DE LA SALLE COLLEGE: TECHNO-LITERACY PROJECT

INTRODUCTION

De La Salle College is an integrated Catholic year 7-13 decile 1[1] 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 enrolees 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 Programme[3], questioning skills and literacy skills, and working in partnership with Pacific Effective Learning Team Solutions (Ministry of Education) the Literacy Centre deliverers 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

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[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 provides 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

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[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 life[10]. 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.

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[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]

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[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 asTTle[21]. 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.