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BACKGROUND TO THE LITERACY AND NUMERACY EMPOWERMENT (LANE) PROJECT

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1. Background to LANE

In a 2005 release to schools on Working and Growing together, the New Zealand Prime Minister Helen Clark wrote “Christchurch is a vibrant exciting city with a lot going for it, thanks in no small part to the hard work of people like you. Our community forums are about helping communities achieve their goals through direct communication with central government.”

Also included in the above document: Government Community Forum 3 on Education states “We’re working hard to raise student achievement and education standards. We have: Invested heavily in reading, writing and maths. We’ll spend close to \$43 million this year on targeted reading and writing programmes and another \$12 million on targeted maths initiatives”.

However, despite the above initiatives, this funding is targeted towards a narrow group of students and many others will not receive any benefit from this extra funding.

In his address to the inaugural Council Meeting on 27th October 2004, Mayor Garry Moore said “Let me turn now to the matter of a Sustainable Community. This is something we do well. This is something which doesn’t happen by chance. We all have to work on it. Every person who watches a sporting event, goes to the library, attends a festival, walks in the hills with a friend, visits a friend, takes their kids to a park or for a swim all add to this being a sustainable community.

I’d like to give the young and the old some new guarantees.

To our young people I’d like to guarantee that:

If you look at our prisons and at those who are not in high paid jobs often the issue is that these people cannot read and count properly. I’d like to give another guarantee to our kids that in this city they will get to certain levels of literacy and numeracy. If you can read and count then you’ve got a very good start in life. This, however, cannot be undertaken by our schools on their own. There are squads of retired people out there who could really spend some of their time teaching one of our future ratepayers how to read or count.

I consider that an early task for our city to adopt is to accept the sort of target which has been set by the Mayor’s Taskforce for Jobs that one of our society goals must be that everybody in our city under 25 is doing something. This means that all of our young people will either be in work, or, in training. This target on its own will stimulate our economy. As employers complain that they cannot get good labour as a city we must ensure that our young people are getting the jobs which are already there.”

There is a great deal of anecdotal evidence about the abilities, or lack of, of our youth. For Christchurch we need to find out what the problems are. Young people with these problems will probably fall into one or more of three categories – never been taught or learnt, not enough teaching to enable skill retention, or unable to be taught through mental or physical or emotional conditions. The education system can identify and perhaps deal with those in its care, but we all know that schools never have enough staff, funding or time to support all

students' individual needs. Other Government agencies appear to be stretched or just not coping. The youth that don't fit into those categories, and those who do, need extra support to reach the literacy and numeracy benchmarks that society demands to enable them to be a positive contributor to our great city.

The LANE Project was started in 2005 with funding from the Wayne Francis Charitable Trust.

LANE Project

The project was to set up scope the problem of youth literacy and numeracy competency, and investigate strategies to enable the City guarantee to be fulfilled.

It would start with no preconceived parameters and encompass as many potential types of youth as possible; from reluctant learners to truants to the more disadvantaged categories, as outlined above.

Questions to be looked at could include;

- What levels of competency does society require our youth to achieve?
- What are the problems with respect to the levels of competency in literacy and numeracy in Christchurch youth?
- What best practice / research exist as support programmes around NZ and the world to address these problems?
- What commercial products and support networks exist in Christchurch?
- What are possible effective ways to deal to these problems for Christchurch?
- Is there one possible solution or is it complex enough that it requires alternative programmes for different situations?
- What resources can Christchurch tap into to enable a pilot programme to proceed?
- What community resources can be utilised both in plant and human resources?
- How can we coordinate different agencies to work together?

Scoping on several wide ranging fields including an extensive literature search on literacy and numeracy review was carried out. During 2005 the research showed the importance of removing barriers to learning before pedagogical solutions to diagnoses were implemented. (1). Medical barriers to learning was one area where dramatic change could be affected, but it was necessary to see what the size of the potential problem was. A pilot scheme at Linwood College was devised which included a Health and Wellbeing Stocktake of students.

Linwood College was deemed to have the expertise, support and infrastructure to mount such a pilot.

This resulted in a recommendation to the Wayne Francis Charitable Trust that LANE provide a complete medical assessment of all the year 9 and year 10 students, examining ears, eyes, nose and throat, teeth. This will give factual evidence to back what is currently being observed.

Treatment can then be offered to correct any problems found. This needs to be standardized and performed by medical experts under medical ethics conditions to ensure the robust nature of the research. The rest of this report focuses on that project.

LINWOOD COLLEGE

HEALTH AND WELLBEING

STOCKTAKE 2005

Prepared By Alan Parris

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1 Background

Concern had been expressed by the Linwood College Nurse, counsellors and the visiting doctor over the known health records that are forwarded to the College from the students previous school. This information did not seem to match what was being seen during consultations by the school medical professionals. These medical conditions are known from research to pose a barrier to learning and it would appear that referrals for treatment are at an unacceptable level and actually obtaining treatment was at a low level. (1)

The LANE Project had identified barriers to learning as a major concern and there was a need to investigate further to gather actual evidence.

In order to facilitate a proposal a number of reports are needed to support its recommendations.

Primary records are examined and compared with a survey of students' perceptions of their health status.

Counselling details are compiled.

Dental health survey is analyzed.

Research on severe reading disabilities at Linwood is reviewed.

This report combines all of these and has a recommendation for further research.

2 Primary Schools Medical Records of present Year 9 and 10 students

Each student arriving at Linwood College has an enrolment record card, MoE number E19/22A, from their Primary or Intermediate school that has information about that student from their time at school. Linwood College examined all of the cards that were forwarded to the College and collated the notes referring to health issues to them in the following categories.

Year 9 Students	182	Year 10 Students	192
Eyes	11 6%	29 15%	
Hearing	7 3%	7 3.5%	
Throat etc	5 2.5%	5 2.5%	
Speech	1 0.5%	2 1.5%	
Other eg Asthma	14 7%	3 1.5%	

Total medical conditions reported

Year 9 48 out of possible 248 with only 182 cards filed at school - ie 19.3% reported medical condition and 26.6% of cards not filed.

Year 10 46 out of possible 250 with only 192 cards filed at school.- ie 18.4% reported medical condition and 23.2 % of cards not filed.

The school suspected that this information was lacking in accuracy as it did not align with the information gathered by the student visits to the Health Centre at school and what our school Nurse, visiting weekly Doctor and Physiotherapist were seeing and reporting to the school administration.

Accordingly a one-minute survey of Linwood College students and parents was conducted to see what responses they would give of themselves regarding their perceived health status.

3. Year 9 and Year 10 1 minute survey

1. Do you have any difficulty reading notices, blackboard, street signs or books?
2. Have you ever been tested and needed glasses and has this not been followed up?
3. Have you had contacts/glasses and lost or broken them and they have not been replaced?
4. Have you had grommets or glue ear as a child?
5. Have you ever had your hearing tested and it was considered lower than normal?
6. Do you or your family think you may have some hearing loss?
7. Do you have any problem speaking or hearing some words or letters?
8. Do you get headaches after reading or watching TV/ computer screen / Xbox?
9. Do you or anyone complain that you snore, sound nasally when you breathe or get frequent tonsillitis eg more than 2 times a year?
10. Are you a wonderful person for filling this in.?

Results from the One Minute Survey

Total Year 9 Pupils	Total Year 10 Pupils	Total Returns	%
248	250	290	58%
	Yes	No	% Yes
Question One	47	243	16
Question Two	35	265	12
Question Three	23	267	8
Question Four	51	239	18
Question Five	34	256	12
Question Six	41	249	14
Question Seven	52	238	18
Question Eight	88	202	30
Question Nine	55	235	19

Comparing the two sets of data raises some serious issues regarding the testing and recording of student information and the tracking of such information.

Of concern was the fact that of the 47 who were identified as having some need of eye treatment, 35 had NOT followed this up. ie 74.4% had done nothing.

Double the number of year 10 students identified they had a problem with eyesight compared to year 9 students.

50% of students who had glasses or contacts had them broken and had not had them fixed.

30% of students complained of headaches etc when watching a TV screen

4. Students Accessing Counselling at School

Statistics/Trends

Analysis of Client Contacts (Individual Clients)	1996	1997	1998	1999	2000	2001	2002	2004	2004
Clinical Psychiatric)								Yr 9 153
Personal/Family)								Yr10 175
Relationships/sexual/peer/teachers)								
Drug/alcohol)								
Health and safety/care and protection	320	340	420	500	399	325	371	439	328
Mediation/bullying/harassment)								
Financial)								
Referrals)								
Psychiatric problems requiring referral	46	36	21	30	18	13	28	50	
Referrals to YES on site programme		10	12	7	10	8	11	6	
Opportunity Room	88	83	73	97	88	76	93	97	
(Some are not included in total above)									
Maori and Pacific Island students	51	86	110	134	106	83	80	139	
Student Welfare requests	148	180	176	181		98			

This analysis does not include casual contacts or enquires

Client Contacts 2004

Similar pattern to previous year

Analysis of Client Contacts (Individual Clients)

- Very high numbers again

- Year 9-10 more likely to self refer than senior students
- Increase in adult and academy referrals - (See letter from Arts Academy Appendices)
- High numbers of Maori and Pacifica

Students

- Increased referrals by junior teachers. The change back to a horizontal form system allows form teachers to have greater involvement.
- Significant increase in self referrals in regard to students who report feeling unsafe at school (see Health & Safety - bullying)
- Increase in disclosures of abuse

**Breakdown of 2004 figures re Client Contact.
Note: Majority of clients are from the Junior School. .
This would be true of previous years records

5. Report of Adolescent Dental Attendance at Linwood College and other related areas

The Ministry of Health commissioned a report on Adolescent Dental Attendance in Eastern Christchurch

All teenagers aged between 13 to 17 years of age are eligible to receive free basic dental treatment from a private dentist on annual basis until they turn 18 years of age. Despite the availability of this service, utilization has decreased. The present sample was gathered from East Christchurch, which is characterized as high health needs, and with a large proportion of Maori and Pacific Island residents. Results indicated that Maori and Pacific Island adolescents were disproportionately represented when compared to New Zealand Europeans, as not attending the dentist within 2-3 years and or since primary or intermediate, 38%, 48% and 22% respectively.

It is proposed that an estimated 541 students from Linwood College and Aranui High do not receive adequate dental treatment on a regular basis.

Results by ethnicity

Twenty five percent of New Zealand Europeans, 43% Maori, 57% of Pacific Island and 32% of Others report not having received dental treatment within 2 – 3 years and or since primary or intermediate.

Report compiled by Karen Cretney, School Social Worker

6 SEVERE READING DISABILITIES AT LINWOOD COLLEGE.

In 2001 Linwood College identified a significant number of severely disabled reading students, compared to previous years and other schools based on Ministry of Education March 1st returns. Judy Kirk came to Linwood College to work with the existing reading recovery team so that she could work with them on this.

The students chosen had a range of problems including dyslexia and SLD.

She did a year-long case study on six identified students and completed a thesis (2001) on them. (2).

(2) Judy Ann Kirk, "Student 'belief effects' in remedial reading", Canterbury University 2001

Word Recognition Strategies and Difficulties for Severely Reading Disabled Adolescents.

Dr Judy A. Kirk

A paper presented at the NZARE (December 2001) Culture in Learning: Culture Forms Learning Conference, (Christchurch NZ) and part of a thesis submitted for PhD.

This paper presents the findings on strategies that six severely reading disabled Linwood College students used to decipher words and the difficulties that contributed to their disability. The results are from a year long remedial reading programme. The students were chosen for their average or better reading comprehension and their very low reading age equivalent scores for word recognition.

Each week the students were asked to read a passage from a New Zealand school journal article or story.

At the beginning of the programme all six of the students in this study had been taught to read by the method recommended by the then Department of Education (1985). They were taught to use a repeated pattern of sampling the text for significant visual features, predicting the words from meaning, confirming from meaning that they had predicted the correct word and self-correcting if they had got the word wrong. If they had difficulty deciphering an unfamiliar word they were taught to read on to the end of the sentence or phrase and then to reread it in order to be able to make the most use of the contextual meaning and language cues. All the students had some letter-sound knowledge, usually the consonants and most of the two letter initial consonant blends.

The six adolescent students in this study had very severe word recognition difficulties. They had difficulty deciphering many two-syllable words. Their reading was characterised by a very high miscue rate, i. e. the rate at which words were not recognised. This resulted from their inability to use complete and accurate letter-sound information fluently. Words miscued were often one-syllable, high frequency words that they had previously read correctly. They had difficulty completely and accurately deciphering letter-sound information. Each student's difficulties with letter-sound information resulted from a cluster of underlying difficulties.

1. All students had phonological processing difficulties. They had difficulty with identifying the phonemes in a word and with breaking words into their phonemes.
2. These results showed that the students had failed to learn the letter-sound knowledge necessary for accurate and fluent reading.
3. Four of the students exhibited occasional but persistent visual processing difficulties with letter orientation and the letter order in words. The other two students had inconsistent but persistent problems with the pronunciation of words. They had inconsistent but frequent difficulty pronouncing multisyllabic words and had difficulty discriminating the sounds in words clearly. They also had difficulty finding the words to express their ideas.

The students used two strategies for word recognition as they read, the initial-letter strategy and the sounding strategy. They made use of the initial-letter strategy for words of one or two syllables and the sounding strategy for words of two or more syllables. When the students used the initial-letter strategy they were applying the strategies that they had been taught within their school reading programme. They used letter-sound information along with contextual meaning to decipher the text but their letter-sound information was incomplete and inaccurate.

Vocabulary knowledge is thought to be determined by exposure to language. Oral language is not as rich in words that are less frequently used and words that are associated with more difficult concepts. It follows therefore that the development of vocabulary is dependent on the amount of reading that a student has done. Improved reading comprehension in turn enables the reader to make better use of contextual meaning. Four of the students made significant increases in their vocabulary development by the end of the reading programme. The development of their vocabulary had been impaired by their severe reading difficulties. Their gains appeared to be a consequence of the reading they had engaged in during the remedial programme.

The results of the study showed that it was the students' difficulty with reading letter-sound information accurately and their problems integrating complete and accurate letter-sound information with contextual meaning that impeded their progress. It was not their inability to use strategies and monitor their reading for miscues.

Recommendation from this study.

Students with severe reading disability clearly require additional remedial language programmes until such time as they are capable of reading at their intellectual level.

7. Conclusions and Recommendations

Comparisons between the diagnosed and recorded results from the Primary cards and the students survey raises concerns over undiagnosed Eye, Hearing and speech difficulties. The Linwood College intake has been academically tested and the results analysed. The testing shows that Linwood College students on entry at year 9 are statistically significantly below the rest of the South Island and all of NZ students in both reading and numeracy. Research tends to suggest that a medical barrier to learning may contribute to poor performance.

Since their learning is at this low level, Linwood College investigated what possible barriers to learning may exist. Research suggested many possible reasons among them medical.

Linwood College looked at their primary reference cards for health issues and did a survey of year 9 and year 10 students and the results were apparent that their health issues were not being picked up prior to coming to Linwood College.

Dental access is an issue, and although it is free up until the age of 18, large numbers have not attended in the last few years.

The project team looked at the international research on all of this as well as the NZ studies.

The research has concluded that medical problems can influence the retardation of educational

development and subsequent social implications. There are many interconnected factors that raise barriers to learning ranging from income in the family, whether there is one or two parents, family support, prevalence of violence and abuse, educational level of parents, number of books in the household, amount of preschool family interaction, background noise in classrooms, and a host of medical and psychological conditions. Most of these are societal factors that we individually have little or no influence on. However the medical aspect is one we can have a profound influence on and major barriers can be removed.

All the research indicates as early an intervention as possible for the greatest effect, but in order to be able to provide intervention it is necessary to identify what medical issues there are and to what extent.

Linwood College has a considerable database on its students and their academic achievement and pastoral care. There is considerable transience of the Linwood College students (22%) and for this and economic and logistical reasons a sample of students is suggested for a total medical screening. The logical grouping was all Year 9 and Year 10 students. This comprised a total of about 450 students encompassing a diverse range of ethnicities.

Recommendation

It was recommended that a complete medical assessment be conducted of all the year 9 and year 10 Linwood College students, examining ears, eyes, nose and throat, teeth. Treatment can then be offered to correct any problems found. This needs to be standardized and performed by medical experts under medical ethics conditions to ensure the robust nature of the research.

Linwood College is the optimum place to do such an assessment as it has a diverse cohort of students and a comprehensive data base of academic and pastoral care information. This information compared to the medical assessments will provide evidence and potential correlations between the different data groups gathered that will be beneficial to more than just Linwood College. It will enable policy development, provide possible strategies to improve academic and medical outcomes. This study will also be able to translate down to primary schools and therefore give the city and the government agencies conclusive evidence for possible action.

This then seems to be the largest, most complete study of a cohort of NZ children of its type. This appears as if the LANE project will be able to make a difference to the future of our city.