Tongan and English (2); English only (1). One student had arrived from Samoa only at the start of the year to follow in his brother's footsteps and do his secondary education in New Zealand. All were members of families with 3-7 children within their nuclear family. Of the six who had formed a career ambition, 3 mentioned professional sport (rugby, golf, boxing), and the other responses were 'policeman' 'builder' and 'lawyer'.

After gaining some background information on the students, I then asked them: "What did you think when you found out that you were coming to SuccessMaker?" The first comment quoted below is a reminder of the connection between education and opportunities in life and society's obligations towards all young people.

"It sounded cool". When asked to expand on this: "I liked the name SuccessMaker"; asked to expand on 'success': "Succeeding in life. You need reading to be successful in life. If you can't read, you can't get a job. "

"I was happy. I wanted to try new things – to give my brain a challenge and see what I could do – to find out if there was anything hidden in my brain."

"I was happy – to learn more about reading and writing."

"I was excited- it was something to help with my learning."

"I wanted to be able to read with better understanding and thought (SuccessMaker) would help."

"I was surprised. I had mixed feelings ...because I would miss other classes."

"I was surprised. I was uncertain about what it would be."

Suggestions of negative labelling were evident in the responses of only one of the eight students interviewed. He described mixed feelings. He liked the idea of using a computer, but on the other hand, someone had told him that "only dumb people come to SuccessMaker." One said that, apart from what the teacher told him, he didn't know anything about SuccessMaker until he started coming. Another said he that a mate had told him that "SuccessMaker was a fun way of learning" and another said that he had heard from mates that SuccessMaker was "interesting". The opportunity to use a computer was also what appealed to another: "I thought it would be cool because you get to use computers."

Gains reported by students were:

better at reading; better understanding of English meanings; improved spelling; better understanding of punctuation; knowing how to use apostrophes in abbreviated words; better equipped to help his younger brother with his reading; "It's helpful with how to speak properly - with hearing words", "because they read it for you I'm getting better at reading".

A comment by one student that he was more confident in reading aloud in class was supported by his English teacher and teacher aide.

All commented positively when questioned about what they would tell another student who asked them what SuccessMaker was like:

"I would tell them it's all right. It's kinda fun."

"I would tell them it's good for learning and spelling."

"It's good for your reading and language."

"SuccessMaker is cool – using the computer."

"It's interesting to use the computer and great fun."

"A great experience for people to speak in English. It will help with your spelling and punctuation. It will help with your speech – how you talk to a person – not to hesitate."

One of the advantages of computer assisted learning underscored by comments from students was the high level of comfort they felt in working on a computer. Specific likes were: using the keyboard, and the interactive nature. They compared it to "playing a game". For adolescents, with their heightened consciousness of image within their peer group, having comparable tuition from a teacher-aide carries a risk of stigmatisation. Another aspect that the students liked was the way in which the computer provided feedback. To quote one student, "I like the way it says *well done*" and another, "It shows your percentage. Seeing improvement makes me happy."

Achievement

Interim results were collated for a group of low stream Form 9 students (age group 13-14) for Readers Workshop (16 students) and Spelling Skills (18 students). There was 100% overlap with respect to names. The results covered the period from 12 May 2008 to 19 August 2008, with on-task time of 50 minutes per session split between 2 and then (i.e. after Reading Adventures was introduced) 3 programmes. Time spent on Readers Workshop by individual students ranged from 52 minutes to 3

hours 15 minutes, and on Spelling Skills 45 minutes to 2 hours 53 minutes. This was a substantial variation, the reasons for which were unclear.

For the Readers Workshop students in the data set, entry level IPMs ranged between 2.8 and 3.07 in the case of 15 of the 16 students; the remaining student (K) began with an IPM of 4. Converted to Reading Ages, the range was 7 years 3 months to 8 years 5 months. For Spelling Skills, all except one student began with an IPM of 2 (equivalent to a spelling age of 8). The remaining student (W) had an IPM of 4 (spelling age of 10). For both programmes, one column of the collated data spreadsheet records the time spent in the programme over the period 12 May to 19 August. Another column shows gains achieved by each student represented in months.

For Readers Workshop, gains ranged from 0.24 months to 17.4 months, with an average gain of 5.6 months, suggesting increased proficiency in extracting information and meaning from text. These gains are promising and affirming, bearing in mind that these students are still in the process of mastering the fundamental building blocks of literacy. There was one student who is at present going through a difficult time emotionally whose score declined. It is understood that his other schoolwork has slipped as well. For Spelling Skills, gains ranged from 0.72 to 25.2 months, with an average gain of 8.3 months. The pattern of results for the latter suggests that it takes longer to launch into Spelling Skills, but having launched, the gains are more striking. Spelling Skills gains reflect not only achievement of proficiency in spelling a long list of words, but more importantly, increased proficiency in applying spelling rules. Some students may take longer to accommodate to the American accent of the Spelling Skills audio.

There was no correlation between time spent on SuccessMaker (Readers Workshop and Spelling Skills) and gains made. This was not surprising as part of the SuccessMaker rationale is that individuals learn at their own pace. And as teachers pointed out, "teaching/ learning is a multi faceted activity and there are multiple areas of input."

It is important to bear in mind that these are interim results extracted for the purposes of this report and that a more indicative picture can be expected towards the end of the school year. Because these students have so much ground to make up, it is likely that their use of SuccessMaker will continue until the end of 2008 and possibly into 2009.

CONCLUSIONS

- 1) SuccessMaker is a resource that is needed at De La Salle College to give continuity to year 9 and 10 levels of the work of their onsite Literacy Centre, which aims to improve reading, writing and listening comprehension of year 7 and 8 students.
- 2) De La Salle College serves a population who are at the lowest extreme of the index of socio-economic deprivation. The grant from the AACT made the acquisition of SuccessMaker possible for the college.
- 3) SuccessMaker is based on sound teaching-learning principles.
- 4) It delivers extra individualised tuition to students that De La Salle College would not have the human resources to provide.
- 5) As a computer assisted learning package, SuccessMaker delivers tuition in a form that is acceptable to students, and having regard to their age, potentially less stigmatising than receiving help from a teacher-aide. Students enjoy using SuccessMaker.
- 6) Setting up SuccessMaker in a secondary school raises location specific issues requiring location specific solutions, mostly around timetabling and priorities with the overarching demands of external examinations on the horizon. Set-up and organisational decisions require a level of consultation that is unlikely to be needed in primary schools.
- 7) The Principal and the Board of Trustees, recognising the importance of fundamental literacy skills as building blocks for learning and for life, have given priority status to SuccessMaker, enabling nominated lower stream form 9 students to be diverted from other classes without class teacher consent. This attests to the importance they place on SuccessMaker.
- 8) The difficulties of detailing in advance and costing a project as complex as SuccessMaker resulted in variation in what was actually purchased from what was designated within the AACT funding approval. In the event, all indications are that the college's revised priorities have added strength to the core project.
- 9) Key aspects of set-up and management of SuccessMaker at De La Salle College are consistent with effectiveness criteria identified in previous evaluations, namely: a variety of courseware available to students; supervision that is supportive but sufficiently detached to strengthen the student's sense of him/herself as an independent learner; discussion of results with students in an honest, supportive manner. Integration of SuccessMaker data into classroom teaching is progressing.
- 10) Given the competing demands around the use of computers in schools, a case in point being De La Salle College, having a dedicated room and dedicated computers for SuccessMaker was essential for giving the guaranteed access needed to be able to put plans in place.

- 11) The benefits reported most frequently by teachers of students using SuccessMaker were enhanced self confidence and being more open and willing to speak out in class. Students themselves commented along similar lines.
- 12) Self-confidence encourages perseverance. Perseverance is a contributor to success. Perseverance is enhanced when one believes in one's ability to succeed in a task. The affirming momentum of SuccessMaker is one of its most compelling features.
- 13) Interim results collated for a group of low stream Form 9 students (age group 13-14) for Readers Workshop (16 students) and Spelling Skills (18 students) showed gains that were promising and affirming for students. They were indicative of increased proficiency in extracting information and meaning from text and applying rules of spelling. The gains made were consistent with the reality that the students are still at the stage of mastering the fundamental building blocks of literacy.
- 14) There was no correlation between time spent on SuccessMaker and gains made. This was not surprising as part of the SuccessMaker rationale is that individuals learn at their own pace. And as teachers pointed out, "teaching/ learning is a multi faceted activity and there are multiple areas of input."
- 15) SuccessMaker at De La Salle College is a work in progress.
- 16) There is potential for SuccessMaker Maths to be used in the future in "downtime" (i.e. timetable slots not taken up by Literacy). The software is already on the server but separate licences would be needed. For the present, getting an optimal operational model for Literacy should take precedence.
- 17) SuccessMaker is not a solution on its own, but it is a helpful tool in the challenge of raising students who enter the college poorly equipped academically, to a level where they can achieve success in an NCEA programme which requires intensive, independent work.
- 18) Literacy is a tool for life and for citizenship.

19) AUCKLAND AIRPORT GRANT-

SUCCESSMAKER

SuccessMaker NZ – SME v1.5 Licences	\$32,000.00
Alleasing- 16 computers/server (3 year lease)	\$25,000.00
G Martin - cabling installation	\$16,879.00
G Adams – power	\$ 4,104.12
Freelance Computers	
BJ Enterprises – installation of benches	\$ 1,531.61
TOTAL	\$79,514.73

Information as supplied by De La Salle College September, 2008.



About the Author

Judy Voyle is a Community Psychologist who has specialized in community-based evaluation research for almost 20 years. Her earlier work in the Waikato was in large corporations, local body community development planning, family support services, community self-help groups and youth justice.

She relocated to South Auckland in 1994 to work with the University of Auckland's Department of Medicine at Middlemore Hospital on research aimed at reducing diabetes related complications, especially among high-risk Maori and Pacifica populations. While continuing to be active in diabetes research, she has become increasingly involved in advising on and evaluating school based initiatives aimed at improving the health status and educational achievement of underprivileged children and their families, both in South Auckland and Northland. This has resulted in a natural move towards organizations working in different ways to raise literacy levels

Acknowledgements

The Auckland Airport Community Trust gratefully acknowledges the generous contribution made by a large number of participants to this evaluation study. In particular the Trust thanks the staff at De La Salle College, Papatoetoe Kindergarten, Tyndale Park Christian School, Papatoetoe South School and Rongomai School.

The project was co-ordinated by Janis McArdle.

Further copies of this report can be obtained by email admin@aucklandairportcommunitytrust.org.nz. The full report or individual chapters can be downloaded from the website www.aucklandairportcommunitytrust.org.nz

Investing in People

Executive Summary

Background to the evaluation

The Auckland Airport Community Trust (AACT) was formally established in October 2003 as a result of a decision made in the Environment Court. The Area of Benefit for the Trust is "those areas most impacted on by current and projected aircraft movements to and from Auckland International Airport". The first of three charitable purposes to which Trust funds can be applied relates to the mitigation of effects associated with noise from aircraft operations. It is the second charitable purpose that is most directly relevant to the present context: "to ensure positive effects on the external environment to offset the other adverse effects." This is further explained in the Trust Deed; "While physical means can go only so far in mitigating adverse effects, there is the possibility of adverse effects being "at least partially offset by providing positive effects in the form of enhanced cultural, recreational and other opportunities and facilities to those living and working in the Area of Benefit..."

Up to June 2008, the Trustees had either given, or were committed to giving around \$1,250,000, the major part of which was allocated to Literacy projects/programmes in schools, and to a lesser extent pre-schools. The Trustees commissioned the evaluation with two main objectives a) to assess the impact of the Trust's grant making decisions on the wider community and b) to evaluate the Trust's own processes and their performance of their role as custodians of the Trust Fund and grant makers into the 'Area of Benefit'. Five projects funded by the Trust were selected as a pathway into the first objective. By focusing on five projects in diverse settings it was expected that the second objective would also be accomplished. A decision to evaluate the following five programmes was made after visiting the respective locations to confirm their agreement:

- Papatoetoe South School: Equipment for Physically Impaired Inclusive Centre;
- Papatoetoe Kindergarten: ICT Literacy Project (stage 3); Making Literacy Visible for our Children and their Families;
- De La Salle College: Techno Literacy Project (SuccessMaker for year 9 and 10 students);
- Rongomai School, Otara: Computers in Homes and Effective Writing;
- Tyndale Park Christian School Trust: Books for a Phonics Based Literacy Programme.

Findings

In the event, the evaluations proved to be more of a journey of discovery than anticipated. The SuccessMaker project at De La Salle College was found to be still in its formative¹ stages. Because

¹ Patton M.Q. (1987) *Qualitative Evaluation Methods*. California, USA: Sage.

SuccessMaker is directed towards helping students to master the building blocks of literacy, and this takes time, impacts information that could be gleaned from the evaluation was limited. Notwithstanding, the evaluation yielded valuable information about the collaborative processes involved in setting up a complex ICT project in a secondary school, and maximizing sustainability.

The Rongomai School evaluation underscored important lessons about community ownership of projects and emphasized that there is 'a time for every purpose'. At Rongomai, building a relationship of trust with the local community and establishing a working partnership with parents in the interests of the children were essential precursors to the Computers in Homes and Effective Writing Project. Earlier foundation building initiatives received funding support from the AACT. It is also noteworthy that new opportunities opened up after the AACT approved their funding application. The high level of communication which the AACT maintains with organizations it funds paved the way for those new opportunities to be taken up, taking programme impacts to an unanticipated level of success.

The Papatoetoe Kindergarten's funding application for ICT equipment was informed by a pilot project at another kindergarten and the experience of other kindergartens within the Auckland Kindergarten Association. The project fitted particularly well with a community with a preponderance of recent immigrant families with little or no English. Photographs taken with the digital cameras made the children's learning at kindergarten visible to the families, thus serving as a bridging language between the kindergarten and its community. There were also direct beneficial impacts for the children, facilitated by the teachers' understanding of child development and behaviour and of empowering and promoting learning and social development. The teachers' expertise became an integral part of their use of the technology. Findings here were consistent with those at Roskill South Kindergarten: that learning gains from ICT technology become probable only in the presence of certain setting-specific mediating factors working in synch.

The Principal of Papatoetoe South School was thinking along similar lines when he emphasised the importance of professional development to support the introduction of ICT in schools. He was referring to training not only in use of the technology, but in curriculum mapping to link the technology into the curriculum. Their own constantly updated intranet served as a valuable aid in linking ICT technology with the curriculum. The evaluation focus at Papatoetoe South School was on the Physically Impaired Inclusive Centre (room 10). Observations in mainstream classrooms were a necessary adjunct for gaining insights into the potential of SMART Boards as a classroom teaching tool. It emerged that, while the SMART Board was undoubtedly a useful learning tool in room 10, there were significant accessibility issues around educational software currently available, which meant that SMART Board use was below potential. An educational software package that has attracted positive comment from teachers of special needs children was identified.

The evaluation at Tyndale Park Christian School turned out to be disappointing. The benefits of phonics teaching methods could not be fully explored. Had we known at the outset that the school's Board of Trustees would not permit any access to an important stakeholder group (i.e. parents) the Trust Administrator and I would have proposed an alternative location for the fifth evaluation. The most valuable information to emerge from this evaluation concerned the AACT's processes.

The remainder of this report summarizes main points in the expectation that the AACT and possibly other funding providers may find them useful.

The AACT

- ◆ Generally excellent feedback about the AACT and the Trust Administrator, Janis McArdle, in particular.
- ◆ The AACT is working in an effective partnership with the community.
- ◆ Excellent communication
- ◆ The importance of accountability was acknowledged and some said that knowing that they will be monitored deters them from straying.
- ◆ The AACT is very fair, takes its responsibilities very seriously, and rightly places importance on accountability to public. They are prepared to go 'the extra mile' to hear people's perspectives (highlighted during the process of the Tyndale Park Christian School evaluation).
- ◆ Supportive but not interfering.
- ◆ Organizations have appreciated the site visits and ongoing interest shown by AACT members. (Site visits occur post funding approval).
- ◆ The funding has provided resources that recipient organizations could not have purchased otherwise/ or for which they would have had to wait a long time.
- ◆ It is appropriate that the AACT asks for more information re larger items of expenditure, e.g. Success Maker literature review.
- ◆ Sometimes applicants are asked to make a presentation to the AACT. An example of a situation where this may be required is if it is thought the project could duplicate an existing service.

Designating a specific area of activity for funding

- ◆ It is desirable to set some boundaries on what type of community projects will be funded:
 - It keeps number of applications received within manageable limits.
 - It implies less waste of time for potential applicants and puts limitations on building up of false hopes.
 - There may be greater synergy between projects e.g. Janis McArdle put a Pacifica Pre-School, Tautua Aoga Amata Charitable Trust in Otara, in touch with Papatoetoe Kindergarten re development of a digital camera project.
 - In maintaining a specific focus, the AACT gains more knowledge of the community than with a 'scatter' approach.
- ◆ It is appropriate to give extra merit points for projects with potential benefits that extend beyond the recipient organisation.

Literacy as a focal area

- ◆ Literacy as a priority area emerged from AACT 's consultation with the community.

- ♦ Literacy is an appropriate area to fund in South Auckland. It can embrace all age groups; helps towards a better future for children; promotes long term, possibly intergenerational benefits.
- ♦ This is not to suggest that Literacy should be the focus forever. The focus should be reviewed from time to time so different sectors share in the benefits.
- ♦ Schools and pre-schools are centres of community. Consequently they are a productive channel for disseminating community wide benefits.

A December 2006 KPMG ² report on costs of literacy difficulties in the United Kingdom had three components a) a review of research on the long term consequences of literacy difficulties to individuals and for society; b) estimating the costs to the public purse that result; c) estimating the return on investment of early intervention to address literacy difficulties. A main conclusion was:

The research reviewed showed that literacy difficulties are linked to costly special educational needs provision, to truancy, exclusion from school, reduced employment opportunities, increased health risks and a greatly increased risk of involvement with the criminal justice system. These risks operate over and above those associated with social disadvantage in general, and those associated with lack of qualifications.

Aspects of the organisation as a consideration in decision-making:

- ♦ The AACT places appropriate importance on quality of programme staff – their track record.
- ♦ Some projects need professional development/training if they are to be maximally effective (e.g. SMART Boards in classrooms). Staff-wide professional development/ training may have sustainability benefits over high investment in a few people.
- ♦ Timeliness – e.g. Rongomai School; foundation work in building a relationship of trust and understanding with the community was a necessary precursor to Computers in Homes.
- ♦ Community context (the community served by the organisation, for example:
 - providing mini laptops for homes can be justified for a school serving a very socio-economically deprived community but not a school serving an affluent community.
 - Success Maker - extra challenges of setting up the same programme in a secondary school, compared with a primary school.
- ♦ Schools can make a contribution in turning around communities characterised by high levels of dysfunction. Projects that support schools in providing pro-social models merit funding support. The Principal of Rongomai School commented on schools as a place where children can observe other adult role models and values reflected in actions and behaviour, in contrast to what may be socially corrosive standards communicated and modelled at home.
- ♦ How a project links into the wider community is important – e.g. linkage with the Otara Computer Clubhouse Trust can potentially enhance sustainability of Rongomai School's Computers in Homes - Effective Writing project. Janis McArdle actively fosters linkages between projects.

² <http://www.readingrecovery.ac.nz/research/download/ECRcosts2006.pdf>

Flexibility /accountability balance

- ◆ In the case of 3 projects, there was variation in expenditure, compared with what was set out in the funding application. New information can emerge once a project gets underway, or something may happen that requires a re-assessment. (Rongomai School, De La Salle College and Papatoetoe Kindergarten.) If variation is envisaged, the organisation should first check with the AACT Administrator.
- ◆ Responsible community ownership is desirable, so that the community makes operational decisions, e.g. Rongomai School did not ask parents to sign a written contract. This did not compromise compliance with conditions that were part of their funding application.
- ◆ Patience is in order– some projects require an extended set-up time – e.g Success Maker at De La Salle College.

Funding application form and agreement form

- ◆ The application form should have space for applicants to nominate the key person to contact should the AACT require information about operational aspects of their project/programme. Professional evaluators seek to work through the correct channels.
- ◆ The application form should incorporate a question re training: e.g. If professional development/ training is needed to implement your project, please provide a summary of what this will consist of and who will provide it.
- ◆ The agreement signed on acceptance of funding should state that if changes are considered advisable with respect to items purchased, the AACT should be contacted.
- ◆ One of the evaluations raised an important issue: What is the entitlement of custodians of public funding with regard to having access for evaluation purposes to organisations receiving funding? The AACT have now incorporated a new clause in their funding acceptance form, making openness to evaluation a condition of receiving funding.

The evaluation

It was encouraging to learn from all organisations where evaluations were completed that the evaluation had added value and understanding to their project/programme or school. A frequent comment was that reading their reports was affirming for staff members, helping them to feel appreciated and acknowledged. In the case of Papatoetoe Kindergarten, a copy of the evaluation has been passed on to the Auckland Kindergarten Association and is being seen as a useful complement to an earlier research report on a pilot ICT project at Roskill South Kindergarten. Likewise, the De La Salle College evaluation could serve as a useful reference for New Zealand educators wanting to introduce SuccessMaker into a secondary school.

Background to the Evaluation

The Auckland Airport Community Trust was formally established in October 2003. This was a direct result of a decision made in the Environment Court on 10 December 2001 that Auckland International Airport Ltd. would establish a trust fund as a condition of the company being granted approval to build a second runway. The court decision specified the amount - \$250,000 per annum adjusted by the rate of the consumer price index each year.³

The charitable purposes of the Trust are set out in a Trust Deed. The Area of Benefit for the Trust is "those areas most impacted on by current and projected aircraft movements to and from Auckland International Airport". The first of three charitable purposes to which Trust funds can be applied relates to the mitigation of effects associated with noise from aircraft operations. It is the second charitable purpose that is most directly relevant to the present context: "to ensure positive effects on the external environment to offset the other adverse effects." A later section of the Trust Deed provides further clarification. While physical means can go only so far in mitigating adverse effects, there is the possibility of adverse effects being "at least partially offset by providing positive effects in the form of enhanced cultural, recreational and other opportunities and facilities to those living and working in the Area of Benefit..."⁴

The Trustees designated support of Literacy as the focus for funding for three years commencing at the start of 2005. Importantly, the Trust's funding application form requires applicants to specify among other things, envisaged outcomes for their project/programme, who will be targeted as beneficiaries, how the project/programme will be assessed, and indicators of its success. This conveys a sense of responsibility on the part of Trustees with respect to directing Trust funding to projects/programmes that will maximize benefits for their target community, and to recipient organisation being attentive to self-monitoring.

Up to June 2008, the Trustees had either given, or were committed to giving around \$1,250,000, the major part of which was allocated to Literacy projects/programmes in schools, and to a lesser extent pre-schools. The Trustees were keen to know whether the allocated funding had made/was making a difference. In other words, what actual benefit was the community

³ Auckland Community Trust 2006 Annual Report

⁴ *ibid*

realising from the Trust's Literacy programme/ project funding?

Notwithstanding reporting requirements for recipient organizations, information reported back to the Trust was likely to be just the tip of an iceberg in comparison with information not being reported. There was also potential for an inherent bias in reports from organizations, as well as unpredicted impacts that had gone unnoticed.

Evaluation Objectives and Overall Strategy

The evaluation objectives were:

1. To provide objective information about direct and indirect outcomes/impacts arising from a sample of Literacy projects/programmes funded by the Auckland Airport Community Trust. Of interest are impacts on participant children/students, school teaching and/or support staff, family/whanau members, schools and/or the wider school community.
2. To express a view on the effectiveness of the Auckland Airport Community Trust's grant making and make recommendations as appropriate.
3. To offer comment to the Auckland Airport Community Trust to assist their ongoing monitoring of funding allocations.

Evaluation Strategy:

I met with the Trust Administrator, and after considering various areas of the Trust's involvement, the five following projects/programmes were included in the evaluation sample:

- Papatoetoe South School: Equipment for Physically Impaired Inclusive Centre
- Papatoetoe Kindergarten: ICT Literacy Project (stage 3); Making Literacy Visible for our Children and their Families
- De La Salle College: Techno Literacy Project (SuccessMaker for year 9 and 10 students)
- Rongomai School, Otara: Computers in Homes and Effective Writing
- Tyndale Park Christian School Trust: Books for a Phonics Based Literacy Programme.

Diversity of programmes and settings guided the choice of programmes, with a view to adding interest and value to the evaluation. All five were developments of projects/programmes funded by the Auckland Airport Community Trust in

preceding years and were to be evaluated in that broader context. The evaluation depended on the full cooperation of personnel involved at an operational level with the programmes and their willingness to allow access to their setting and to children’s/students’ records for evaluation purposes. The Trust Administrator and I were open to revising the list of evaluation locations if such cooperation and access were not clearly evident. Although the envisaged locations remained the same, one of the programme on our original list was replaced with another to accommodate what was happening at that site. One of the realities of community settings is unforeseen eventualities that hinder programme roll-out.

The Trust Administrator made the initial contact by phone with all five locations and together we visited each one and spoke with the Principal or equivalent to seek their agreement and support for the evaluation. This involved an explanation of the rationale emphasizing the AACT’s accountability to the wider community, the evaluation aims and interest in wider community impacts, and how they or their staff might be expected to contribute if they agreed to being part of the evaluation.

The AACT Administrator, Janis McArdle was available throughout as my point of contact and liaison with AACT members. I attended AACT meetings at regular intervals to personally report progress.

Types of data collected varied across the locations. Generally, data included documentation, student achievement records where appropriate, other programme reports/records; interviews with key teachers/support staff; observations of the project/programme in action; interviews/chats with students, appropriate to the age group; interviews with others, according to what emerged through the research; academic literature; searching internet web sites. I was always mindful of carrying out the evaluation in such a way as to bring the least possible disruption to work and routines in the schools and kindergarten. This was made clear to Principals and other personnel. At four of the evaluation locations, I asked for feedback on the AACT – communication, help offered, processes etc.

In August/September 2008, draft reports for their particular section of the evaluation were sent to the school Principal or person in charge of the programme/ project, inviting their comment and asking them to highlight any inaccuracies. It was made clear that their project/programme report was one of five which would be made available to the general public. In preparing the evaluation reports, care was taken not to identify children/ students/ family members unless it was seen to have significant explanatory value and to show

the individual in a positive light. Where identifying information is included, often in the form of photographs (i.e. in the Rongomai School and Papatoetoe Kindergarten reports), it is with the written consent of the person concerned or a parent or caregiver.

DE LA SALLE COLLEGE: TECHNO-LITERACY PROJECT

INTRODUCTION

De La Salle College is an integrated Catholic year 7-13 decile 1¹ school, located on Grays Avenue Mangere, South Auckland, with a roll of 900 plus boys (98% Pacific Islands ethnicity). Its Samoan male enrolment is the largest, numerically, in the world. Most are from NESB (non English speaking background) families. The vast majority live in Papatoetoe, Otara, Mangere, Otahuhu or Manurewa. Eighty percent of students on first entering the college have a literacy level 2 years or more below their chronological age. Some new enrollees are 5-6 years below. Deficits in literacy are characteristic of communities which are low on the index of socio-economic deprivation, including South Auckland.² Because issues affecting literacy range from micro to macro level, it is to be expected that the impacts of an intensive multi-pronged strategy currently in place to improve literacy levels will be gradual. For some years yet, teachers at De La Salle College will be faced with the challenge of raising students who arrive at the school poorly equipped academically, to a level where they can achieve success in an NCEA programme which requires intensive, independent work.

Central to the college's literacy strategy has been the establishment, nine years ago of an onsite Literacy Centre, which aims to improve reading, writing and listening comprehension of students at year 7 and year 8 level. This is an ongoing programme. With initiatives like the Duffy Reading Programme³, questioning skills and literacy skills, and working in partnership with Pacific Effective Learning Team Solutions (Ministry of Education) the Literacy Centre delivers specialised courses at years 7-8 level. A focal area is taken each year according to how the results of the previous year are reported.⁴

College staff identified SuccessMaker interactive educational software as a means for extending the Literacy Centre programme to year 9 and 10 levels to reinforce the gains made to the end of year 8. It was also seen as a way of catering to the needs of newly enrolled year 9 students, some of whom are new arrivals in New Zealand. Their funding application to the AACT was approved in June 2006.

Items included in AACT funding grant for the SuccessMaker Techno-Literacy Project (approved June 2006):

Desktop computers

SuccessMaker software

Smartboard

¹ Decile rank is determined by census data and indicates the extent to which the school draws its students from low socio-economic communities. Decile 1 schools are the 10% of schools with the highest proportion of students from low socio-economic communities, whereas decile 10 schools are the 10% of schools with the lowest proportion of these students. www.mined.govt.nz

² White P., Gunston J., Salmond C., Atkinson J., Crampton P. (2008). Atlas of Socioeconomic Deprivation in New Zealand: NZDep2006. Wellington: Ministry of Health.

³ www.booksinhomes.org.nz.

⁴ De La SalleCollege's 2006 funding application to the AACT.

Projector

Administration

Professional development

AACT Grant: \$74,473-00

DATA SOURCES

1. Literature search.
2. Interviews with teachers: Several interviews with Rafi Kadher, Faculty Head of Languages and Literacy, and project coordinator for SuccessMaker; interview with Carey Joe-Hartley, Head of ESOL and Special Needs Education Coordinator; Interview and several discussions with Fran McGinn, Teacher Aide to lower level literacy classes and SuccessMaker room supervisor;
3. Interview with Marshall Gass, technical advisor, who wrote the SuccessMaker funding application to the AACT.
4. Personal try-out of SuccessMaker Spelling Skills, Readers Workshop and Reading Adventures;
5. Four hours of observation of year 9 students using SuccessMaker in 4 different groups;
6. Interviews with 13 SuccessMaker students. All interviews were in the SuccessMaker classroom with the supervising teacher-aide present at all times;
7. Achievement data in the form of SuccessMaker reports and collated results for two courseware programmes, Readers Workshop and Spelling Skills, for 16 and 18 students respectively.
8. Written comments on SuccessMaker from De La Salle College English Department teachers.

DESCRIPTION OF SUCCESSMAKER

The research underlying SuccessMaker® interactive educational software was initiated by Psychologist and Philosopher, Professor Patrick Suppes, and colleagues at Stanford University during the 1960's in experiments using computers to teach mathematics and reading to schoolchildren. The purpose of the research was "to emulate a human expert tutor who discerns and responds to the individual instructional needs of each student and provides essential information to the classroom teacher."⁵

*It is widely agreed that the more an educational curriculum can adapt in a unique fashion to individual learners - each of whom has his own characteristic initial ability, rate and even "style" of learning-the better the chance is of providing the student with a successful learning experience. The computer makes the individualization of instruction easier because it can be programmed to follow each student's history of learning successes and failures and to use his past performance as a basis for selecting the new problems and new concepts to which he should be exposed next.*⁶

The groundbreaking research was continued by Mario Zanotti at the Computer Curriculum Corporation and further extended by Pearson Digital Learning.⁷ Although a computer cannot fully emulate interactions between a human tutor and a pupil, research has contributed to an understanding of key features of tutor-pupil interactions that maximize learning outcomes. SuccessMaker was designed "to equip the classroom teacher with an instructional aide who is expert, affordable and educationally effective".⁸ The concept of an expert tutor, as incorporated in SuccessMaker, is further elaborated:

*An expert human tutor continuously adjusts the content and mode of presentation based on the student's recent responses and the tutor's instructional goals and prior knowledge of the student. Similarly, the courseware presents the student with objectives at selected levels from a mix of curriculum strands in a selected mode, be that a question, a tutorial, brief feedback, or other form of instruction. The tutor model (is)... guided by the principle of engaging and pleasantly challenging the student as the student gains knowledge of the subject.*⁹

SuccessMaker courseware allows for input from the class teacher. Essentially, this means that teachers are able to incorporate their goals for the student, within the context of the curriculum and relative to the student's peers. There is an exchange of information insofar as the courseware reporting system should provide feedback to the teacher about the student's academic progress.

SuccessMaker provides courses "that build essential math, reading and writing skills and courses that encourage exploration and discovery". Although SuccessMaker was initially directed towards new

⁵ Thrall, T., Tingey, B. (2003). SuccessMaker® Motion: A research summary. USA: Pearson Digital Learning.

⁶ Suppes, P. (1966). The uses of computers in education. Collected Works of Patrick Suppes
<http://suppes-corpus.stanford.edu/index.html>

⁷ Suppes, P., Zanotti, M. (1996). Foundations of Probability: Selected Papers, 1974-1995. New York: Cambridge University Press.

⁸ Thrall, T., Tingey, B. (2003). SuccessMaker® Motion: A research summary. USA: Pearson Digital Learning.

⁹ ibid

entrant through to year 8 students, it was later adapted and extended to cater to students who enter secondary school lacking the fundamental knowledge and skills to progress their education, and also to adult learners. It has frequently been used in home schooling. Use of SuccessMaker has spread beyond the United States of America to include Australia, New Zealand, Canada, the United Kingdom and many other countries. ⁴

SuccessMaker courseware features are the culmination of the research by Suppes and his successors in educational research. The following features are generic to the range of courses and age levels.

- Initial Placement Motion (IPM) finds the student's appropriate level in the course, a level that is appropriate for learning, neither too easy nor too difficult for the individual.
- Mastery decisions are based on the probability of the student answering the next exercise correctly, not merely on the student's current percentage of correct answers. The courseware therefore responds to student understanding, resulting in a more efficient use of the student's time.
- Dynamic sequencing of content adjusts to the individual student. When the student experiences repeated difficulties with new material, the material is set aside ("delayed") for subsequent presentation. Again, the goal is to challenge the student without frustrating him/her, and thereby maintain engagement in the courseware.
- The proportion of instruction across concept areas is adjusted for the individual so that weaker areas receive more emphasis, thereby reducing the gap between the student's areas of relative weakness and strength.
- Tutorial intervention guides individual student learning. When the student encounters difficulties, the system employs various instructional strategies, including sequential practice within the area of difficulty, presentation of brief tutorials, and/or review of prerequisite material.
- By periodically checking the student's recollection of previously mastered material, the system assures the student's firm basis for further learning.
- The time a student requires to achieve specified gains is estimated and reported to the teacher. The estimate is initially based on data from past users of the courseware. Then, as the system analyses the individual student's rate of progress, it adjusts the estimate.

Implicit in the foregoing is the capacity for SuccessMaker to affirm the student and encourage perseverance so that he/she accrues experiences of earned success. The suggestion that people build on their previous experiences of success is central to Self-Efficacy Theory in Psychology, which has been shown to have explanatory power in a wide range of contexts. It states that individuals' judgment of their capabilities to perform a task determines which behaviours they will engage in, their persistence in the face of obstacles and temptation, and how much effort they will expend to achieve their goals. An important influence on self-efficacy is previous mastery experience in all areas

of an individual's life¹⁰. The affirming aspect of SuccessMaker takes on special importance when one envisages the situation of adolescents deficient in the basic skills of literacy trying to cope with the escalating learning and social challenges of secondary school.

SuccessMaker has been available in New Zealand since 1992, with reported use of its courseware in more than 100 schools a decade later. Its distributors have highlighted the relevance of SuccessMaker in the context of present day education:

*In recent years teaching has become more challenging than ever. Class sizes are larger and student needs are more diverse. The pressure to "demonstrate results" has increased. There is a growing national focus on the need to improve core skills in numeracy and literacy. In addition, motivating students is more and more difficult in today's multimedia world.*¹¹

SuccessMaker has been the subject of evaluation in a range of international contexts^{e.g. 12; 13; 14}, including research directly commissioned by Pearson Digital Learning, pilot studies commissioned by local school authorities to inform spending decisions, and pre/post achievement measures in schools. Dates are important as ongoing evaluation has been integral to SuccessMaker product improvement, raising the possibility that shortcomings identified in earlier evaluation studies may have been addressed subsequently. Most of the reported findings relate to the use of SuccessMaker in primary schools, the focus is worldwide, and some pertain to the Math component. Evaluation research on SuccessMaker falls within a wider category of research on computer assisted learning (CAL) systems. The following content and implementation factors appear to play a part in optimising class work gains made by students through the use of CAL systems in schools:

- Manipulation of the CAL environment to attain a good curriculum match and integration with class work. An evaluation of the use of SuccessMaker at Rutherford High School, Wellington, observed that *"The educational integrity of any innovation is dependent on the extent to which it complements and extends curricula goals and melds with the school's philosophy of teaching and learning and accepted pedagogical models."*¹⁵
- CAL content that is sufficiently varied, relevant to engage the student's interest and allay boredom;
- The CAL package is sensitive to the student's progress and adjusts the level of challenge accordingly.

¹⁰ Bandura A. (1982) Self-efficacy mechanism in human agency. *American Psychologist*; 37: 122-4.

¹¹ SuccessMaker New Zealand (2002). Product information on SuccessMaker: addressing numeracy and literacy concerns for students of all ages and abilities, culture and gender, in an individual and cost effective manner. www.successmaker.co.nz

¹² Pearson Education (2002). Successmaker: Evidence of effectiveness- selected evaluation studies.

¹³ Parr J.M. (1995). How successful is "Successmaker"? Issues arising from an evaluation of computer-assisted learning in a secondary school. *Australian Journal of Educational Technology*. 11 (1). 20-27.

¹⁴ Knipe D. (2002). An evaluation of SuccessMaker ILS in two primary schools. A report produced for the Department for Social Development: Belfast Regeneration Office <http://www.stmarys-belfast.ac.uk/downloads/research/successmakerpaper.pdf>

¹⁵ Parr J.M. (1995). How successful is "Successmaker"? Issues arising from an evaluation of computer-assisted learning in a secondary school. *Australian Journal of Educational Technology*. 11 (1). 20-27.

- Frequency and length of use: Use of the CAL package for a minimum of 1 hour per week, and preferably more, over a time span to suit a student's individual needs. A literature review of evaluations of use of SuccessMaker with school grade levels from 1-12 ¹⁶ noted significant gains with a full year's use (1.4 years with SuccessMaker, compared with 1 year without SuccessMaker). An evaluation at Rutherford High School, Wellington involving 379 year 8 and 9 students found that the most marked gains were demonstrated by lower level students who had intensive time (4 hours per week over 1-2 terms) on SuccessMaker, with specialist teacher support. However, the trend was for the gains to occur at a slower rate than for others in the sample. ¹⁷
- Supervision around the student's use of the CAL system. Supervision should be supportive but sufficiently detached to strengthen the student's sense of him/herself as an independent learner. At Rutherford High School, one of the features that attracted favourable comment from students was *"perceived lack of teacher monitoring and control. This reaction was particularly marked among learning achievers and may reflect some of their experiences of education to date. In reality, the students controlled neither content nor pace to any extent."* ¹⁸
- Class teachers' use of reports generated by the CAL system to make modifications to classroom instruction and assign interventions. The Rutherford High School evaluation observed that few teachers used the diagnostic features of SuccessMaker. This underscores the importance of basic teacher professional development around the introduction of a CAL system.

One of the main benefits associated with pupils using SuccessMaker reported by teachers is an increase in self confidence when approaching literacy and numeracy in classroom situations. ¹⁹ This is a consistent finding from research in primary and secondary school contexts that has extended to reporting on wider gains from the use of SuccessMaker. For example:

Partly as a result of experiencing success, but perhaps also because they felt they had some control over the process, many students developed more positive perceptions of themselves as learners. They were achieving at their own level and felt pleased with their progress "on the computer". Some comments (by students and teachers), at interview, suggested there were other spinoffs in terms of a more confident approach to learning in the normal classroom. ²⁰

¹⁶ Kulik J A (1994) Meta-analytic studies of findings on computer-based education. In Technology, Assessment in Education and Training, eds. E. Baker and H. O'Neill, New Jersey: Lawrence Erlbaum Associates.

¹⁷ Parr J.M. (1995). How successful is "Successmaker"? Issues arising from an evaluation of computer-assisted learning in a secondary school. Australian Journal of Educational Technology. 11 (1). 20-27.

¹⁸ ibid

¹⁹ Knipe, D. (2002). An evaluation of SuccessMaker ILS in two primary schools. A report produced for the Department for Social Development: Belfast Regeneration Office
<http://www.stmarys-belfast.ac.uk/downloads/research/successmakerpaper.pdf>

²⁰ Parr J.M. (1995). How successful is "Successmaker"? Issues arising from an evaluation of computer-assisted learning in a secondary school. Australian Journal of Educational Technology. 11 (1). 20-27.

Growth in confidence and self-esteem are also frequent themes of numerous teacher endorsements of SuccessMaker which can be found on the internet, including via product web pages. Central to the vision behind SuccessMaker was the challenge of re-igniting interest and motivation among young people whose expectations of success had been eroded by previous experiences of 'failure', leading them to be easily distracted and to give up too easily.

SUCCESSMAKER AT DE LA SALLE COLLEGE

SuccessMaker was introduced at De La Salle College in mid 2007. A mix of literacy experts (Rafi Khader, Carey-Jo Hartley and Amanda Chapman) and technical experts (John Singh and Marshall Gass) were involved in initial discussions that culminated in an application for funding to the AACT. The set up phase involved the same team. More recently, Rafi Khader, as Language Faculty Head and Literacy Coordinator, has assumed day-to-day coordination responsibility, assisted by Carey-Jo Hartley (Head of ESOL and Special Education Needs Coordinator) and supported by the school's technical experts. College Principal, Brother Steve Hogan has overall responsibility and Rafi Khader reports on SuccessMaker to him and to the College's Board of Trustees.

Much thought went into how to set up SuccessMaker in a way that would ensure its ongoing use. It was to be expected that the set up and management processes would raise more complex issues in a secondary school than in primary school settings where children stay with the same teacher for most, if not all of their lessons. Notice was taken of anecdotal reports from another South Auckland secondary school where SuccessMaker became a little used resource for reasons related to inadequate planning and limited staff interest and support. Importance was placed on having a dedicated room within the English teaching block and dedicated computers for SuccessMaker, thus giving the guaranteed access needed to be able to put plans in place. This resulted in some expenditure variation from the budget that was part of the funding application approved by the AACT. The creation of a separate facility for SuccessMaker required the gutting of an English resources room, the purchase and installation of a server, benches to be built for the computers and the room to be secured with security bars. Setting up a dedicated room took priority over a screen and projector, which were considered non-essential and were not purchased. The fact that SuccessMaker emphasises individualised tuition lends support to this assessment of priorities. The room houses 15 computers, 10 with a SuccessMaker licence. Initially, 15 of the computers had SuccessMaker licences but 5 of these were part of a set up offer and expired after a year.

The nature of the curriculum and processes around its delivery also gives rise to a greater divergence of priorities in secondary schools, compared with primary schools. With external examinations on the horizon, teachers at De La Salle College, like their colleagues in other secondary schools, are inclined to be defensive about class time allocated to their particular teaching subject. They are more likely to be receptive to a student being diverted to SuccessMaker if they see a connection between basic literacy competence and achievement in their own subject area. The Principal and the Board of Trustees, recognising the importance of fundamental literacy skills, have given priority status to SuccessMaker, enabling nominated lower stream form 9 students to be diverted from other classes

without the consent of the class teacher. Because it can involve missing some classes, parental consent is required for participation in SuccessMaker classes.

Courseware was chosen to address areas of weakness identified through asTTle²¹. The following descriptions of courseware used at De La Salle College are from the SuccessMaker website (www.successmaker.co.nz).

Initial Reading (approximate reading age 6-8)

Initial Reading develops comprehension, vocabulary and word analysis. Intended to follow on from the Reading Readiness Course, students learn letter identification, patterns, phonics and sight words. It joins content and colourful animated graphics to help students develop strong skills. At De La Salle College, Initial Reading is currently being used by 2 students to enhance their ESOL learning, in conjunction with Readers Workshop.

Readers Workshop (approximate reading age 7-13)

With more than 12,000 activities, this major course supplements the classroom reading programme by promoting reading and critical thinking skills in a multimedia environment. Two of the strands, Passage Comprehension and Thematic Lessons develop integrated and content area reading. Five additional strands contain courseware that develop and apply specific skills in a variety of reading contexts. Courseware levels 2.8 (RA or reading age of 7 years) to 7.5 (RA 13 years).

Spelling Skills (approximate reading age 7-14)

With over 3200 words in this module graded by year, it comprises three activities, quiz, word study and learning games. Spelling skills uses picture and word animations, contains audio and online help and also a sophisticated error analysis system. Its purpose is to develop spelling skills by combining practice, tutoring and learning games. It helps students achieve spelling mastery. Courseware levels 2.0 (RA 7 years) to 8 (RA 14 years)

Reading Adventures (approximate reading age 8-11)

Reading Adventures includes more than 100 award winning multicultural titles. Online writing activities are integrated before, during and after reading. Students can use online writing tools to organise their thoughts and improve writing skills. Teachers can build lessons around themes or subjects making it easy to integrate the courseware with other classroom activities. Courseware levels 3 (RA 8 years) to 6 (RA 11 years).

Reading Adventures was incorporated in May 2008 to add extra interest and challenge as some students were showing signs of boredom with the two courseware packages they were using up until

²¹ Assessment Tools for Teaching and Learning
<http://www.minedu.govt.nz/educationSectors/Schools/CurriculumAndNCEA/AssessmentToolsForTeachingAndLearning.aspx>

then. There is capacity to make adjustments within courseware packages. The Spelling Skills audio has an American accent, which may be a source of confusion for some students, possibly all the more so if English is not their first language. Most students start at courseware levels 2-4.

A dilemma that is being kept under review at De La Salle College concerns how to best allocate the resource to bring maximum benefits to students. Analysis of SuccessMaker reports from the first six months at the College indicated that the lowest achievers showed gains that were significant for them but not so marked as the gains made by those whose literacy was slightly better, although still significantly below their chronological age. It was noted that the lowest achievers engaged with it for longer, compared with other students for whom it became less challenging and a little boring – so they started to waste time. Another consideration is allocating students to SuccessMaker in a way that does not label it as for “the dummies”. Including a range of lower stream students with varying levels of literacy deficit was seen (and adopted) as a way of negating these assumptions.

At the time of writing, SuccessMaker is timetabled for use for a total of seventeen hours weekly by 7 groups of year 9 students and 1 group of year 10 students. The 7 groups of year 9 students are scheduled for 2 x 1 hour periods and the year 10 group have 3 x 1 hour periods. Each period (50 minutes on task) is divided between 3 different courses (Readers Workshop, Spelling Skills and since term 3 commencement, Reading Adventures) to incorporate different literacy skills and maintain interest and engagement. Groups range in size from 5-10, (previously 5-11).

Teacher-aide, Fran McGinn, provides supervision and support at all times when SuccessMaker is being used. The room is locked when there is no teacher or teacher-aide in attendance. Fran introduces the students to SuccessMaker, monitors their attendance and use of SuccessMaker, assists in sorting out computer and software problems, prints the individualised monthly reports generated by the software and discusses them with the students. At the end of each term, data for all current students are collated into a spreadsheet, which forms the basis of reports to the Principal and Board of Trustees. The spreadsheet format encapsulates key information that enables students to see clearly the progress they have achieved.

Professional development and software support are specified in the licensing contract between SuccessMaker NZ and the college. An annual subscription of \$2,000-00 paid by the school assures ongoing access to upgrades and product support. At set-up time, SuccessMaker NZ provided professional development for 7 year 9 teachers over 3 days. Of those 7, four are still at the College. Comments on ongoing product support and responsiveness from SuccessMaker NZ were positive. Since 2007, the coursework range has been expanded to add interest, depth and challenge and a SuccessMaker representative came to the school in April-May 2008 to provide staff members who are directly involved (Carey-Joe and Fran) with training for Reading Adventures. Indications are that De La Salle College can expect to benefit from SuccessMaker’s ongoing evaluation, development and expansion of their software.

Variation in Expenditure

The difficulties of detailing in advance and costing a project as complex as this are clear. It is noted that a projector and screen were part of the funding approved by the AACT. Subsequent to submitting the funding application to the AACT, the importance of having a dedicated space with

dedicated server and computers came into sharper focus. With consideration to the fact that a main purpose of SuccessMaker is its delivery of individualised tuition, achieving a dedicated SuccessMaker facility was prioritised over a projector and screen. In effect, there was variation in what was actually purchased from what was designated within the AACT funding approval. I fully support the college's revised priorities as adding strength to the core project. However, there was an oversight on the part of the college insofar as there was a lack of communication with the AACT Administrator about the revised priorities. (See appendix 1- list of expenditure supplied by De La Salle College)

It also worth noting that half of the twenty licences initially allocated by SuccessMaker NZ were for one year only, at the end of which the college would have the option of paying another not insignificant fee to convert those licences to permanent status. The year recently came to an end. With ten SuccessMaker computers now in use, the College is considering purchase of another five permanent licences at a cost of \$17,000. The decision requires technical input regarding the capacity of the server to handle 15 computers using SuccessMaker at the same time. The interactive nature of SuccessMaker places extra demands on the server. The College's main computer suite is already operating to full capacity so including extra SuccessMaker computers in that area is not an option.

EFFECTS

Teachers' Perspective on SuccessMaker

At this point in time, only teachers within the English Department have enough familiarity with SuccessMaker to be able to provide feedback with any degree of conviction. By far the most important benefits observed to date by teachers are enhanced self confidence and being more willing to speak out in class. This takes on extra significance, given the importance of traditions of oratory in Pacific cultures.

Staff within the English Department provided the following report with their combined feedback on SuccessMaker:

Reflections from Teachers with students who attend SuccessMaker.

Students are withdrawn to attend SuccessMaker from cross curricular classes. All teachers are aware of and know of the students who are part of the program. However greater interest in the achievement of these students is obviously from the English teacher. The following are some of the observations made by the classroom teachers.

- * Students display a greater confidence when interacting with a piece of text.
- * They read more confidently – some improvement in their understanding.
- * Some improvement in their writing especially with regard to spelling/

Students' Perspective on SuccessMaker

Of the thirteen students I interviewed, six were Samoan and two were Tongan. Eleven were 13 years of age and two were 14. Most striking was the high proportion of students from families who do not speak English at home: Samoan only (5); Tongan only (2); Samoan and English (3); Tongan and English (2); English only (1). One student had arrived from Samoa only at the start of the year to follow in his brother's footsteps and do his secondary education in New Zealand. All were members of families with 3-7 children within their nuclear family. Of the six who had formed a career ambition, 3 mentioned professional sport (rugby, golf, boxing), and the other responses were 'policeman' 'builder' and 'lawyer'.

After gaining some background information on the students, I then asked them: "What did you think when you found out that you were coming to SuccessMaker?" The first comment quoted below is a reminder of the connection between education and opportunities in life and society's obligations towards all young people.

"It sounded cool". When asked to expand on this: "I liked the name SuccessMaker"; asked to expand on 'success': "Succeeding in life. You need reading to be successful in life. If you can't read, you can't get a job. "

"I was happy. I wanted to try new things – to give my brain a challenge and see what I could do – to find out if there was anything hidden in my brain."

"I was happy – to learn more about reading and writing."

"I was excited- it was something to help with my learning."

"I wanted to be able to read with better understanding and thought (SuccessMaker) would help."

"I was surprised. I had mixed feelings ...because I would miss other classes."

"I was surprised. I was uncertain about what it would be."

Suggestions of negative labelling were evident in the responses of only one of the eight students interviewed. He described mixed feelings. He liked the idea of using a computer, but on the other hand, someone had told him that "only dumb people come to SuccessMaker." One said that, apart from what the teacher told him, he didn't know anything about SuccessMaker until he started coming. Another said he that a mate had told him that "SuccessMaker was a fun way of learning" and another said that he had heard from mates that SuccessMaker was "interesting". The opportunity to use a computer was also what appealed to another: "I thought it would be cool because you get to use computers."

Gains reported by students were:

better at reading; better understanding of English meanings; improved spelling; better understanding of punctuation; knowing how to use apostrophes in abbreviated words; better equipped to help his younger brother with his reading; "It's helpful with how to speak properly - with hearing words", "because they read it for you I'm getting better at reading".

A comment by one student that he was more confident in reading aloud in class was supported by his English teacher and teacher aide.

All commented positively when questioned about what they would tell another student who asked them what SuccessMaker was like:

"I would tell them it's all right. It's kinda fun."

"I would tell them it's good for learning and spelling."

"It's good for your reading and language."

"SuccessMaker is cool – using the computer."

"It's interesting to use the computer and great fun."

"A great experience for people to speak in English. It will help with your spelling and punctuation. It will help with your speech – how you talk to a person – not to hesitate."

One of the advantages of computer assisted learning underscored by comments from students was the high level of comfort they felt in working on a computer. Specific likes were: using the keyboard, and the interactive nature. They compared it to "playing a game". For adolescents, with their heightened consciousness of image within their peer group, having comparable tuition from a teacher-aide carries a risk of stigmatisation. Another aspect that the students liked was the way in which the computer provided feedback. To quote one student, "I like the way it says *well done*" and another, "It shows your percentage. Seeing improvement makes me happy."

Achievement

Interim results were collated for a group of low stream Form 9 students (age group 13-14) for Readers Workshop (16 students) and Spelling Skills (18 students). There was 100% overlap with respect to names. The results covered the period from 12 May 2008 to 19 August 2008, with on-task time of 50 minutes per session split between 2 and then (i.e. after Reading Adventures was introduced) 3 programmes. Time spent on Readers Workshop by individual students ranged from 52 minutes to 3 hours 15 minutes, and on Spelling Skills 45 minutes to 2 hours 53 minutes. This was a substantial variation, the reasons for which were unclear.

For the Readers Workshop students in the data set, entry level IPMs ranged between 2.8 and 3.07 in the case of 15 of the 16 students; the remaining student (K) began with an IPM of 4. Converted to

Reading Ages, the range was 7 years 3 months to 8 years 5 months. For Spelling Skills, all except one student began with an IPM of 2 (equivalent to a spelling age of 8). The remaining student (W) had an IPM of 4 (spelling age of 10). For both programmes, one column of the collated data spreadsheet records the time spent in the programme over the period 12 May to 19 August. Another column shows gains achieved by each student represented in months.

For Readers Workshop, gains ranged from 0.24 months to 17.4 months, with an average gain of 5.6 months, suggesting increased proficiency in extracting information and meaning from text. These gains are promising and affirming, bearing in mind that these students are still in the process of mastering the fundamental building blocks of literacy. There was one student who is at present going through a difficult time emotionally whose score declined. It is understood that his other schoolwork has slipped as well. For Spelling Skills, gains ranged from 0.72 to 25.2 months, with an average gain of 8.3 months. The pattern of results for the latter suggests that it takes longer to launch into Spelling Skills, but having launched, the gains are more striking. Spelling Skills gains reflect not only achievement of proficiency in spelling a long list of words, but more importantly, increased proficiency in applying spelling rules. Some students may take longer to accommodate to the American accent of the Spelling Skills audio.

There was no correlation between time spent on SuccessMaker (Readers Workshop and Spelling Skills) and gains made. This was not surprising as part of the SuccessMaker rationale is that individuals learn at their own pace. And as teachers pointed out, "teaching/ learning is a multi faceted activity and there are multiple areas of input."

It is important to bear in mind that these are interim results extracted for the purposes of this report and that a more indicative picture can be expected towards the end of the school year. Because these students have so much ground to make up, it is likely that their use of SuccessMaker will continue until the end of 2008 and possibly into 2009.

CONCLUSIONS

- 1) SuccessMaker is a resource that is needed at De La Salle College to give continuity to year 9 and 10 levels of the work of their onsite Literacy Centre, which aims to improve reading, writing and listening comprehension of year 7 and 8 students.
- 2) De La Salle College serves a population who are at the lowest extreme of the index of socio-economic deprivation. The grant from the AACT made the acquisition of SuccessMaker possible for the college.
- 3) SuccessMaker is based on sound teaching-learning principles.
- 4) It delivers extra individualised tuition to students that De La Salle College would not have the human resources to provide.
- 5) As a computer assisted learning package, SuccessMaker delivers tuition in a form that is acceptable to students, and having regard to their age, potentially less stigmatising than receiving help from a teacher-aide. Students enjoy using SuccessMaker.
- 6) Setting up SuccessMaker in a secondary school raises location specific issues requiring location specific solutions, mostly around timetabling and priorities with the overarching demands of external examinations on the horizon. Set-up and organisational decisions require a level of consultation that is unlikely to be needed in primary schools.
- 7) The Principal and the Board of Trustees, recognising the importance of fundamental literacy skills as building blocks for learning and for life, have given priority status to SuccessMaker, enabling nominated lower stream form 9 students to be diverted from other classes without class teacher consent. This attests to the importance they place on SuccessMaker.
- 8) The difficulties of detailing in advance and costing a project as complex as SuccessMaker resulted in variation in what was actually purchased from what was designated within the AACT funding approval. In the event, all indications are that the college's revised priorities have added strength to the core project.
- 9) Key aspects of set-up and management of SuccessMaker at De La Salle College are consistent with effectiveness criteria identified in previous evaluations, namely: a variety of courseware available to students; supervision that is supportive but sufficiently detached to strengthen the student's sense of him/herself as an independent learner; discussion of results with students in an honest, supportive manner. Integration of SuccessMaker data into classroom teaching is progressing.
- 10) Given the competing demands around the use of computers in schools, a case in point being De La Salle College, having a dedicated room and dedicated computers for SuccessMaker was essential for giving the guaranteed access needed to be able to put plans in place.
- 11) The benefits reported most frequently by teachers of students using SuccessMaker were enhanced self confidence and being more open and willing to speak out in class. Students themselves commented along similar lines.

- 12) Self-confidence encourages perseverance. Perseverance is a contributor to success. Perseverance is enhanced when one believes in one's ability to succeed in a task. The affirming momentum of SuccessMaker is one of its most compelling features.
- 13) Interim results collated for a group of low stream Form 9 students (age group 13-14) for Readers Workshop (16 students) and Spelling Skills (18 students) showed gains that were promising and affirming for students. They were indicative of increased proficiency in extracting information and meaning from text and applying rules of spelling. The gains made were consistent with the reality that the students are still at the stage of mastering the fundamental building blocks of literacy.
- 14) There was no correlation between time spent on SuccessMaker and gains made. This was not surprising as part of the SuccessMaker rationale is that individuals learn at their own pace. And as teachers pointed out, "teaching/ learning is a multi faceted activity and there are multiple areas of input."
- 15) SuccessMaker at De La Salle College is a work in progress.
- 16) There is potential for SuccessMaker Maths to be used in the future in "downtime" (i.e. timetable slots not taken up by Literacy). The software is already on the server but separate licences would be needed. For the present, getting an optimal operational model for Literacy should take precedence.
- 17) SuccessMaker is not a solution on its own, but it is a helpful tool in the challenge of raising students who enter the college poorly equipped academically, to a level where they can achieve success in an NCEA programme which requires intensive, independent work.
- 18) Literacy is a tool for life and for citizenship.

19) AUCKLAND AIRPORT GRANT-

SUCCESSMAKER

SuccessMaker NZ – SME v1.5 Licences	\$32,000.00
Alleasing- 16 computers/server (3 year lease)	\$25,000.00
G Martin - cabling installation	\$16,879.00
G Adams – power	\$ 4,104.12
Freelance Computers	
BJ Enterprises – installation of benches	\$ 1,531.61
TOTAL	\$79,514.73

Information as supplied by De La Salle College September, 2008.

Papatoetoe Kindergarten Making Literacy Visible for our Children and Their Families

INTRODUCTION

Papatoetoe Kindergarten is one of 107 kindergartens within the Auckland Kindergarten Association (AKA), a charitable trust. It is located on the corner of Wilmay Avenue and St. George Street, Papatoetoe. AKA Kindergartens employ fully qualified teachers who have an early childhood teaching diploma as a minimum qualification and hold a current Teacher Registration Practising Certificate. Teachers must be involved in professional development to maintain teacher registration status. Professional development supports positive learning outcomes for children by providing teachers with new and inspirational ideas and assisting them to remain informed about current theory and teaching practice. AKA environments “reflect the diversity of New Zealand society, and are inclusive of and support all children and their families. Cultural diversity is celebrated for its ability to enhance and enrich the learning environment.”¹

Cultural diversity is a defining characteristic of Papatoetoe Kindergarten. At least 90% of children attending Papatoetoe Kindergarten are from non-English-speaking backgrounds. Ethnicities include Indian from India, Indian from Fiji, various Middle Eastern, Chinese (from China), Vietnamese, Cambodian, Korean, a few Pacific Islands people and a few Maori (3 currently). Forty percent of children have a grandparent as their main caregiver during the day. Some families delay starting their child at kindergarten until a family member moves in with them and can take the child to and from kindergarten. The majority of parents, grandparents and children walk to kindergarten, and in all weathers.

Recognising the special character and needs of the kindergarten community, the Auckland Kindergarten Association agreed to build a community room adjoining the main class room area. Completed mid-2007, 20 months behind schedule, it provides a separate space where parents and/or grandparents can choose to stay and relax while their children/ grandchildren are at kindergarten. Many bring a book or newspaper to read, others lie down and have a rest, or if there is a shared language, they may converse. The community room now incorporates a lending library of children’s puzzles and books in the languages of the families

¹ Auckland Kindergarten Association website. (accessed 26/8/08)
<http://www.aka.org.nz>

(English, Vietnamese, Arabic, Urdu, Hindi, Punjabi and Mandarin), purchased with a grant approved by the AACT in June 2006.

Papatoetoe Kindergarten's roll is maintained at a constant level of 90 children, 45 enrolled in daily morning sessions, and 45 enrolled in afternoon sessions on Tuesdays, Wednesdays and Thursdays (12.45 to 3.15pm). With three teachers, the child/teacher ratio is 15:1. Their waiting list ranges between 250 and 310 children, the longest waiting list in New Zealand. Children begin in afternoon sessions and move to morning sessions as children turning 5 transition to school. While children's names can be placed on the waiting list as early as age 2, many children are not enrolled by their parents until they turn 4. Entry to kindergarten is in age order. On average, children spend between 9-11 months at Papatoetoe Kindergarten, compared with around 18 months average time in other New Zealand kindergartens. This comparatively short time and high turnover of children (approximately 45 each term) poses a challenge for establishing relationships with families:

Because our children do not enter kindergarten until they are approximately 4 years 3 months, families are only with us for the time their children attend kindergarten. It has been difficult to maintain continuity because by the time relationships are formed between teachers and whanau, their child is close to leaving for school. Thus the relationship/learning cycle starts over for new families.²

Another thing that sets Papatoetoe Kindergarten apart from most other kindergartens is its expansive, well developed outdoor play area.

² Papatoetoe Kindergarten ICT/literacy Project (2005-2007) Historical summary of events supplied to the Auckland Airport Community Trust.

ICT PROJECT RATIONALE AND GOALS

A more visual approach utilising digital camera and computer technology was seen as offering a way of achieving communication and partnership with parents and caregivers, especially in situations where there is no shared spoken language, thereby adding benefit to the education of their children. Papatoetoe Kindergarten's funding application stated as follows:

The teachers, volunteers and committee want to involve parents/whanau in their own child or children's learning. To attain this goal, we need to use a more visual approach for our families, most of whom have English as their additional language.

In early childhood, one of the major cultural tasks for children is to develop competence in, and understanding of language. Adults, for their part, should understand and encourage this, and we believe through a more "hands on" visual approach, we can encourage and teach parents to be part of their children's education and learning.³

Specific goals:

The first of the following four were explicit aims in the kindergarten's funding application. The fifth and sixth were listed as 'anticipated continuity of benefit'. I have added numbers 7 and 8. They were not explicit in the kindergarten's funding application to the AACT in 2005. Rather, they were implicit in the way the project unfolded from the start, suggesting that they were self-evident to the teachers all along.

- 1) To build up parents' confidence and self-esteem;
- 2) To enhance the ability of parents and caregivers to see how their children interact at play;
- 3) To facilitate the creation of story booklets/ folders highlighting various aspects of children's activities and achievements at kindergarten.
- 4) To use the booklets/ folders as a way of sharing and as a vehicle for communication with others.
- 5) To further develop and make visible a "culture" (within the kindergarten) that values and promotes literacy.
- 6) To up-skill parents to help maintain literacy interests for our children;

³ Papatoetoe Kindergarten's funding application to the AACT, March 2005.

- 7) To demonstrate a valuing of children's uniqueness and assist them to give expression to their special qualities and potentials.
- 8) To advance children's learning.

The ICT project was envisaged as synergistic with other initiatives in the kindergarten, including the building of the community room.

Items Purchased with AACT 2005 Grant

1 digital projector, 2 digital cameras, 2 Ibook computers, appropriate computer software: \$9,000-00.

The kindergarten fundraised to purchase a colour printer. A scanner and colour copier is leased from the AKA. The kindergarten pays for pages printed under a contract with Fuji Xerox.

DATA SOURCES

- Background literature: Report on a pilot project at Roskill South Kindergarten using information and communication technology (ICT) for teaching and learning. ⁴ Roskill South Kindergarten is a 'Ministry of Education Centre of Innovation'.
- Documentation including AACT funding applications and Papatoetoe Kindergarten's printed reports to the AACT.
- Interview with Head Teacher, Judy Barnes and the two other teachers, Christine Suisted and Shah-Naaz Ali.
- Participation in a shared lunch for families of morning and afternoon children currently attending. A huge turnout of parent and grandparent caregivers provided a picture of kindergarten families and how they fit into the kindergarten.
- Viewing the children's folders with stories and photographs taken with the digital cameras and printed via computer. Teachers were available and contributed background information. Selected pages extracted from some of the stories are included with this report.
- Observation of children and talking with several of them about their folders.
- At the shared lunch, I took the opportunity to interview several parents, one grandparent and two Early Intervention Special Education teachers.
- Telephone interviews with Principals, Deputy Principals or New Entrant teachers at the schools to which Papatoetoe Kindergarten children are most likely to transition (Papatoetoe East, Papatoetoe Central, Holy Cross, Puhinui, Papatoetoe West Primary Schools).

Note: Where pages from children's stories contain information that could identify the child or family (e.g. name or photograph), family consent was obtained with the knowledge that the report would be made available to the general public.

⁴ Ramsey K., Breen J., Sturm J., Lee W., Carr M. (2006) Strengthening learning and teaching using ICT- Roskill South Kindergarten final research report. Ministry of Education. [Hp://www.minedu.govt.nz](http://www.minedu.govt.nz)

PROCESSES AROUND ICT AT PAPATOETOE KINDERGARTEN

Preparatory Stages

The ICT Equipment Project was the subject of Papatoetoe Kindergarten's funding application to the AACT in March 2005 and approval was notified in June 2005. After receiving confirmation of funding approval, Judy Barnes spoke at length per telephone with Karen Ramsey, Head Teacher of Roskill South Kindergarten, who is highly regarded for her knowledge and skills in incorporating ICT equipment into kindergarten programmes to involve children, parents and whanau. A suggestion that emerged from the phone discussion was that consideration be given to purchasing a digital projector in place of the e-mac desk-top computer listed in the funding application. A digital projector offered the advantage of a far greater viewing area than a computer. Two computers would still be required for downloading, processing and printing. Kindergarten staff later met with Karen Ramsey to plan the project in specific detail and set realistic timelines. With approval for the variation from the AACT, the kindergarten proceeded with the purchase of a projector and other equipment. The kindergarten's ICT Manager, Ian Newson, was part of all purchase decisions. All three of the Papatoetoe Kindergarten teachers attended various workshops to up skill in ICT use.

The next step was a survey of their families, translated into five languages, to ascertain the skill base of using ICT at home and also the interest of parents in attending a planned workshop, facilitated by Ian Newson. Parents responded with enthusiasm to the surveys, with many eager to attend the workshop. The workshop, held on 11th November 2005, focused on giving families an overview of the direction the kindergarten was taking in early childhood education by viewing the DVD "Kimihia-Nga-Pae", produced by the Ministry of Education. Families were then given the opportunity of hands-on experience with digital still-shot cameras and making slide shows using the computer.

How is the ICT Equipment used?

The digital cameras are used by the teachers, children and parents to record events, activities, achievements and interactions, with the kindergarten children, or occasionally a family member as the focus. Families may borrow a camera to record a special event such as a birthday gathering for the child or something that has special meaning for the child (e.g. his/ her bedroom, a new baby in the family, a treasured toy etc.)

Photographs are downloaded onto a computer and processed in a variety of ways, depending on how they are to be used. They may become part of a slide show with the digital projector. Slide shows are a feature of special events such as four end of term shared lunches and annual Diwali celebrations, to which all parents and caregivers are invited. In the case of photographs of a group activity or visit to a place of interest, they are displayed on a poster board within the kindergarten. Photographs also become part of children's individual story folders when they are a 'key player', a leader in the activity, or if it is *their* story. Visits to a place or event of interest may inspire an individual child to take a theme to another level that is meaningful to them, providing an opportunity for sharing. Some stories record an event that has arisen quite spontaneously at a session, instigated by a child, but gaining impetus with encouraging input from a teacher.

The photographs are complemented by the addition of a caption or story. The stories are the work of the teachers and the child/children involved. A special skill is required of teachers in captioning and story writing. Even more important than the technical skills aspect is that story writing draws on the teachers' understanding of children and child development and behavior and promoting learning and social development. For a start, teachers have to be able to identify when there is potential in a situation that makes it worth recording. It is noticeable that the stories are written in ways that are consistently affirming of the child, highlight the specialness of the child, reinforce a bond between the teacher and the child, and sometimes between the child and other children (e.g. a budding friendship, or explaining 'how it's done'). Often there is a note of humor. Frequently they incorporate a hint or suggestion of what could happen next to keep the activity or learning alive. The stories are written in a way that encapsulates the child's world. Use of phrases and exclamations etc. that 4 year old boys/girls use helps towards that effect. Opportunities are taken for the children to have input using other modes (e.g. drawing pictures) to enhance their story. If extra information needs to be sourced from the internet, the teacher and child/children do a web search together, with the children having the final say about what will and won't be included. Sensitivity is required of teachers in pitching their input to progress children's learning while not infringing on children's ownership of their story.

Sometimes the development of a story is sustained through supportive input from the parent/s. Some stories show the child with a family member and convey a valuing of that person by the kindergarten. Many record a child's achievements. Other stories demonstrate respect for cultural traditions. For example, 'Roti for Morning Tea' records a group of children making the traditional Indian bread at kindergarten, each adding his/her own touches, as well as information about mum's embellishments of roti. The kindergarten is most fortunate to have a Muslim Indian teacher who is fluent in Urdu and

English, speaks and understands some Hindi and, while not speaking Punjabi, understands it. She contributes first language input to the stories of many of the children. They have recently recruited a teacher-aide who is fluent in Mandarin and English.

Word art and fancy borders provide the final touches to photographs, children's pictures or writing, and the written narrative before they are placed inside the protective transparent leaves of a child's folder. Each child has a folder of his/her own with name clearly marked on the cover spine, kept on a shelf at the kindergarten within easy reach. Children know they can pick up their folder at any time they choose to. When the child transitions to school, the folder becomes his/hers to keep at home.

OUTCOMES

There is common ground between the outcomes observed at Papatoetoe Kindergarten and those reported for Roskill South Kindergarten. Roskill South Kindergarten, like Papatoetoe Kindergarten, serves a multicultural, multilingual community. My participation in the shared lunch at Papatoetoe Kindergarten made it abundantly clear that they have achieved an impressive level of success in involving their community of families. Estimated conservatively, at least 80% of the 90 morning and afternoon children had a family member present, sometimes more than one. The table was laden with a magnificent choice of ethnic dishes, prepared by families with obvious care and pride. I observed that the poster boards, continuing slide show and story folders were points of interest for children and families.

Building Relationships with Families

The most significant finding reflects accomplishment of the main goal of the ICT project, as stated in the funding application. It relates to the preponderance at Papatoetoe Kindergarten of first-generation immigrant families with little or no English language and the effectiveness of photographs as a vehicle for communicating with families. Photographs make the children's learning visible to families, thus serving as a bridging language. They contribute significantly to engaging families in their children's learning and social development in the wider world. While the information sharing potential of photographs is also true for English speaking families there is special salience in the case of immigrant families. A recurring phrase in the Roskill South Kindergarten report, 'reading photographs' is just as applicable here to refer to the way in which non-English speaking family members grasp information from photographs.

At Papatoetoe Kindergarten, the family identified and acted on opportunities to give tangible support to their child in developing their stories, so that the communication became two way. The stories of Gurveer and Wendy are but two of a multitude of possible examples.

The communication embraced family beyond New Zealand. Educational opportunities for children and prospects of a better lifestyle are the main reasons for many families choosing to come here. Many immigrant families keep close communication with family overseas and are keen to send news of their children's educational experiences back to the family in their country of origin. A not uncommon scenario is for a father to continue living overseas for business or employment reasons and for mother and children to reside in New Zealand.

There were frequent instances of Papatoetoe Kindergarten families sending photographs of kindergarten activities and achievements to family members overseas, including children's dads. If kindergarten staff knew that children were to travel overseas, they encouraged the family to bring back some photographs to be incorporated in their child's folder. Families were responsive to teachers' requests to share their photographs of events that held significance for their child.

Relationships of trust were also strengthened when families saw aspects of their culture acknowledged. Activities such as the making of roti, children's accounts of their religious beliefs, and the incorporation of the family's first language in story folders conveyed crucial messages about richness in cultural diversity and respect for different cultural and religious traditions.

Building English Language Fluency

The addition of ICT to children's communication repertoire enhanced their motivation to participate and encouraged their use of other modes, such as talking, writing and drawing. It opened up communication across cultures among children in their day-to-day activities at kindergarten. It encouraged children from non English speaking backgrounds (NESB) to make use of their English language vocabulary and, with help from extra resources such as books and DVDs, develop it.

The story of Gurveer, whose first language is Punjabi (*pages 69-72*) is one example of a child who, according to his mother and teachers, lacked confidence and had difficulty in relating to other children in the kindergarten. That was until a teacher "*tapped into the right place at the right time...and found a new Gurveer (which he always was at home)*" (letter from Gurveer's mother). The point of connection, 'Thomas the Tank Engine' came to light when Gurveer overheard the name 'Percy' in a story that the teacher was reading to a group of children. Percy is Thomas the Tank Engine's sixth engine. In telling others about something he felt passionate about, Gurveer became increasingly confident about communicating in English. He brought each of his engines to kindergarten, drew pictures of the engines and explained in English the features which distinguished one from another. The interest shown by the teachers and other children encouraged him. Gurveer revealed a facility with English which came as a complete surprise to his mother and teachers.

What part did the digital technology play in facilitating this sequence of events, triggered coincidentally? The teacher was quick to identify the potential inherent in Gurveer's response when he heard the name 'Percy' to gain trust with him and to get him to reveal more of himself. Recording the episode using

the camera and building a story around the photographs showed a valuing of and shared interest in what was important to Gurveer, initially by the teacher, and then by others. It enabled Gurveer to revisit his story and explore it further. It encouraged him to employ a range of modes of communication, including drawing, duplo modelling, bringing his engines to kindergarten to show others and using his English language to explain what needed explaining. The teacher's tracking down of a DVD encouraged the involvement of more children. An ultimate result was a strengthening of the teaching/learning partnership between the kindergarten and Gurveer's family. A letter from his mother that became part of Gurveer's folder underscored the kindergarten/family partnership.

Building Confidence and Sense of Identity

Building of self-confidence and affirmation of the children as competent learners were woven into the fabric of the stories and recording of events. Processes around writing stories and taking photographs conveyed to children that their stories were valued. Children gained in confidence through explaining their stories to other children. The stories of Wendy and Gurveer illustrate growth in self confidence.

Each folder reflects the uniqueness of the child whose photographs and stories it contains. The Deputy Principal (see next page for a précis of the interview) was clearly referring to identity when she described the photographs as "giving children a sense of who they are", with the potential for that to change as they move into new contexts as part of their life journey. Importantly, the photograph always represent identity in a positive and affirming way. Engaging parents and building understanding with them may help resolve conflicting expectations, a potential source of identity confusion for children. One of the key aspects of identity development is 'reconciliation' between membership of different 'communities of practice':

"It is a matter of making connections across communities to make the learning context at kindergarten more meaningful by 'reconciling' it with other spheres of the children's lives. And vice-versa, that other spheres of children's lives are enriched by connections to their kindergarten experience."⁵

The photographs were also a way of affirming and placing on record social connections and friendships between children. One of the mothers I interviewed said that this was a particularly important benefit for her son, who lacked social confidence and friends when he started kindergarten. Sometimes events

⁵ Wenger E. (1998) *Communities of Practice: Learning, Meaning and Identity*. Cambridge: Cambridge University Press.

recorded in the photographs and stories, although unhappy, need acknowledgement. One mother described how writing about the death of his cat helped her son to express and cope with his sadness. It was helpful that the folders were stored within easy reach of the children so that they could revisit their learning and social accomplishments and special memories when they felt a need to do so.

Expertise with Technology

Children gained knowledge and practical experience in using the internet as a tool for gathering information. They also gained expertise using the digital cameras and computer technology to prepare their own learning stories. I saw many photographs and stories where children's quick acquisition of ICT skills was the subject matter of the story.

Children's Learning Gains

The photographs and stories gave tangible expression to the children's achievements, with potential to revisit the achievement. This is conducive to self-efficacy⁶. In simple terms, self efficacy refers to the tendency for people to build further successes using their appraisals of their previous successes as a frame of reference. Self-efficacy aligns with self-confidence but is not the same thing.

With the digital technology, children could see immediate results. This was helpful in capturing and maintaining their interest.

Children developed their story-telling abilities by telling visual stories (often about their own or other children's learning).

The digital technology enabled children to 'read' and revisit their learning, strengthening their identities as confident and competent learners.

Children gained expertise in explaining their stories and areas of knowledge to others.

ICT added excitement and interest to the learning in many areas and topics.

Teachers used websites and commercial DVDs to add to the knowledge of topics of interest to children, and to introduce new angles.

⁶ Bandura, A. (1982) Self-efficacy mechanism in human agency. *American Psychologist*; 37: 122-4.

Transition to School

The two Special Education Early Intervention Visiting Teachers I interviewed were at the time involved with four children (morning and afternoon sessions). They commented on the usefulness of the folders for children's transition to school. *"They are a valuable aid to new entrant teachers in becoming acquainted with the children and knowing their special interests and talents."*

One mother said that she has continued with the photo/story folder idea since her daughter started school *"as a type of diary of events for her to refer back to"*.

The following is a précis of my interview with the Deputy Principal of one of the schools to which Papatoetoe Kindergarten children transition.

Approximately 80% of their children attend some form of pre- school, often for only a very short time. The digital cameras make an important contribution in transition to school. Photographs are very important. Potentially, starting school is quite daunting for children as it involves a much bigger environment with 500 children instead of 40 or so. Children make a visit to their nominated school before their time at kindergarten has ended. As far as this particular school is concerned, one of the important things to happen is that on the pre-enrolment visit to the school, they take a photograph of the child in what will become their new room with their new teacher. The child receives two laminated copies, one for their folder at kindergarten, the other to take home to promote discussion with the family. This helps towards the child building a new identity – i.e. a sense of who they are and where they will be next in their life journey. They also photograph all the children on their first day at school and the family receives a copy of that photo. The photos are a tool by which the child can revisit the experience of the school visit. Folders that the children bring with them when they start school help the school in gaining some understanding of the child- what their interests are, how confident they are socially, their interaction with other children. (The family keeps the folder.) The school also provides the kindergarten with a series of photographs of the school to help familiarise children with the school they will attend – toilets, library, classrooms, teachers etc. Parents can access this information through the kindergarten.

Teaching/Learning Partnerships: Children and Teachers; Teachers and Parents

ICT took teachers into domains of knowledge where the children were the experts. It added ways in which children could take responsibility in the learning and teaching process. Children took up these opportunities with enthusiasm. This is suggestive of a power shift, which could be regarded as confidence building for children.

It included families and whanau in a mutual learning and teaching endeavour with the teachers and children. Children and families became teachers as well.

Teachers honed their skills in recognising and responding to the children's learning in more thoughtful, intuitive, and often innovative ways.

CONCLUSIONS

The Roskill South Kindergarten report noted that learning outcomes are invariably the result of a combination of factors. Attributes of the technology, family participation and teacher approach towards empowering the child were highlighted as significant mediating influences. The strengthening of children's learning using ICT became probable only when mediating influences were in synch or working together with the same principles and vision in mind.

This applies equally in the case of Papatoetoe Kindergarten. The outcomes listed in the preceding section were a reflection of the commitment of Papatoetoe Kindergarten staff to their children and community of families. The processes around the introduction and roll-out of ICT technology set the scene for successful outcomes. The Roskill South Kindergarten Pilot offered a frame of reference and source of expertise that the Papatoetoe teachers wisely tapped into and adapted to suit the needs of their unique community. The ICT venture would not have succeeded in the many ways that it did were it not for the teachers' ability to recognise the potential in small incidents and to take story writing to another level. The project drew on the teachers' understanding of child development and behavior and of empowering and promoting learning and social development, as well as a valuing of their community.

In a community where a majority of families had little or no English, photographs taken with the digital cameras were a vehicle for communicating with families. They made the children's learning visible to the families, thus serving as a bridging language. They contributed significantly to engaging families in their children's learning and social development in the wider world. Relationships of trust were strengthened when families saw aspects of their culture acknowledged. The incorporation of cultural traditions and language in story folders conveyed crucial messages about richness in diversity and respect for different cultural and religious traditions.

The photographs and stories gave tangible expression to the children's achievements, with potential to revisit the achievement.

*By the time this (early childhood) period is over, children will have formed conceptions of themselves as social beings, as thinkers and as language learners, and they will have reached important decisions about their own abilities and their own worth.*⁷

⁷ Donaldson M., Grieve R., Pratt C. (1983). Early childhood development and education. Readings in Psychology. Oxford: Blackwell. (Cited in Ramsey et al, 2006)

Building of self-confidence and affirmation of the children as competent learners and social beings were woven into the fabric of the stories and recording of events. Story folders reflected the uniqueness of each child. Processes around writing stories and taking photographs conveyed to the children that their stories were valued. Children developed their story-telling abilities and gained in confidence through explaining the subject of their stories to other children.

The addition of ICT to children's communication repertoire enhanced their motivation to participate and encouraged their use of other modes, such as talking, writing and drawing. It opened up communication across cultures among children in their day-to-day activities at kindergarten. It encouraged children from non English speaking backgrounds to make use of their English language vocabulary and, with help from extra resources such as books and DVDs, to develop it.

Children gained knowledge and practical experience in using the internet as a tool for gathering information. They also gained expertise in the use of the digital cameras and computer technology to prepare their own learning stories. The digital technology offered the advantage of immediate results, which contributed to capturing and maintaining their interest.

One school has adopted the practice of photographing prospective new entrant children on a pre-enrolment visit to the school. The children receive a print to take home and one for their folder. The idea is to stimulate family discussion and encourage the child to envisage him/herself in the new setting. They have also found the photograph folders to be a valuable aid to new entrant teachers in becoming acquainted with the children and knowing some of their special interests and talents. There is potential for other schools to use the folders to a greater extent than is the case at present, to ease children's transition to school.

Children and families became teachers as well. ICT took teachers into domains of knowledge where the children were the experts. It added ways in which children could take responsibility in the learning and teaching process. Children took up these opportunities with enthusiasm. This is suggestive of a power shift, which could be regarded as confidence building for children. It included families and whanau in a mutual learning and teaching endeavour with the teachers and children.

The funding grant from the AACT was indeed well directed. The digital camera and ICT technology is valued by the kindergarten community and being put to ongoing use with excellent results.

Papatoetoe South School: SMART™ Board Equipment for the

Physically Impaired Inclusive Centre

INTRODUCTION

Papatoetoe South School is a decile 2¹ year 1-6 contributing primary school, located on Milan Road Papatoetoe, off Puhinui Road. An expanding roll over the last few years is an ongoing trend, to the point where 2008 roll increases are exceeding projections. A roll of 510 at 2008 school start increased to 580 by the end of term 1 and is now expected to reach 640-50 by the end of the year. A new classroom and other purpose built rooms completed in August 2008 will lessen but not eliminate pressures on room space. The growth in school roll numbers reflects increased infill housing in the neighbourhood and an associated influx of Indian families with young children. It also signifies that the school has a good reputation among the Papatoetoe South community. Ethnic composition is: 30% Maori; 30% Indian/Asian; 30% Pacific Islands; 6% NZ European and 4% others. Principal, Mark Barratt, commenced at Papatoetoe South School in December 2007. The school's Board of Trustees comprises 5 community representatives (2 Maori, 2 Cook Islands and 1 European) as well as the Principal and the school's Executive Officer, Ann Yearbury. The Board of Trustees are persevering in their attempts to attract an Indian community representative to join them.

The physically impaired inclusive centre is located in room 10, alongside other class rooms encircling the school's main play area. The Senior Teacher in Charge is Julie Swale. For the sake of convenience and economy of words, the Physically Impaired inclusive Centre will often be referred to as room 10 in this report. I asked Julie Swale to provide a description of the children in room 10 while protecting their identities. Julie Swale and Mark Barratt provided the following class description:

The Children in room 10 all have some form of physical disability and most have intellectual disabilities as well. The intellectual disabilities are mainly to do with the way the children are able to process information from thinking to doing. The students all require one to one teaching and some have higher needs than others which means they need help eating and toileting. The physical disabilities range from mild coordination problem, fine and gross motor issues to being unable to walk or move unaided. Some children require a wheelchair so that they are mobile.

All children in room 10 have physical programmes in place to increase their independence with mobility. The children come from a mix of cultures mainly Pacifica – Tongan, Cook Island and Samoan also Maori,

¹ Decile rank is determined by census data and indicates the extent to which the school draws its students from low socio-economic communities. Decile 1 schools are the 10% of schools with the highest proportion of students from low socio-economic communities, whereas decile 10 schools are the 10% of schools with the lowest proportion of these students. www.mined.govt.nz

Indian and European cultures. There are 12 full time students in room 10 and another 3 students who are attached to room 10 for Health needs only. These students are in mainstream classrooms full time.

We have a very strong individual inclusive education goal for all children with special needs at Papatoetoe South. For this reason Room 10 follows the New Zealand curriculum and whatever the rest of the school is into. We have mainstream children coming and going in and out of room 10 throughout the day for Literacy programmes; they interact with the children in room 10. These students have issues with their learning and need extra support.

Room 10 has a high staff/student ratio, including a Special Education Assistant who looks after the children's health needs. Visiting specialist services available to the room 10 children include Physiotherapy, Occupational Therapy and Speech Language Therapy. Individual Education Programme (IEP) Meetings take place twice a year involving family, the class teacher, therapist, and room 10's Special Education Assistant. There is a sharing of information on the child's progress and goals are set for therapy and learning. Twice yearly parent/teacher whole-school interview evenings, additional to IEPs, provide another opportunity for discussion of children's learning progress.

The word 'inclusion' is pivotal to understanding the way in which room 10 merges into the total school environment at Papatoetoe South School, with an underpinning philosophy of maximizing opportunities for all children to participate fully in school life, and eventually as adult citizens within society. The room 10 children do their fair share for all events on the school calendar, including concerts and sports days. In [Psychology](#) and [Social Work](#) practice, **Social Role Valorization** (SRV) is the name given to an analysis of human relationships and human services, formulated in 1983 by Dr. [Wolf Wolfensberger](#), Philosopher, Psychologist and Educationalist, as the successor to his earlier 1970s formulation of the principle of Normalisation.^{2 3}

"The theory is based on the idea that society tends to identify groups of people as fundamentally 'different', and of less value than everyone else. It catalogues the methods of this 'devaluation' and analyses its effects. It may be used by those seeking to counteract these methods and effects.

*An understanding of Social Role Valorization can lead to ideas about how to improve the lives of people who are devalued by society. These can be seen to have two themes - firstly removing devaluing features (for instance people being segregated from society in a building along with others perceived to belong to the same group), and secondly taking action that leads to people being valued. ... the approaches of SRV involve Socially Valued persons (in allying) themselves with Socially Devalued persons. This alliance will unify people, broaden acceptance of differences, and encourage the coexistence of people."*⁴

² Lemay, R. (1995). Normalization and Social Role Valorization. In A. E. Dell Orto & R. P. Marinelli (Eds.), *Encyclopedia of Disability and Rehabilitation* (pp. 515-521). New York: Simon & Schuster Macmillan.

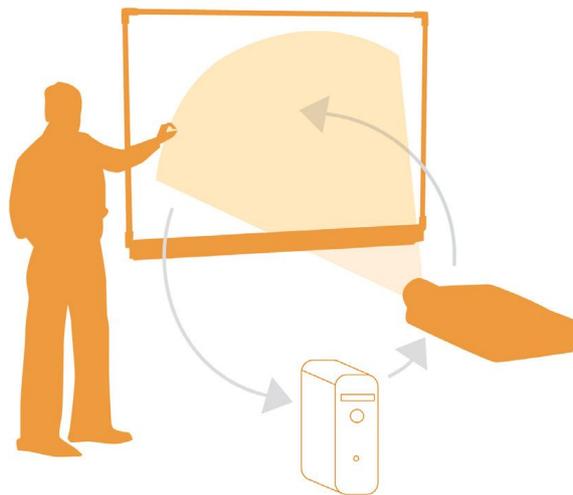
³ Wolfensberger, W. (1998). *A Brief Introduction to Social Role Valorization*. A higher-order concept for addressing the plight of societally devalued people, and for structuring human services. Syracuse, NY: Training Institute for Human Service Planning, Leadership & Change Agency (Syracuse University).

⁴ http://en.wikipedia.org/wiki/Social_role_valorization

SMART Board Description

Successful funding applications to the AACT in 2005 and 2006 saw Smart Board Interactive Whiteboard technology installed in all of the mainstream classrooms. A funding application submitted to the AACT in 2007 sought to extend the opportunities offered by Smart Board interactive technology to the room 10 children.

The **SMART Board interactive whiteboard** is a product of [SMART Technologies](#). It is a large, touch-controlled screen that works with a projector and a computer. The projector throws the computer's desktop image onto the interactive whiteboard, which acts as both a monitor and an input device (mouse and keyboard). Users can write on the interactive whiteboard in digital ink or use a finger to control computer applications by pointing, clicking and dragging, just as with a desktop mouse. Buttons launch a popup keyboard and a right-mouse-click menu for more input options. The interactive whiteboard is usually mounted on a wall or a floor stand.⁵ The interactive whiteboard allows control of any application simply by touching the screen.



From Installation and Users Guide SMARTBOARD™ 600 Series
Interactive Whiteboard⁶

⁵ http://en.wikipedia.org/wiki/SMART_Board_interactive_whiteboard

⁶ <http://www2.smarttech.com/kbdoc/1414>

PROJECT GOALS

Papatoetoe South School's 2007 funding application to the AACT envisaged that " *the installation of interactive Smart Board technology in the Physically Impaired Inclusive Centre would help the Special Needs children make " literacy gains commensurate with their 'atypical' able-bodied peers... Interactive technology engages children through touch, visual, auditory and thinking skills. Research shows that empowered children using this technology make significant gains in their learning."*

Items Purchased with AACT 2007 Grant

AACT Grant amount: \$8,483.00

Prices listed below are less GST.

Smart Board SB660 64 inches	\$3052.00
USB audio system for Smart Board	\$ 680.00
Sanyo PLC XU47 2991mm projector	\$2760.00
AMIS AMC30 Amplifier	\$ 279.00
Projector bracket	\$ 490.00
Installation costs	<u>\$ 1072.00</u>
TOTAL	\$8,483.00

DATA SOURCES

- 2005, and 2007 AACT funding application;
- Several interviews with Mark Barratt, Principal over the period April-August 2008;
- Several discussions with Julie Swale, Senior teacher, room 10 and the Special Education Assistant;
- Observation of Room 10 children and their use of the SMART Board on 2 occasions;
- Observation of SMART Board use in five mainstream classrooms. They included a combined 2 teacher class with 55+ children and a classroom where a boy who began in room 10 is now part of mainstream education;
- The classroom observations were an opportunity to gather feedback from teachers in mainstream classrooms on the technology.
- Discussion with a member of the school's Board of Trustees.
- Interview with Denise Moyle, Senior Teacher ICT at Papatoetoe South School.
- Data from a survey on 60 students and a sample group of teachers supplied by Mark Barratt, Principal. (Thank you)

USE OF SMART BOARDS IN MAINSTREAM CLASSES

School Principal, Mark Barratt emphasised that, for SMART Boards to be used to their full potential, teachers need proper training, not only in use of the technology, but in curriculum mapping to link the SMART Board into the curriculum. He favours an inclusive team approach, so that knowledge is distributed across the whole staff group, albeit with a core group of team leaders having a higher level of proficiency. Given the reality of staff turnover in schools, it is unwise to rely too heavily on two or three people trained to high levels of expertise, who could be poached by other schools.

The school has its own intranet, which is being constantly revised and added to. It includes a wide spectrum of school information, educational material and educational software accessed via the internet, such as Rainforest Maths. An item that is of particular interest to the room 10 children is a series of photographs recording their participation in a 2008 combined schools Para Sports Day at Mount Roskill School. Other mainstream children can also share in Para Sports Day experiences. The school's intranet offers a safe, relevant and diverse learning environment, categorised for junior,

middle and senior school levels, which Papatoetoe South children can access in non-class time. It also gives teachers ready access to lesson content.

Observation of the use of SMART Boards in mainstream classrooms was helpful for gaining insights into their adaptability for classroom teaching purposes. My observations were in year 4, 5 and 6 and new entrant classrooms. Two observations were of Maths lessons, one was oral reading (new entrants), one was written expression (words that link ideas) and one related to the recording of time based on a 24 hour clock. A boy in a wheelchair who was in one of the Maths classes participated equally with other students.

The information presented on the whiteboard was a combination of information written on the board with a special pen as part of the lesson, and information accessed via the computer. The computer information included lesson material prepared by the teacher, examples recalled from an earlier lesson and new examples for students to work through. I was able to gain a more complete picture of the potential of SMART Boards when I returned on another occasion to watch a year 5 teacher using a Readers Digest 'learning' DVD with the SMART Board. Taken at face value, the DVD was a Nature Studies lesson on the eating habits of blue whales, but the teacher incorporated extra components to turn it into a lesson aimed at developing skills in identifying key words and note taking. Once the SMART Board teaching session ended, the DVD was transferred to a laptop computer so that the children could access the information for themselves.

Teachers commented that, having experienced the benefits of teaching with a SMART Board, they would not want to return to teaching without one. The following were some of the advantages mentioned by teachers:

- 1) A new set of information can be placed in front of the class immediately;
- 2) It is interactive, producing an immediate response, e.g. new entrant class observation: children's touching of the screen triggered first the sound, then a word incorporating the sound accompanied by a picture.
- 3) The advantages of the pause function of the DVD were very apparent in the year 5 lesson on key words and note taking.
- 4) There is no need for the students to spend time finding books and pieces of paper;
- 5) Earlier lessons and examples can be recalled to the screen. This is a good security net for students who are slower to grasp information – less 'loss of face' for those students;
- 6) It enables access to a wide range of educational programmes;
- 7) It encourages self-initiated learning. Children who want to probe deeper can do so. A folder at the bottom of the screen linked with an on-screen keyboard gives children easy access to class projects and the school's intranet.
- 8) Children make good use of the resource to do 'extra topic' work before school and at lunch time. For example the room 5 teacher said that 8 children had been using the SMART Board before school on the day of my visit.

- 9) The SMART Board is useful for generating and recording ideas to solve a problem. For instance, the room 5 children contributed their own ideas for solving bullying problems. The ideas were circulated across the school and some were translated into action.
- 10) It encourages group work and peer tutoring – children help one another;
- 11) It engages the children – focuses their attention.
- 12) DVDs can be transferred from the SMART board computer to classroom lap tops, enabling children to retrieve information they may have missed out on or want to recheck.

Survey conducted by Mark Barratt, Principal

Influences on learning

In a questionnaire about learning, year 5 and 6 students were asked to rank what they thought had a big impact on their learning. In the context of the survey, ICT referred to a range of technology used by children while at school: computers, SMART Board, cameras, fax machine, telephone and photocopier. Students attributed importance in the following order (most to least impact). Teachers' attributions are shown in brackets.

1. Teacher and how they are perceived by the student (6)
2. If they knew what they were meant to be learning (1)
3. ICT activities (4)
4. Hands on activities (5)
5. If they knew they had to meet a high standard (2)
6. Size of the groups (3)
7. If they had physical activity that day (7)
8. Time of the day (8)
9. Topic being studied (9)

For the students, ICT activities were clearly important, but not as important as teacher related factors. The low ranking attributed to 'topic being studied' is surprising, as one might expect that a topic of high interest to a student would have a high level of impact for that student. There was relatively close agreement between teachers and students regarding the impact of ICT. However it is noteworthy that teachers attributed a higher ranking to ICT activities than they did to 'teacher and how they are perceived by the student' impact. This was a small sample but if it suggests any abrogation of responsibility by teachers in favour of ICT technology, it would be of concern.

Student impressions of the benefits of having a SMART Board in the classroom.

Reason	Number of Student Mentions	Comment
Communication	54	Students wrote they could see more clearly
Motivating	49	Students said it was exciting. You could do 'cool' things with them
Interactive	45	Teachers could show clearly how things could be better

Teacher impressions of the benefits of having a SMART Board in the classroom.

Reason	Comment
Motivating	Students faced the whiteboard as they were afraid they might miss something.
Interaction	Teachers are able to unpack concepts more easily
Learning Links	We are able to make cross-curriculum links more easily as a result of internet access. Makes learning more pertinent.

Students identified SMART Boards as an important learning tool as they improve teacher-student communication. Teachers also saw SMART Boards as a tool to improve teacher-student interaction, as well as helping to make learning pertinent to the students.

ROOM 10'S USE OF THE SMART BOARD

Julie Swale described the SMART Board as *"a wonderful interactive tool that provides inclusion for all students"*. Interactive communication technology is particularly important for room 10 children in improving their quality of life. For children who are non-verbal, key board skills are especially important. At the time of my research, only one of the families of room 10 children had a home computer, although several had X Boxes.

My first room 10 SMART Board observation was of a caterpillar game which reminded me of the popular children's book "The Very Hungry Caterpillar". There were 8 leaves and a bare branch, each numbered one to eight in random order. The challenge was to drag the leaves using finger touch on the screen and to place each on the branch in ascending numerical order. Each child had a turn. Once the leaves were correctly placed, the caterpillar ate up all of the leaves, metamorphosed into a butterfly and flew away. The task was more than a simple maths exercise as it involved hand-eye coordination and called upon social skills, in terms of the children waiting for their turn, cheering

others on and hand clapping. It was interactive, giving immediate reinforcement once the task was accomplished. As an observer, what impressed me most was the complete focus of this group of children who varied in their attention spans, and the encouragement and support shown for one another. The challenge presented by the task varied across the group of children. For example, one child, who was reluctant to even touch the SMART Board, took the hand of another child and placed it on the board, keeping his own hand on top, thus maintaining indirect control.

Digital photographs featured prominently in room 10's use of the SMART Board. The two sets of photographs I observed being used were of a walk around the local neighbourhood and the children's participation in a combined Para Sports Day at Mount Roskill School. Weather permitting, they try to do a walk around the local neighbourhood once a week, photographing items of interest, with the children themselves as central participants. The digital photographs are a way of recalling the experience and prompting discussion about what they saw on the walk, e.g. a household letterbox, power poles, cars, pedestrian crossing, birds, clouds, fences, colours, leaves, flowers etc. Because learning occurs through all of the senses, children are encouraged to touch things on the walk and talk about things that interest them. Seeing themselves and one another on the screen raises the excitement level. This was especially noticeable when they were viewing photographs of the Para Sports Day. The photographs of this day put on record the children's membership of a wider community and their efforts and successes, large and small. Learning programmes are available that link into the NZ primary schools curriculum (e.g. Kid Pix Deluxe – a simple to use drawing programme, the Magic School Bus and interactive maths games), although they are limited in number, and particularly so considering the accessibility requirements of the room 10 children.

In summary, I observed ways in which the SMART Board was a useful tool in the room 10 classroom situation. At the same time, I noted the following challenges:

- * Teachers had to cater to the education needs of children of a wide range of ages and levels of ability;
- * The limited attention span of some of the children required saint-like patience on the part of the teacher and teacher-aides.
- * Children were at varying points on a continuum of motor skills, ranging from mild coordination problems through to fine and gross motor issues. Children needed a certain minimum level of motor skills to be able to use the SMART Board.

Clicker 5 has gained a reputation among teachers of special needs children as a useful individual programme, as well as adding value to SMART Board use. The New Zealand distributors of Clicker 5 describe it as a powerful yet easy-to-use writing support and multimedia tool that enables children to write with whole words, phrases or pictures. The user clicks on words, phrases or pictures in a 'Clicker Grid' at the bottom of the screen, to send them into a talking word processor called 'Clicker Writer' at the top of the screen. They can hear words before writing them or whole sentences after writing them. Clicker 5 is ideal for primary-aged children. It is ideal for people with special needs, as

it is switch accessible – it can even be used as a communication tool.^{7 8} A localised product version is available to suit the Australian/ New Zealand market. Julie Swale believes that Clicker 5 would have the following benefits for room 10 students:

The benefits for room 10 students would be around their ability to adapt to the NZ curriculum, Clicker 5 programmes cover all NZ curriculums. Students' independence would grow because they would have access to a programme that would suit their needs, not just for now but as they progress through their schooling. The need to keep students engaged in today's and tomorrow's technology is extremely important to the students in room 10 having their place in being able to be part of their community and take a place in society as a whole. I am very aware of the need to keep students included in being able to learn within their particular ability and for the students to make progress. Technology is very much part of room 10 students' world and needs to keep up with the ever changing needs of the students, Clicker 5, I believe, is one way of ensuring that the students needs are being meet.

Clicker 5 systems requirements for Windows are: Pentium II 400 or greater, Windows 98, ME, NT, 2000, XP, Vista. 128 MB RAM, 400 MB free disk space. And for Mac, Mac OS x 10.3 or above, 128 MB RAM, 400 MB free disk space.

Licence costs appear reasonable. GST exclusive costs supplied by the NZ distributor are quoted below. It is to be expected that product upgrades from time to time would involve additional fees:

Licence fees	excl . GST	Dual Mac + Windows
1 user	\$314	For one computer
5 user licence	\$480	For up to 5 computers, includes install CD
30 user licence	\$1291-74	For 30 computers, include install CD
Additional licence each	\$53-76	in addition to single user, 5 user or 30 user for each computer.

Other costs are freight/courier/insurance from a Melbourne warehouse - \$8 + GST and training books. Training booklets price per title = Single: \$30 + GST; 5 pack: \$120 + GST; 10 pack: \$210 + GST

Clicker 5 Introduction

This booklet covers the main features of Clicker 5, including Clicker Writer; using and creating Grid Sets; Pop-up grids; and talking books.

Clicker 5 Advanced

This booklet looks further at the multimedia features of Clicker 5 and how it can be used for to create complex learning resources.

Clicker 5 Access

⁷ <http://www.cricksoft.com/uk/products/clicker/default.asp>

⁸ Norm Jager" <norm.jager@edsoft.co.nz

This booklet covers the range of access methods available in Clicker 5 and how it can be used to address the needs of a variety of learners.

Because many of the computers at Papatoetoe South School are old and have inadequate memory capacity, a minimum of two new computers would be needed to supplement what the school can make available. This would allow for individual use of Clicker 5 by room 10 children as well as combined SMART Board use.

CONCLUSIONS

Social Role Valorization advocates for improving the lives of people who tend to be devalued by society, among them the physically and intellectually impaired. Improvement has two facets, each with implications for human relationships and human services: a) removing devaluing features (for instance people being segregated from society in a building along with others perceived to belong to the same group), and b) taking proactive action that leads to people being valued. While the philosophy of inclusion underpinning the set up and organisation of room 10 exemplifies the first category, the installation of a SMART Board in room 10 exemplifies the second category of proactive action.

Education ranks importantly as a vehicle for enabling people with physical and intellectual impairments to attain equal rights and opportunities within society. Notwithstanding, the education task is accompanied by significant challenges, some of which were noted in room 10 observations that were central to this evaluation:

- * Room 10 teachers had to cater to the education needs of children of a wide range of chronological ages and ability levels;
- * The limited attention span of some of the children required saint-like patience on the part of the Senior Teacher, Special Education Assistant and teacher-aides, all of whom merit any support that can be given towards carrying out their roles.
- * Children were at varying points on a continuum of motor skills, ranging from mild coordination problems through to fine and gross motor issues. The fact that children needed a certain minimum level of motor skills to be able to use the SMART Board, was indicative of a much broader problem of specialised educational resourcing available to New Zealand schools. It harks back to the room 10 Senior Teacher's comments on the vital importance of interactive communication technology for physically impaired children in improving their quality of life and assisting them towards independence, especially when they are non-verbal.

By way of comparison, observations in mainstream classrooms provided useful insights into the potential of SMART Boards as a classroom teaching tool. While the SMART Board was undoubtedly a useful learning tool in room 10, there were significant accessibility issues around educational software currently available, which meant that SMART Board use was below potential. In the course of the evaluation, Clicker 5 emerged as a software package that would benefit room 10 students in their ability to adapt to the NZ curriculum. Clicker 5 programmes cover all NZ curricula. The room 10 Senior Teacher expressed confidence that "students' independence would grow because they would have access to a programme that would suit their needs, not just for now but as they progress through their schooling". From my own professional perspective, I can envisage definite advantages in installing Clicker 5 for room 10 children, both for individual use and combined SMART Board use.

The SMART Board technology has added greater excitement and interest to the room 10 learning environment. Group learning activity focused on the SMART Board touch-controlled screen appears to reinforce social bonds and mutual support among class members, as well as giving practice in social skills, such as taking turns. Use of the SMART Board in conjunction with digital photographs enables children to revisit and re-examine their experiences, discuss them with others, give and receive praise, and share emotions and feelings. Because the children feature prominently in the photographs, they see themselves as participating in a wider world, often in ways that bring satisfaction and commendation. Children do not take photograph folders home (as in the case of Papatoetoe Kindergarten), but appropriate importance is placed on organising regular meetings with parents/caregivers to review progress and issues and encourage their input to forward planning for therapy and learning.

The room 10 class are a very diverse group in terms of chronological age and learning ability. Learning achievement is assessed according to individual goals set for each student. Only when SMART Board use is tied into individualised learning goals for each student, preferably with the addition of new software programmes meeting accessibility criteria, will actual learning gains facilitated by the SMART Board become discernible.

Rongomai School: Computers in Homes and Effective Writing

INTRODUCTION

Rongomai is a decile 1¹ year 1-6 primary school, with an enrolment of 150-170 children from approximately 110 families. Ethnic composition is: Maori 30%, Cook Islands Maori 30%, Samoan 30%, Tongan 7%, Niuean 3%. It serves a neighbourhood in Otara that is at the lowest end of the socio-economic deprivation spectrum². School families, many of them single parent families, struggle with the stresses and tensions of poverty on a daily basis. Like other low decile schools, Rongomai School has to find ways of working proactively to prevent these stresses and tensions impinging negatively on children's education and development. Present Principal Tina Voordouw, took up the role in 2004, bringing with her professional experience gained in a diversity of urban and rural schools, including other South Auckland decile 1 schools. When she first commenced at Rongomai in 2004, the school's roll had dwindled from 720 in the late 1970s to 120. Rongomai School had a reputation for violence in the playground, as well as poor achievement. In December 2003, only 6% of children transitioning from Rongomai School to year 7 intermediate schooling were able to read at their chronological age level or better. The remaining 94% were lacking essential basic literacy skills. Reading and reading comprehension were key issues. This was despite the presence of two pre schools on site - a kohanga-reo and the Poetiare Cook Islands pre-school.

Tina Voordouw's approach was holistic, implying a need for the school and its community of families to work as partners in defining the issues and putting solutions in place. What was happening in the school was a reflection of a school community which lacked cohesion, as well as a lack of connection and shared vision between families and the school. Many of the parents still had unhappy memories of schooling which caused them to feel alienated. Children were

¹ Decile rank is determined by census data and indicates the extent to which the school draws its students from low socio-economic communities. Decile 1 schools are the 10% of schools with the highest proportion of students from low socio-economic communities, whereas decile 10 schools are the 10% of schools with the lowest proportion of these students. www.mined.govt.nz

² White P., Gunston J., Salmond C., Atkinson J., Crampton P. (2008). Atlas of Socioeconomic Deprivation in New Zealand: NZDep2006. Wellington: Ministry of Health.

picking up on their parents' feelings of alienation, a sense of disillusionment that education could make a difference for them and theirs, and a lack of hope for a better future. Some of the homes are without pen and paper. Parents also tended to underestimate the contribution that they could make. In the words of one mother who has a long association with Rongomai School, "I did not realise that parents need to work at home with the children. I thought my children's learning was a matter for the school to see to, not the family". The new Principal directed attention to building trust with the local community, fostering a shared vision of education as a path to a better future, and encouraging parents to become actively engaged in their children's education.

She introduced a new approach to teaching literacy - the Bannatyne Programme³. Having observed its use in a low decile school in Papakura, she was impressed with its effectiveness, most especially in helping disadvantaged and learning impaired children with poor prognoses for literacy achievement to learn to read and write. Developed by Alexander Bannatyne, it incorporates phonics, visual/spatial skills, motor/kinaesthetic skills, listening skills, comprehension and articulation skills and humour, among other elements. It is self-pacing and designed to be fun. It claims a track record of success with children ranging from gifted and mainstream beginner readers, through to those for whom acquisition of basic literacy is a major challenge (e.g. children with Attention Deficit Disorders, learning disorders, dyslexia, unmotivated and hyperactive students). The successful track record extends to children from non English speaking backgrounds, those from disadvantaged home backgrounds and teenage and adult poor readers.⁴

The Auckland Airport Community Trust provided the financial means for an important initiative aimed at strengthening home-school partnerships and showing parents how to better support their children's learning. A successful funding application to the AACT in 2005 and 2006 for *Pause, Prompt, Praise (PPP)* provided for the purchase of basic readers, sets of books for children to take home, and a parent-sized beanbag and a smaller child sized beanbag per family. The bean bags served the purpose of getting families to set aside a reading area in homes that were often sparsely furnished and with few comforts. They could also be moved to a quiet space in homes that were often noisy and busy. The beanbags and book sets to take home (children were offered a selection to choose from) were conditional on parent's participation in *PPP* training. Children, excited at the prospect of beanbags and books, naturally played their part in urging their parents to participate in the *PPP* training. The Duffy Programme⁵ adds to children's book collections each month. In 2007,

³ <http://www.bannatynereadingprogram.com/home.htm>

⁴ <http://www.bannatynereadingprogram.com/home.htm>

⁵ www.booksinhomes.org.nz

there was a big influx of parents to the PPP programme. Rongomai teachers and teacher aides commented on a noticeable difference in on-task learning behaviours between children who commence at the school with parents doing PPP training and newcomers who transfer from other schools.

Another early initiative was a Parent as First Teachers Programme (PAFT)⁶. Planning is underway to introduce HIPPY (Home Interaction Programme for Parents and Youngsters)⁷, dependant on financial resourcing. As a response to the level of violence that still pervades the local community, a Canadian Peace Foundation programme, Roots of Empathy (ROE), is being piloted in year 5- 6 classrooms. It is directed towards fostering caring behaviours and encouraging children to articulate feelings and emotions and to empathise. It revolves around bringing a baby into the classroom, the purpose being to communicate values and standards in a non-threatening way. Learning activities are incorporated, such as measuring and doing math calculations around weight and length, reading facial expressions from photographs, and putting feelings into words on paper.

A quite different and more basic initiative is a breakfast and lunch programme which operates sensitively to safeguard against children and parents feeling embarrassed or singled out.

Whereas systematic attendance records do not appear to have been kept prior to 2004, attendances are now monitored systematically, and unexplained or unjustified absences are followed up. Perfect class attendances are acknowledged at school assemblies. The local Truancy Services provide excellent back-up.

The main focus of this report, "Computers in Homes and Effective Writing" was made possible by a successful funding application to the AACT in 2007. The impacts of this particular project must be viewed within the total picture of an extremely disadvantaged community and initiatives and strategies introduced by a Principal with a vision emphasising strengths and collaboration, matched by the dedication and drive to bring it to fruition.

⁶ <http://www.minedu.govt.nz/educationSectors/EarlyChildhood.aspx>

⁷

https://www.sovereignsunshine.co.nz/index.php/charities/charity/great_potentials_foundation

PROJECT RATIONALE AND GOALS

By the time that the funding application was submitted to the AACT in March, 2007, Rongomai School was showing gains in reading achievement, with 71% of children reading at or above their chronological age by the end of their year 6 schooling (compared with 6% in December 2003). While the gains were impressive, and all the more so considering the time span, they were not construed as grounds for complacency. Writing and comprehension were of particular concern. Measured against national norms, *"across Rongomai School, 16% of our students are writing at their correct level, 76% are 1-2 years behind, and 8% are 3-4 years behind. ...Precious little writing goes on in the homes. They have no reason to write. Having a computer would change that."*⁸ At that time, only 10 of 110 school families had a computer. The school saw an opportunity in an offer from its sponsor, Westpac Bank, to give the school 'cleaned' 3-year old lap top and desk top computers which were due for replacement. If these computers could be placed in the homes of 100 school families, the main expense to be incurred would be in the purchase of software.

The project aim was to encourage use of computers by parents within the school community. The purpose was to accelerate progress in writing and in comprehension. An ongoing progression was envisaged, *"with computer skills and literacy going hand-in-hand... We are seeking to lift the level of literacy in our homes because the more our students see their parents utilizing literacy, the more they will see a reason for increasing their own competence."*

Three conditions were envisaged as a prerequisite for receiving a computer loaded with software: a) parent or primary caregiver must attend a training session in computer basics; b) Students required to complete a piece of writing on the computer to demonstrate competence in use; c) the student must bring to school each week at least one piece of writing that he/she has done at home.

Items Purchased with AACT 2005 Grant

AACT Grant amount: \$43,540.00

Two separate quotes were obtained and the following costings were based on the lower of the two. Prices listed below are less GST.

Microsoft Office Professional x 100	\$35,378.00
Norton Antivirus x 100	\$ 4,440.00

⁸ Funding application to AACT

Encarta x 100	\$ 1,776.00
Carmen Sandiego software	\$ 1,776.00
Rewritable CDs	<u>\$ 177.00</u>
TOTAL	\$43,547.00

DATA SOURCES

- 2005, 2006 and 2007 AACT funding applications and AACT 2006 and 2007 reports .
- Several interviews with Tina Voordouw, Principal over the period April-August 2008.
- Two interviews (April and August 2008) with 2 parents and one grandparent. They are also teacher-aides, dating back 9-11 years. One was a foundation pupil in the 1970s. They were commenting as teacher-aides and as parents and grandparents of children of Rongomai School.
- Interviews with 2 Rongomai School teachers (of year 2 and year 3 classes) and a Resource Teacher Learning and Behaviour.
- Revisited school to peruse attendance data, comparing 2006, 2007 attendances with 2004. Trends in school attendances were of interest as a potential area of wider impact.
- Attended Pause, Prompt, Praise training session, including showing of a 15-20 minute video. Although wet weather meant a reduced parent turnout, it was an opportunity for me to meet and talk with a mother, a father and a grandmother.
- Interview with Manukau Libraries librarian responsible for the Tupu Library (Dawson Road branch) used by children and families. The main value of this interview, as it evolved, was finding out about the community library's outreach to children, youth and families in Otara and resources available to schools.
- Quantitative assessment data from Rongomai School: percentages of children reading at or above their chronological age level, years 1-6, covering the years 2003 through to 2007.

Extract from "Investing in People"

- A wide range of examples of writing projects children have done at home.
- Interview with Mike Usmar, founder and Executive Officer of Clubhouse 274 based at Clover Park School, Othello Drive, Otara and initiator of the Computer Clubhouse Trust.
- Interview with a class of approximately 20 year 5-6 students.

Note: Where children's work included this report comprises information that could identify the child or family (e.g. surname or photograph), family consent was obtained with the knowledge that the report would be made available to the general public.

OVERVIEW OF THE PROJECT

The project was launched along the lines envisaged in the funding application but later underwent revision in response to what emerged initially as an obstacle, but transposed into an opportunity.

The response by parents/ caregivers to participate in computer training was excellent, with 30 completing the training and 17 names still on a waiting list at the time of my first interview with Tina Voordouw in April 2008. However, the supply of 'cleaned' computers from Westpac Bank was slower than anticipated. The task of installing the new software on the computers also shifted to the computer technician who visits the school. Software installation proved to be time consuming. The result of these combined circumstances was that the flow of computers more closely resembled a trickle than a flood. Initially, the school adopted a cautious approach and three families who were in frequent contact with the school each received a computer on a trial basis. The school kept in storage another 17 'clean' computers and Westpac later added another 10, making a total of 27. Further training sessions were wisely delayed and the money for the software was set aside.

Following my interview with Tina Voordouw and having looked at product information on the Microsoft.com website, I came to the conclusion that Microsoft Office Home and Student would better suit the purposes of the project, and at half the cost of Microsoft Office Professional, which included components superfluous to requirements. I spoke with the AACT Administrator, who discussed this with Tina. Shortly afterwards, Tina received a Ministry of Education Centre for Assistive Technology circular advising of the availability of Asus Eee PCs complete with educational software. They were available with a 2 year warranty through certain local distributors at a very reasonable cost:

The Eee PC is a small lightweight laptop alternative running Linux operating system with Open Office or Windows XP with Works. The keyboard and screen are small and suitable for students who require a sturdy lightweight tool. New versions include the nine inch screen with Microsoft XP operating system or Linux.

⁹

The Eee PCs offered the advantage of wireless internet, email, web browser, file manager and accessories, Skype complete with built-in web cam and microphone, and open source software encompassing word processing, PDF reader, paint, spreadsheets, typing tutor, photo manager, virus protection and

⁹ <http://event.asus.com>

fun programmes for reading and language literacy, maths and science. Wireless internet connectivity is important because many homes do not have a landline phone connection. A revised plan, which was within the budget approved by the AACT, was proposed. Rongomai School would retain the 30 computers already supplied by Westpac. The funds set aside for purchase of software would be diverted to the purchase from a local distributor of 100 Eee PCs, each with a bonus 4GB USB flash drive and lanyard. USB flash drives were favoured over CDs because of their durability, portability and memory capacity. Attached to a lanyard hanging around a child's neck, they were less likely to be lost than if they were loose in a school bag.

The revised plan was adopted and implemented with the agreement of the AACT. The computers are now with families previously without a computer, all of whom have completed a basic training. Internet connection is via a local wireless network. The only cost that falls to families is for internet services. Anti-virus etc. protection is via open source software at no cost and is ongoing (i.e. no expiry date and no renewal fees). Low cost to families is important to the sustainability of the Computers in Homes project, given that some families are struggling to pay for basic necessities such as food, shelter and electricity. However, the financial situation of some families is improving with mothers and older teenage sons and daughters finding a place in the workforce. The children save their work on their USB flash drive, obviating the need to bring the computer to school every week. The work is printed on a school printer and shown to the class teacher.

There were discussions around whether to require families to sign a written contract. It was decided not to adopt this course of action as, in Tina's words, "we want to have faith that we respect that they want the best for their children as well." This is not a 'pen and paper' community. It is a community where a spoken understanding means more than a written one. There was one instance of a child reporting that "our computer is in the money shop but Mum says we will have it back at the weekend". Fortunately, mum was true to her word. The family name and name of the school are engraved on each individual computer and it is hoped that if a computer were to be left at a loan shop and not retrieved, the shop would contact the school. Any glitches have been minor, such as an older child who registered a password and promptly forgot it, making the computer inaccessible; at least until the school technician resolved the problem. A family's relocation to another area raised the question of whether the computer should be returned. The family retained the computer with the school's blessing.

An interview with Mike Usmar, founder of Clubhouse 274¹⁰ based at Clover Park School, Othello Drive Otara and initiator of the Computer Clubhouse Trust gives cause for optimism about project sustainability into the future. The following is a transcript of my notes from an interview with Mike in May 2008:

A 2007 Manukau City Council funded survey of 1561 Otara homes found that 40% of homes had computers, the vast majority 5+ years old. 60% had connected landline phones, 17% had dial up internet, and a miniscule number had Broadband internet. In late June 2008, work will commence on the laying of fibre optic cable to provide wireless internet connection across Otara. Consultation with Netsafe will ensure that the internet will be heavily filtered to moderate online behaviours. Schools are intended as the point of access for homes in their neighbourhood.

Requests for proposals (RFPs) will be sent to Otara schools in October 2008 and schools will start to be connected next January 2009. Schools will be required to contract to pay \$9-50 per month for what is envisaged as a very high speed connection. There will be no additional costs to homes. A simultaneous initiative will be the distribution of 3000 plastic laptops¹¹ to children attending Otara schools. The costs of US\$187 for each computer will be funded by sponsors. Development of 'open source software' for the laptops will be guided by the RFPs from schools. To add value to teaching and learning, Clubhouse 274 are working with "Anytime Anywhere"¹², an organisation focused on professional development for teachers to incorporate personal laptops as a learning tool. The process for distributing the laptops and establishing priorities will be decided in consultation with schools. The commitment of schools for their teachers to participate in professional development will be a major consideration in deciding who will get computers.

¹⁰ www.clubhouse274.org.nz

¹¹ http://wiki.laptop.org/go/Hardware_specification

¹² <https://www.microsoft.com/education/aal.mspix>

OUTCOMES

As explained in the introduction, the Computers in Homes and Effective Writing Project built on a platform of positive changes in the school, realised through other initiatives. These included a range of parent engagement initiatives, strategies aimed at making Rongomai School a happier and safer place for the children, and new approaches to teaching Literacy, in the form of the Bannatyne Programme. Outcomes must be viewed in this context.

Literacy Gains

The following table, based on results obtained using PM Benchmarks¹³ and "PROBE" (Prose Reading Observation, Behaviour and Evaluation of Comprehension)¹⁴, shows the progress that has been achieved. PROBE was developed as an individual reading assessment tool designed for students aged from 7 to 15 years, but it may also be used as a measure of silent reading comprehension and listening comprehension at the same age levels.

<i>RONGOMAI READING: %ages of students reading at or above their chronological age</i>					
	2003	2004	2005	2006	2007
Year 6	6%	33%	35%	71%	96%
Year 5	20%	20%	35%	65%	65%
Year 4	15%	20%	30%	50%	70%
Year 3	18%	25%	21%	42%	60%
Year 2	13%	30%	15%	20%	48%
Year 1	8%	0	8%	3%	13%
Year 0	0	0	0	0	0

The literacy gains since 2003 are impressive; in 2003 only 6% of children finished year 6 with a reading age commensurate with or above their chronological age level, compared with 96% in 2007. With some allowance needing to be made for movement in and out of the school (transience is around 10%), the 96% group in 2007 were the same students who completed year 2 in 2003. As they advanced through the year levels, they steadily gained chronological reading age parity or better with peers nationwide; 13% in year 2- 2003; 25% in year 3 – 2004; 30% in year 4 – 2005; 65% in year 5 – 2006; and 96% in year 6 - 2007. Looking vertically, column by column, the general trend across the school in 2006 and 2007 was for percentages achieving parity to increase as year levels got higher, a pattern of

¹³ PM Benchmarks goes to reading level 15, which equals a reading age of 6. Publishers: Wellington NZ: Nelson Price Milburn

¹⁴ PROBE: Prose Reading Observation, Behaviour and Evaluation of Comprehension http://www.tki.org.nz/r/assessment/two/assess_tools2_e.php

improvement that was not evident in 2003. This would seem to bode well for the future, in terms of students being able to continue to hold their own as they progress through intermediate and secondary schooling and beyond. Tina Voordouw explained that there is a "need for targeted learning every year to keep up the momentum. It distinguishes the families who do a good job at home." She added that an earlier trend for children's literacy performance to 'drop off' after holiday breaks, especially the long Christmas break, is not so marked now, with children doing more reading at home. It is reasonable to expect that the home computers will help maintain an unbroken learning momentum.

As indicated earlier, the Effective Writing Project had its origins in feelings of concern that writing and comprehension were lagging behind, despite demonstrated improvements in reading across the school. It is noted that PROBE incorporates assessment of comprehension. The above 'pre home computer' results are testament to improvements in comprehension, as well as reading. With children's use of home computers for writing, the future looks promising. As indicated by teachers' accounts and the accounts of parents and of children themselves, the children are doing more story writing and other written work because writing on a computer is fun. They are far more eager now to use the classroom computer. I was given a large folder of a range of written work (stories, letters, viewpoints etc) done on computers at home by children from years 1-6. Some examples are included in an appendix immediately following this report. Among the pages are children's letters of thanks to Westpac and the AACT.

A frequent comment from teachers and teacher-aides was that children have become more confident about expressing themselves and are articulating their ideas and questions more clearly during classes and among themselves. Listening has improved. Vocabularies have expanded. An 8 year old was able to gather enough confidence to ask a teaching staff member a question that was indicative of a situation of sexual abuse in the home, enabling early intervention.

The computers give the children a wider learning base. Games included in the open source education software package are a fun way to learn and practise maths and literacy related skills. The music programmes on the computer are helping children to develop their musical talent.

School Attendances/Absenteeism

With increased engagement of parents in the school and parents becoming more actively involved in supporting their children's education, I thought it would be worth looking at 2006 and 2007 attendance figures to compare them with 2004

when Tina Voordouw first arrived. Prior to 2004, attendance records were not kept systematically. The records confirm that attendances have improved and generally, if a child is absent from school, the absence is both explained and justified. I would suggest 3 main reasons, supported by data: a) improved monitoring and absenteeism follow-up processes; b) building trust and understanding with parents; c) children enjoy being at Rongomai School. In the words of a teacher-aide/ parent, "they (the parents) recognise the importance of not missing out on learning." Previously, no breakfast / lunch (no bread in the house) was a reason for parents to feel justified in keeping children home from school. Parents are now more comfortable about telling the school, so the child comes to school and the school provides breakfast and lunch without any 'loss of face' for the child or parent. This has not fostered dependency as *"parents have become more consistent about preparing school lunches"* (teacher aide). Enjoyment of school was evident in the children's stories; school becomes more enjoyable when children feel that they are able to keep up with their class work.

Computers as a Family Activity

The examples of work I was shown and my interviews with parents indicated that parents and other family members are working alongside the Rongomai children on the computers. Sometimes computer use involves more than one child working with the parent; sometimes it is a parent- individual child activity; and sometimes siblings work together, usually with one providing tips or instruction. An example was a brother who is in secondary school explaining a science programme to his younger sibling. In Tina Voordouw's words, "it's like having a great excuse to work together". Some parents have been motivated to take their learning to another level. Some have progressed their computer training through courses at the Manukau Institute of Technology (MIT). Some have enrolled in MIT courses to improve their English.

Children appear to see the computers as belonging more to them than their parents. This came across very clearly when I interviewed the year 5-6 class. Part of the explanation may be that children's affinity for ICT technology means that they quickly become more proficient than their parents in using a wide variety of the computer's features. A type of role reversal ensues, with the children teaching the parents, and possibly the teachers. Being able to teach something new to an older person is affirming of a child's learning identity. I see children's possessiveness of the computers as a positive development for several reasons. As a teacher-aide described it, the children feel 'a pride in ownership' because, for most, their Eee PC is the most significant thing they have ever owned. Understanding 'pride in ownership' may foster a sense of respect for the property of other people. Another implication is that it motivates children take greater care of their computers.

Children are drawn to use the computers because they are fun. They allay boredom, thus helping to lower stress levels in homes during school holidays, especially when the weather is wet. Often the school holiday caregivers are grandparents. They can also reduce stress levels and reduce driver distraction on long car trips, because children who are occupied are less disposed to complaining and fighting. Another comment from a mother was that it's noticeable in her neighbourhood that the computers "keep the children off the streets more."

Skype and the webcam allow for low cost communication, helping to reinforce family connections. Skype facilitates cheap phone calls elsewhere in New Zealand and overseas. Many of the Rongomai children have family in the Pacific Islands and some have family in Australia. At least one family have used the webcam for a family portrait.

Emergence of Leadership

Community leadership has also emerged from the computer training classes. Three parents who were part of the classes subsequently became members of the school's Board of Trustees. Another mother is organising monthly parenting sessions covering the following programme topics: healthy lunches, budgeting, first-aid, drug/ alcohol awareness, positive parenting, coping with puberty, reading and maths activities for families. A walking group of 12 people has emerged out of the parenting classes. Both groups are ongoing.

Children's Comments

In interviewing a class of approximately 20 year 5-6 girls and boys, I was wanting to gauge their response to the computers and find out how they are using them. The comment from one child, "We like everything about it. It makes us feel special" conveys a sense of how much the computers mean to the children. The students were unanimous that the computers are helping their learning. I did not ask specifically about learning activities but they were mentioned most frequently as a favourite activity nonetheless. Direct quotes are italicised.

Features of the computer that they like

The laptop keyboard is right for our fingers.

Wireless internet

*The camera – we use it at home
privacy*

The password – it gives

The size – you can take it wherever you want.

The touch pad

*The plug in head phones
changing these.*

Backgrounds – likes

Extract from "Investing in People"

*The sound recorder- we record our own voices
family overseas*

Skype – can talk to

*Being able to download music
reminders*

Notebook – able to post

Favourite learning activities

Maths games – challenging

Hangman (word game)

Pasting pictures into a story

Fractions and geometry

*Tux Maths and Pics
elements*

The periodic table of

Painting – likes *the grass that sparkles*
emails

Sending and receiving

*I like writing stories...writing about my niece
countries*

Photos from different

*The jumbled letter game
writing words*

Typing games and

*Writing Nana's memories (after her death).
right answer.*

Blows bubbles for the

The dictionary – uses it when writing to look up meanings and spelling

Timetables and maths - getting better at basic facts. The world clock

*The planetarium and it tells us what liquids are made of. It makes me want to
find out more.*

The calculator can go to trillions – more than 100 zeros.

Games (variable learning component)

Potato Guy - that you can decorate with eyes, ears, hats etc.

Solitaire

Sudoku

Penguin races

Playing Music

CONCLUSIONS

1. The Computers in Homes and Effective Writing Project brought together two main strands: a) engaging parents in their children's education and b) giving children tools and increased incentive to work on their literacy. Building a relationship of trust with the local community and establishing a working partnership with parents in the interests of the children were essential precursors to the Computers in Homes and Effective Writing Project. Without this preparation, a well intended initiative was at risk of being misused. The way in which the Project has been administered by the school has further enhanced its relationship of trust with the community.
2. The project got off to an excellent start with thirty parents/primary caregivers completing the training and another seventeen on a waiting list as at April 2008.
3. It is appropriate that operational decisions were/ are in the hands of the Rongomai School Principal and members of the school's Board of Trustees because they know their community best. The school community has ownership of the project and takes the responsibilities entailed very seriously.
4. New information emerged when the project was in its early stages, which resulted in major revisions to the strategy outlined in the funding application to the AACT. The revisions trace back to the evaluator raising questions about the most appropriate software to meet the needs of the Effective Writing project. My concerns related to incurring unnecessary costs for superfluous components. Not long afterwards, the Rongomai School Principal received information through Ministry of Education networks about Eee PCs (very durable mini-laptops), which could be purchased within the funding grant. Following discussions between the Principal and the AACT Administrator, 100 Eee PCs complete with open source software were purchased. They were subsequently distributed to families, in compliance with conditions set out in the funding application. Substantial extra benefits have resulted from what could be considered a serendipitous turn of events.
5. The Eee PCs come equipped with wireless internet, email, web browser, file manager and accessories, Skype complete with built-in web cam and microphone, and open source software encompassing word processing, PDF

reader, paint, spread-sheets, typing tutor, photo manager, virus protection and fun programmes for literacy, maths and science. The 'minimum, non-recurring costs to families' aspect is important to project sustainability. The children and families seem to be using all of the programmes.

6. The USB flash drives constitute a simple method for work done at home to be brought to school and for assignment work to be taken from school to home. Families don't need to own a printer as printing can be done at school.
7. Literacy gains at Rongomai School since 2003 are impressive; in 2003 only 6% of children finished year 6 with a reading age commensurate with or above their chronological age level, compared with 96% in 2007. Improved standards of writing and comprehension are reflected in the 2007 figures. It is reasonable to assume that home computers will help reinforce these gains.
8. A trend evident across the school in 2006 and 2007 for percentages achieving parity to increase as year levels increase bodes well for the future, in terms of students being able to continue to hold their own as they progress through higher levels of education.
9. Children have become more confident about expressing themselves and are articulating their ideas and questions more clearly during classes and among themselves. Listening has improved. Vocabularies have expanded. Home computers are a contributing but not the sole explanation.
10. Parents and other family members are working alongside children on the computers. Sometimes computer use involves more than one child working with the parent; sometimes it is a parent- individual child activity; and sometimes siblings work together, often with one providing tips or instruction.
11. Records confirm that attendances have improved. A contributing factor is increased trust and understanding with parents. In the words of a teacher-aide/ parent, "they (the parents) recognise the importance of not missing out on learning." Also, school becomes more enjoyable when children feel they are not falling behind in their learning.
12. Some of the parents/primary caregivers who completed the basic computer training at Rongomai have progressed their computer training through courses at the Manukau Institute of Technology (MIT). Some have enrolled in MIT courses to improve their English.

13. Children's affinity for ICT technology means that they can quickly become more proficient than their parents in using a wide variety of the computer's features. A type of role reversal ensues, with the children teaching the parents, and possibly the teachers. Being able to teach something new to an older person is affirming of a child's learning identity.
14. Children appear to see the computers as belonging more to them than their parents. Children's possessiveness of the computers can be seen as a positive development for several reasons. The children feel 'pride in ownership' because, for most, their Eee PC is the most significant material possession they have ever owned. Understanding 'pride in ownership' may foster a sense of respect for the property of other people. Another implication is that it motivates children to take greater care of their computers.
15. Children are drawn to leisure time use of the computers because they provide entertainment. In allaying boredom, they help to lower stress levels in homes during school holidays (as long as the children aren't fighting over the computer!). They can also reduce stress levels and reduce driver distraction on long car trips. Another comment from a mother was that it's noticeable in her neighbourhood that the computers "keep the children off the streets more."
16. Skype and the webcam allow for low cost communication, helping to reinforce family connections. Many of the Rongomai children have family members in the Pacific Islands and elsewhere overseas. At least one family have used the webcam for a family portrait.
17. Community leaders have emerged from the computer training classes. Three parents who were part of the classes subsequently became members of the school's Board of Trustees. Another mother now organises monthly parenting sessions, which have in turn led to the formation of a walking group of 12 people.
18. Work being done by Mike Usmar and the Computer Clubhouse Trust gives cause for optimism about the continuity of the Computers in Homes-Effective Writing project well into the future. In October 2008 all Otago schools will be invited to forward their proposals. As well as linking Otago schools into a wireless network and putting mini laptop computers in homes, it will offer professional development for teachers to incorporate personal laptops as a learning tool. Mike Usmar's project would appear to offer excellent opportunities for Rongomai School.

19. The children of Rongomai School have asked me to convey their special thanks to the AACT for a gift that means so much to them. Letters of thanks to the AACT are among written work they have done on the computers.

20. It is most fitting that the children themselves should have the last word. The comment from one child, "We like everything about it. It makes us feel special" conveys a sense of how much the computers mean to the children. The students were unanimous that the computers are helping their learning. I was amazed at the range of features they are using. The computers are adding a fun element to learning and to 'homework' in its broadest sense.

Tyndale Park Christian School Trust: Phonics Based Literacy & Vocabulary Enrichment and Extension Programmes

INTRODUCTION

Tyndale Park Christian School is a year 1-13 school with an enrolment of approximately 120 students from 80 families. It is located on Murphys Road, Flatbush amidst farmland. The school's website states as follows:

Tyndale Park Christian School Auckland (Manukau) offers an education that supports the faith and practice of the Christian home. Our school offers a Christian primary school, Christian intermediate school and Christian secondary school. From year 1 to high school, your child will find a supportive and academic home...Our curriculum is based on Christian principles. We offer small class sizes and emphasise the three Rs: reading, writing and arithmetic. Children in our school learn to read in one year using a phonetics based program.¹

Enrolment is not restricted to families who identify as Christian, but every student is required to participate in all aspects of the curriculum, which includes Bible studies. Twenty five percent of the families live locally. Others come from as far away as Mangere, Maraetai and Drury². School staff do not consider their families affluent; most make sacrifices to send their children to the school. Fees information is publicly available on the website. The school has developed over a 27 year time span, beginning with land and building materials for three classrooms bequeathed for the purposes of establishing a Christian school.

As an independent, non-integrated school, their state funding is minimal. There is a commitment to Literacy learning and "tried and true" phonetic teaching methods. This school does not have a Principal, but it has a School Manager who is responsible for the operation of the school and a Head Teacher who is responsible for monitoring the academic performance in the school.

The senior high school (Grades 11 and above) is offered the A.C.E. programme. Accelerated Christian Education is a complete package of individualized curriculum material, covering all grade levels from preschool through Year 13 and beyond. Each subject is presented in a series of self-instructional workbooks, called PACEs (Packets of Accelerated Christian Education), progressively graduated so that new concepts and truths build upon previously mastered ones. Some courses employ video sessions to enhance the learning process whilst others are supplemented with computer software programmes. The school's reasons for choosing the ACE system in preference to others included: a) Biblical world view; b) fits within the vision for Christian Education at Tyndale Park Christian School c)

¹ www.tyndalepark.school.nz

² Information supplied by Tyndale Park Christian School

ability to integrate with existing Tyndale curriculum d) the qualifications gained in the programme are recognized for entrance to Universities and Technical Institutes.³

PROGRAMME RATIONALE AND GOALS

As a Christian school in name and focus, helping children to achieve literacy is a priority at Tyndale Park Christian School. God has provided a written word in the form of the Bible. Being able to access and understand the Bible requires a defined minimum standard of literacy. Beyond being a Christian school, a feature of Tyndale Park Christian School that further distinguishes it from most mainstream schools, and one that is directly relevant to the present context, is a resolute dedication to phonics methods for teaching literacy.

The school funding application to the AACT was for purposes of replacing worn out reading sets and library books, and adding improved, up to date resources seen as more effective for advancing the school's literacy programme across the school. Dictionaries and thesauruses, the subject of the 2007 funding application, were regarded as important supplements.

The following information regarding aims and objectives and projected outcomes is extracted from the school's 2006 and 2007 funding applications.

2006 Programme Title: Phonics Based Literacy Programme

Aims:

- To advance the students' God-given abilities in literacy;
- To advance students' reading writing, listening, comprehension and speaking skills using a systematic co-ordinated approach;
- To enable the students to develop competency in all areas of their education.

Objectives:

- Improvement in reading, writing, listening, comprehension and speaking skills of all pupils, especially the weaker students, through group reading cells and tutoring;
- Accuracy fluency and creativeness in reading and writing.
- An enjoyment and enthusiasm for reading and writing.

Projected Outcomes

³ <http://www.tyndalepark.school.nz/christian-secondary-school-ace-courses> and information provided by the school.

- At the end of grade 1 year, the goal is for the student to read independently and fluently and write full sentences correctly.
- In the middleclasses from grade 2 to 8, the goal is for students to build on this foundation and further develop the skills necessary for the objectives listed above.
- In the senior classes, grades 9-13, the goal is for academic success for each pupil in the study programme he/she has embarked upon including ACE programme for grades 11-13.

2007 Programme Title: Vocabulary Enrichment and Extension Programme

Aims and Objectives:

- To supplement the resources obtained through the grant received in 2006;
- To enhance the opportunities for students to enrich their vocabulary and validate their choices for spelling;
- To update and increase the range of dictionaries students will have access to.

Projected Outcomes:

Improved levels in PRETOS and reading vocabulary results. (grade 1-10 pupils).

Items Purchased with AACT 2006-2007 Grants

2006 Grant Amount: \$8055-00

- Phonics teaching resources for grades 2 to 10 inclusive.
- Library books for grade 1-13 children. Literature books for the ACE programme grades 9-13.

2007 Grant Amount: \$2720-00

- an updated range of dictionaries appropriate to the different levels of students.
- 25 thesauruses for grades 7-10 students.

DATA SOURCES

- 1) Ms Janis McArdle, AACT Trust Administrator, and I visited Tyndale Park Christian School in December 2007 and met with the School Manager. The purpose of the meeting was to explain the rationale for the evaluation, what it would involve, and face-to-face introductions.
- 2) Computer assisted literature for information on Phonics and Whole Language teaching methods.
- 3) The school's November 2007 report to the AACT, including children's accounts of AACT funded books they like.
- 4) Extended interview with the Head Teacher who is also the grade 9-10 teacher.
- 5) School holiday time visit to all classrooms, library, computer room and science lab. The visit provided an opportunity to look at the books, dictionaries and thesauruses purchased with funding from the AACT, as well as children's work, especially primary school level.
- 6) Return visit to spend half an hour in all of the classrooms, new entrant to secondary, observing English/Literacy teaching and use of books funded by the AACT. The class teachers adjusted their programme so that English/Literacy teaching was timed to fit with my visit. I was able to speak briefly with some of the teachers.
- 7) Assessment data in the form of Progressive Achievement Test (PAT), accompanied by a PAT Teachers Manual, and PRETOS (spelling test) results.
- 8) Written case study information provided by the Head Teacher for one student.

Request to Interview Parents

I requested to interview 6 parents, either in 2 groups of three, or individually if requested, at a time to suit them. I was particularly interested in interviewing parents who had transferred their children to Tyndale Park from another school. The underpinning rationale was to ascertain whether the parents felt Tyndale Park Christian School offered extra benefits with respect to literacy teaching that their child's previous school did not, and exploring that further. The information was seen as an important supplement to information from teachers. An undertaking was given that names of students and parents would remain anonymous in my reporting. My request was referred to the school's Board of Trustees. I subsequently received a letter advising that the request had been declined, stating the reason: *"As it is not our policy to have outside agencies interviewing parents we are not able to assist you in this matter"*.

Evaluation is a form of research. As such it has to meet standards of methodological rigor if conclusions are to have validity. Multiple methods and triangulation of observations contribute to methodological rigor.⁴ The logic of triangulation is based on the premise that:

*No single method ever adequately solves the problem of rival causal factors...Because each method reveals different aspects of empirical reality, multiple methods of observation must be employed. This is termed triangulation.*⁵

The present evaluation achieved a degree of methodological triangulation through use of classroom observations, interviews with teachers, a case study supplied by a teacher and some quantitative test results. Notwithstanding, the research fell short with respect to data source triangulation, in having to rely too heavily on information from one source: i.e. teachers. This is not to imply an undervaluing of the opportunities offered by the teaching staff or to suggest in any way that the teachers were distorting information – quite the contrary. All school staff were very hospitable and helpful. Special thanks are given to the Head Teacher who was most helpful and generous with her time. The point is that people have different perspectives on, insights into, and knowledge of the same subject or event. Evaluation research gains richness and validity when it incorporates multiple knowledge sources and perspectives. Teachers know things about the children they teach that parents don't know. Equally, parents know things about their children that teachers will never know. Even when there is shared knowledge, perceptions and interpretations will vary. Parents are major stakeholders in their children's education.

⁴ Patton MQ (1987). *Qualitative Evaluation Methods*. Beverly Hills: Sage.

⁵ Denzin NK (1978) *Sociological Methods: A Sourcebook*. New York: McGraw Hill. Cited in MQ Patton (1987) *Qualitative Evaluation Methods*. Beverly Hills: Sage.

LITERATURE REVIEW: PHONICS AND WHOLE LANGUAGE METHODS OF LITERACY TEACHING

Despite having “a very homogeneous education system with a uniform approach to reading instruction and intervention”⁶, New Zealand surveys show large disparities in literacy achievement in schools. While this observation dates back to a report written in 2002, the report’s authors are no less concerned in 2008 that disparities in literacy achievement appear not to have been significantly impacted by literacy teaching and remedial strategies. At the heart of the present evaluation are issues around the adequacy of Ministry of Education literacy teaching and intervention strategies in mainstream schools. Specifically, are the strategies broad enough to cater to the needs of children from diverse social backgrounds, who vary hugely in reading related knowledge and skills at school entry? This is a key question in assessing the contribution of the phonics teaching methods at Tyndale Park Christian School.

The Whole Language (WL) reading strategy that prevails within New Zealand state schools directs children to place emphasis on sentence contextual cues (guessing) rather than letter sound (phonics) strategies⁷.

*The focus of (the Whole Language) approach is on learning to read by reading, with minimal attention being given to the development of essential word level skills and strategies. Instead, beginning readers are urged to use preceding passage content, sentence context cues, and picture cues as the primary strategies for identifying unfamiliar words in text.*³²

Reading Recovery constitutes the main thrust of the NZ Ministry of Education for reducing reading failure in schools. It is an early intervention strategy developed by Dr. Marie Clay (Auckland University) as a supplement to Whole Language Reading strategies, to help children who continue to demonstrate difficulties in learning to read after a year of formal reading instruction. Children selected for Reading Recovery are provided with 30-40 minutes “daily one-to one pull-out (i.e. from class) instruction” over a period of between 12 and 20 weeks by a specially trained Reading Recovery tutor.”⁸ Reading Recovery is essentially a more intensive version of what occurs in regular New Zealand classrooms.⁹

Research by Massey University’s Dept. of Learning and Teaching Professor William E Tunmer and colleagues¹⁰, indicates that, while children with an abundance of literature cultural capital at school

⁶ Tunmer WE, Chapman JW, Prochnow JE. (2002). Preventing negative Matthew Effects in at-risk readers: a retrospective study. Massey University. Final phase 1V report to the Ministry of Education, Wellington NZ.

⁷ Bill Carlson. (2007). Reading Recovery: Just the Facts? AVKO Educational Research Foundation www.avko.org/Essays/reading_recovery.htm

⁸ Tunmer WE, Chapman JW, (2004?) Reading Recovery: distinguishing myth from reality. Massey University.

⁹ Thompson GB (1993) Reading instruction for the initial years in New Zealand schools. In GE Thompson, WE Tunmer & T. Nicholson (Eds.) Reading Acquisition Processes. Clevedon UK: Multilingual Matters.

¹⁰ Tunmer WE, Chapman JW, Prochnow JE. (2002). Preventing negative Matthew Effects in at-risk readers: a retrospective study. Massey University. Final phase 1V report to the Ministry of Education, Wellington NZ.

entry tend to respond well to Whole Language teaching methods, the same methods discriminate against 20-25% of NZ school children. Reading Recovery is not succeeding in lifting the poorest readers to class average, fuelling a negative Matthew Effect (the poor get poorer). Social class differences in home literacy environment underpin essential reading-related skills and knowledge at school entry.

The research highlights major shortcomings of Reading Recovery in terms of a) not adequately addressing deficiencies in phonological awareness and b) inadequacies in teacher training/ professional development to sustain and reinforce gains made during Reading Recovery following return to regular classroom learning. In a recent Radio NZ Nine to Noon interview (June 2008)¹¹, Professor Tunmer reiterated the same concerns, i.e. 2001- 2006 data show that “the gap between good readers and those who are struggling is large and persistent”. Reading Recovery is not working for students who are most at risk of not learning to read. Moreover, “teachers colleges are not properly preparing teachers for the range of literacy challenges they encounter in schools.” Mary Chamberlain, who was part of the same interview, offered reassurances that professional development issues are being addressed by the Ministry of Education.

NOTE:

I made some inquiries of Principals and Associate Principals (APs) of decile 1 schools in Papatoetoe, Otara and Manurewa, using my own networks. Their comments were indicative of an eclectic approach to Literacy teaching. Many families have no vision of engendering a better future for their children. Principals and teachers in these schools have learned to make things happen through being resourceful. In the words of one AP, “we use whatever works”. Schools are using a range of programmes, some involving phonics, others not. An oral language programme, e.g. ‘Talk to Learn’, is the starting point for some schools, before embarking on reading and writing. Common themes were children commencing school with little understanding of letter names and letter sounds and lacking basic skills and strategies. This is partly a reflection of the large percentage who have not participated in pre-school education (around 80% for one school). There is variation in availability of kindergartens and pre-schools with trained Early Childhood Education teachers. For instance, a school whose children are from the most socio-economically disadvantaged families has no kindergarten in the vicinity.

It may be that higher decile schools are more disposed to Whole Language methods. Verifying this was beyond the scope of the present evaluation.

¹¹ Radio NZ Nine to Noon Kathryn Ryan 4/6/08 interview with Professor Wm Tunmer & Mary Chamberlain, Ministry of Education Group Manager for Curriculum Ed and Learning - 28 minute audio www.radionz.co.nz.

USE OF THE LITERACY RESOURCES

There are 2 levels or grades in each class at Tyndale Park Christian School. Children do not move from grade 1 for Literacy teaching until they are able to read.

All classrooms have shared in the resources purchased with the AACT funding. Class sets and study guides purchased for use in grade 1-10 classrooms were chosen to facilitate literacy teaching using a phonics method. Once children have mastered phonics fundamentals at grade 1, Christian principles are embedded in the stories. For example, I observed use of a grade 2 reader, which prompted a simple discussion of feeling left out. 'Work ethic' was the subject of a reader entitled "Mr Toil" used with a year 5-6 class. Book titles chosen for years 9-13 were from the ACE curriculum list. Some of the themes I noted were truth and wisdom, courage and being willing to take a stand, 'success' in Christian terms, humility, justice, temperance, beauty, joy and peace, faith and hope, love, time and eternity.

All children have a dictionary on their desk. They are age grade appropriate, beginning with 'Jolly (picture) dictionaries' for grade 1. Children are encouraged to use the dictionaries and thesauruses (grade 7 and above). A point of interest for me was the inclusion in grade 2 readers of words with which children would not be familiar, but which they were able to read by sounding out, e.g. retorted, retreated, parakeet, clambered.

As well as class sets, each classroom has a small mini- library of books appropriate to the grade level. I noted that some of the books being used in the school are old and showing their age.

OUTCOMES

Quantitative assessments of achievement were derived from 2008 Progressive Achievement Testing and PRETOS. Progressive Achievement Tests are intended primarily to assist classroom teachers to make decisions about the kinds of teaching materials, methods and programmes most suitable to their students.¹² They provide information “to assist classroom teachers in determining the levels of development attained by their students in the basic skills of reading comprehension and the use of vocabulary”.¹³ The proof reading tests of spelling (PRETOS) devised for children aged 8-13 are broad measures of a child’s ability to discriminate between misspelt words and correctly spelt words. Presented in the context of meaningful paragraphs, the tests provide a measure of spelling achievement within the context of a proof-reading task, as well as giving diagnostic information about individual pupils’ spelling accomplishments. The abilities tapped by PRETOS are broader than those associated with the traditional assessment of spelling.¹⁴

Progressive Achievement Test Results

Results obtained from Progressive Achievement Tests “are converted first into ten levels of achievement....These level scores can then be converted into age percentile rank norms (which) indicate the relative position of each child when compared with a nationally representative group of similar age.”¹⁵

Tyndale Park Christian School provided April 2008 PAT age percentile results for 69 grade 4-10 students. Results for reading comprehension showed that 64% of the students were equal to or above the national median. Of that 64%, a high proportion (77%) were in the top one third. PAT age percentile results for reading vocabulary for the same group showed that 61% achieved equal to or better than the median. Of that 61%, 64% were in the top one third.

With respect to reading comprehension and reading vocabulary, just under half of students who were below the median (44% and 48% respectively) had been at Tyndale Park Christian School for one year or less. Around a quarter of students who were above the median (23% and 29% respectively) had been at Tyndale Park Christian School for 1 year or less. Some commenced in January 2008 or more recently. Some of the lower percentile rankings were for children from non-English speaking backgrounds. New students (i.e. 1 year or less) were most numerous in grades 9 and 10, due a transfer in of students from another Christian school which closed its secondary teaching unit.

¹² Reid NA, Elley WB. (undated). Progressive Achievement Tests of Reading: Teachers Manual.

¹³ *ibid*

¹⁴ www.nzcer.org.nz/default.php?products_id=415

¹⁵ Reid NA, Elley WB. (undated). Progressive Achievement Tests of Reading: Teachers Manual.

PRETOS Results

The tests are devised to provide both recognition and production scores. The recognition score is a measure of the ability to recognise misspelt words. The production score is a measure of the child's ability to spell a word correctly, having recognised it as an error. Scoring is in percentiles based on a normative sample.

The school provided PRETOS recognition and production results for 42 grade 4-8 students, 2 of which I excluded because they were for students who were new to the school. 90% of the 40 remaining students (36/40) were above the median for recognition and 92.5% (37/40) were above the median for production. These are excellent results.

Case Study

A case study provided by the school showing gains made by an individual student from a non-English speaking background is not included for reasons of maintaining confidentiality.

Classroom Observations

My main conclusion from observations was that Phonics teaching methods give students a set of tools for reading. Often students are presented with words that are quite new to them and they vocalize them correctly. This was particularly noticeable in the case of grades 1-4 children. At the same time children are made aware that, while the phonics tools apply most of the time, some words are exceptions and have to be memorised. Students are encouraged to use their dictionaries, which are within easy reach on their desks.

Summary

The results indicate a high success rate at Tyndale Park Christian School in assisting children to read, comprehend and spell at their chronological age level or better. It is of interest that, for both reading comprehension and reading vocabulary, almost half of the students with a percentile ranking below the national median had been at Tyndale Park Christian School for less than a year. It is not known whether students who had been at Tyndale Park Christian School for 1 year or less had any exposure to phonics teaching methods in their previous schools.

A question that was of particular interest was whether students in general were advantaged by the phonics method of literacy teaching at the school. PAT scores on their own did not justify any conclusions on that question. For example, the same PAT score may represent excellent achievement for one student, but poor achievement for another who is not being extended. If a school population is achieving at a high level, it is always for a combination of reasons. At Tyndale Park Christian School, possible contributing factors might be that parents are actively supporting and enhancing their children's learning, that the children have superior study and homework habits, or possibly the school is attracting higher ability children, etc. The mere fact that parents are willing to make sacrifices to pay for their children's education suggests that parental interest and support is true of children at Tyndale

Park Christian School. And most certainly there is an emphasis on work ethic, which could be expected to foster good study and homework habits. Something that was evident from my classroom observations and children's accounts of books they like was that reading is an enjoyable activity for most, if not all of these children.

PAT scores show that Phonics teaching methods are working, but whether Phonics teaching methods are opening doors that would otherwise remain unopened, it is impossible to say. Interviews with parents of children who had been in schools which rely on Whole Language methods of literacy teaching would have provided a more complete picture.

The PRETOS results for spelling were more persuasive evidence of the merits of phonics teaching methods because achievement was at such a high level. Undoubtedly, children's use of dictionaries also contributed to the very commendable spelling results. The fact that children made good use of their dictionaries was a reflection of teachers' active encouragement of dictionary use, their insistence on correct spelling and not settling for less, and each child having a dictionary within arm's reach.

CONCLUSIONS

At Tyndale Park Christian School, there is a very strong emphasis on building sound foundations in the basics. As well as offering a Christian education, a feature of Tyndale Park Christian School that further distinguishes it from most mainstream schools is a resolute dedication to phonics methods for teaching literacy. A successful 2006 funding application to the AACT made possible the replacement of worn out reading sets and library books and the addition of improved, up to date resources seen as more effective for advancing the school's literacy programme across the school. In 2007 AACT funded dictionaries and thesauruses enabled all children at the school to have an age appropriate dictionary on their desk and access to a thesaurus. One to two years on, it is clear that these resources are valued and are being well cared for.

Results derived from NZCER¹⁶ validated assessment tools indicate a high success rate at Tyndale Park Christian School in assisting children to read, comprehend and spell at their chronological age level or better. In the absence of other information about the children, it was not possible to arrive at any conclusions from PAT results about whether or not they were advantaged by the phonics method of literacy teaching at the school. The PRETOS results for spelling were more persuasive evidence of the merits of phonics teaching methods because achievement was at such a high level. Undoubtedly, children's use of dictionaries also contributed to the very commendable spelling results. The fact that children made good use of their dictionaries was a reflection of teacher's active encouragement of dictionary use, their insistence on correct spelling and not settling for less, and each child having a dictionary within arm's reach.

The Auckland Airport Community Trust receives funding each year from Auckland International Airport Limited and distributes these funds by way of an annual contestable grants distribution process. To date the Trust has allocated \$1.25 million and it was the view of the Trustees that it was timely for processes for the distribution of grants to be independently evaluated. One of the tasks of the evaluation was to explore impacts of the AACT's funding decisions, not only on direct beneficiaries, but upon the wider community. Interest in wider community benefits was a reflection of the AACT's perception of its accountability to the general public and obligation to be open and transparent in making funding decisions.

Tyndale Park Christian School's resolute faith in phonics methods for teaching literacy, translated into practice, emerged early in the evaluation as an area where Tyndale Park Christian School was ostensibly filling a gap that existed in a community where Whole Language teaching methods held sway. Teachers offered anecdotal accounts of parents who had removed their children from other schools and enrolled them at Tyndale Park Christian School for that very reason. Unfortunately, it was not possible to explore the teachers' claims by interviewing parents. Parents would have been commenting from a different perspective and knowledge base of their child. Most importantly, parents are major stakeholders in their children's education. From my own professional perspective,

¹⁶ New Zealand Council for Educational Research

triangulation of data sources is a criterion for 'good' evaluation research. Despite an offer from the AACT Administrator and the evaluator to meet with them and discuss concerns (this was not taken up), the school's Trust Board adhered to its policy of "not allowing outside agencies to interview parents." The wishes of the school were respected. Consequently, while there can be little doubt that children at Tyndale Park School derived, and are still deriving benefit as direct beneficiaries of the AACT's funding grants in 2006 and 2007, there was not sufficient evidence to reach any conclusions about the contribution that Tyndale Park Christian School is making to the wider community through its methods of teaching literacy.

