

Peer Review - Quantitative and Qualitative Analysis of U.S. Research Studies I & II

Quantitative:

Statistical Analyses by Dr. Alison Gilmore, Professor of Educational Assessment and Evaluation at the University of Canterbury, New Zealand

Spring 2004 Experimental Group

Mean Raw Score on Pre Test = 30.943
(out 49 possible points)
Mean Raw Score on Post Test = 35.078
Differential raw score = +4.135
Differential Reading Level = +1.789 years

Spring 2004 Control Group:

Mean Raw Score on Pre Test = 31.867
Mean Raw Score on Post Test = 36.057
Differential raw score = +4.190
Differential Reading Level = +1.722 years
Unpaired t-test comparing experimental and control groups'
post test raw scores: **p -Value::** <.0001

Spring 2004 Control Group:

Mean Raw Score on Pre Test = 18.515
Mean Raw Score on Post Test = 18.621
Differential raw score = .106
Differential Reading Level = 0

Fall 2004 Control Group:

Mean Raw Score on Pre Test = 31.455
Mean Raw Score on Post Test = 28.909
Differential raw score = -2.545
Differential Reading Level = 0
Unpaired t-test comparing experimental and control groups'
post test raw scores: **p -Value::** <.0001

Qualitative:

Student Responses:

Students in the second research experimental classes were asked to write anonymous reports of their experiences and opinions of the AVAILLL program. The peer review committee determined 142 out of 146 as positive or a **97.2% positive response from students.**

Peer Review Comments (selected from the transcript of the peer review committee meeting)

Faye Parkhill, Senior Lecturer in Literacy, College of Education, University of Canterbury, New Zealand:

"I think that you've got enough rich data in there to suggest the shifts to support our contention..From the data and going thoroughly through every single one of these, we said, look, to get that sort of weighting (increase) from kids who mostly were not in your top accelerated levels was an extreme positive action, and an affirmation that something there was working and engaging, challenging and moving students onè.

The degree of commitment and the enjoyment that they got out of it was from the essays, I thought very impressive, plus I just know that the amount that it captured us last week (during the demonstrations of AVAILLL activities).

Jilaine Johnson, Senior Lecturer in Literacy, College of Education, University of Canterbury, New Zealand:

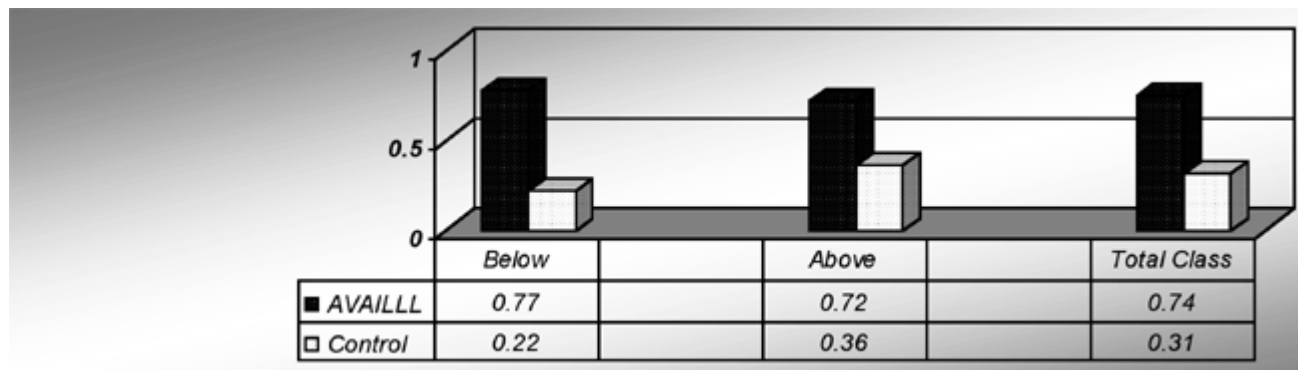
So we looked at it and thought there were significant gains - almost all students there are gains. I thought, shivers, if we can all do that in six weeks it would be absolutely fantastic. I think all of these things plus the book has added a power. The interactive activities and then moving them through to the book has sort of reinforced what they were getting. From the data of what we looked at, our opinion was, go for it!

For a full transcript please email AVAILLL at: training@availll.com

New Zealand Research Study

Reading Comprehension Change by Years in Six Weeks

Below Average Readers, Above Average Readers and Total Class



Abstract

Purpose: The purpose of the study was to replicate the research studies previously conducted in the United States and to confirm the data results on a wider basis in order to increase validity and generalizability. Using random methods for the assignment of control or experimental status to equivalent classes, this research would be classified as experimental. Design: The research plan had a pretest - treatment - post test design with experimental classes receiving the AVAILLL activities and control classes receiving standard New Zealand reading instruction. Population: 14 teachers, 296 eight to twelve year old students (36% minority) in 4 schools participated in the study. Additionally, a class of all Maori students or 19 indigenous students and a Maori teacher were included to offer a preliminary indication of how the AVAILLL program works with indigenous and ESL students. Location: Christchurch, New Zealand. Duration: The program was used from the 3rd of March to the 16th of April, 2008 (six consecutive weeks) Evaluation: The norm referenced instrument used was the Progressive Achievement Tests of Reading (P.A.T.) Students in the experimental classes also wrote an anonymous evaluation of the program. Results: Below age readers in the experimental group increased their reading age by an average of +.77 years. The below level control students increased by +.22 years. (Pretesting indicated students reading below age had an average of -1.05 years below level.) Average and above level students in the experimental group increased by +.72 years and in the control group by +.36 years. The data results are graphically depicted above with further data and implications discussed by researchers below.

Indigenous / Bilingual Class Raw Score Result

Summary:

Total class = + 1.5 years

Below level readers = +1.63 years.

Average or above level readers = +1.17 years

Please note that in six weeks 12 of the 13 or 92% of the below average readers became average or above readers.

			PAT TestB	Exp Pre	Exp post	Exp pre	Exp post	Exp change		
School ID	Teacher ID	Pupil ID	Part Com- prehension	raw score	raw score	Reading age	Reading age	Reading age in years	Age	Gen 1=M 2=Fe
4000	4100	4104	6	13	26	10.8	13.3	2.5	12	2
4000	4100	4107	6	16	21	11.5	12.5	1	12	1
4000	4100	4105	6	14	18	11	12	1	12	2
4000	4100	4102	6	14	20	11	12.3	1.3	12	1
4000	4100	4101	6	12	20	10.6	12.3	1.7	12	2
4000	4100	4106	6	12	13	10.6	10.8	0.2	12	1
4000	4100	4133	5	24	29	12.3	13	0.7	11	2
4000	4100	4111	5	25	29	12.5	13	0.5	11	2
4000	4100	4112	5	8	23	9	12.1	3.1	11	2
4000	4100	4119	5	10	19	9.6	11.25	1.65	11	2
4000	4100	4124	4	16	19	10.4	10.8	0.4	11	2
4000	4100	4126	4	12	22	9.6	11.5	1.9	10	1
4000	4100	4125	4	8	19	8.6	10.8	2.2	10	1
4000	4100	4123	4	32	38	13.3	15.25	1.95	11	2
4000	4100	4132	3	7	15	7	9.3	2.3	9	2
4000	4100	4134	3	17	17	9.6	9.6	0	9	1
4000	4100	4114	5	11	20	9.6	11.5	1.9	11	1
4000	4100	4131	3	9	19	8.25	10.2	1.95	9	2
4000	4100	4117	5	29	35	13	15	2	11	1

Selected Statistical Results Discussion by J. Arantes, Statistician and Lecturer, University of Canterbury

The average increase in reading age for minority students (other than NZ European /Pakeha) from the experimental group (M = 0.66 years) was significantly greater than the increase for minority students in the control group (M = 0.17 years), $t(89) = 2.19, p < .05$.

Similarly, increase in reading age for the below-age readers (i.e., students with a reading age of 0.5 years or more below their chronological age) was significantly greater than the increase in reading age for below-age readers from the control group (M's = 0.77 and 0.22, respectively), $t(119) = 2.86, p < .05$.

We conducted an analysis of variance (ANOVA) to determine whether the change in reading age scores depended on gender, class, experimental vs. control group and non-minorities vs. minorities. In addition to what was mentioned before, we found a significant two-way interaction between class (Year 4,5,6 or Year 7,8) and non-minorities vs. minorities students [$F(1,225) = 4.54, p < .05$]. This interaction resulted from the change in reading age being greater for minorities from Year 7,8 being greater than for minorities from Year 5,6 and 7

In conclusion, the results from the present study replicate the results from the previous study, i.e., our program showed to be effective in improving the reading skill of both minority and below reading age students. These results strengthen the findings from our previous study about the implications that our program can have when used with more disadvantaged students. Because an average of almost 33 per cent of all the students at the New Zealand's schools are minorities or below age readers, our program can have an important impact.

Developer's note: In the New Zealand experimental classes in which the teachers followed the AVAILLL program's design of involving above average readers to help manage the program, average and above student's reading levels rose by .7 years. In classes where student help was not used (i.e. the program not replicated) the average and above readers levels increased by .38 years.

Selected Observations and Implications by Researchers:

By Jilaine Johnson
Senior Lecturer Education
University of Canterbury

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Observations: The gains have been dramatic. As an observer I witnessed the enthusiasm of the experimental teachers even though, initially, a few were either sceptical or not displaying a "committed" interest. The teachers were astounded by the way in which their students took to the AVAILLL programme with such enthusiasm, with some children begging their teacher to continue the programme through lunch breaks...

It is a teacher friendly programme. The students in the classrooms I observed were either riveted to the screen, diving into dictionaries, practicing fluency or reading the texts. Students verbalized to me what they had learned and along with the explicit reading skills, imaging pictures in their mind came out as a useful strategy to have practised. It is a cost effective programme. Once teachers have been trained and accredited, the ongoing costs of buying supplementary materials (DVD's and texts) for a school will be minimal...

Many children do not realize they are reading so much because it is 'fun' but certainly become aware of their improvement after two weeks on the program.. Many of the below average readers had never achieved in their academic studies and this was both a boost to them and their families. The students who participated in this study were from low socio-economic backgrounds, a significant number were minorities and a large group were classed as below age readers. To see these children improve so markedly was wonderful. It raised participants' levels of self-esteem and did wonders for struggling students' self-belief in their ability to learn.

146 of the 148 student evaluation reports we read were positive to extremely positive. A 98.8% reaction from the students in the programme!

Implications: I regard what AVAILLL does to raise student self-belief among those who are minorities or struggling with reading as very worthwhile in terms of any country's social agenda. If

a school takes on the AVAILLL programme and runs it for several years, what students learn about literacy skills through it I believe will last and allow these students to find their place in their world.

By Faye Parkhill
Senior Lecturer
College of Education
University of Canterbury
New Zealand

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Observations: The results from the present study replicate those from the previous studies in the United States. The program showed that it is effective in improving the reading skill of both minority and below average students. These results strengthen the findings from the previous study in the US about the implications that the program can have when used with more disadvantaged students. Because approximately 32.7 per cent of all the students at the New Zealand's schools are minorities, the program can have an important impact in lifting 'the tail' on international and national comparisons.

This programme is cost effective, as most schools already possess the equipment that is required (TV and DVD players). There is the purchase of a teacher's manual and a minimum of other print material. AVAILLL is not only student-friendly but also teacher- friendly. The teacher's manual is detailed with all of the teacher interactions explained in some detail. Therefore, daily teacher planning is limited to becoming familiar with the lesson content and ensuring the equipment is available and working...

Both the qualitative and quantitative revealed definite gains for students who participated in this study. Reflections on evaluations indicated a genuine engagement in AVAILLL, an awareness of students' own improvement and development of more effective meta-cognitive strategies related to the reading process.

Implications: These results are very exciting as are the expressions of dismay when the programme ended reported from many students. The critical analysis that occurs during the programme between book and movie versions of the meanings, character portrayal and use of language are invaluable for their future study where learners are required to become multi-literate to succeed in the modern world...

To conclude, as a literacy educator, I would advocate that AVAILLL becomes available to larger numbers of students and in different contexts. Some critics may suggest that the 'sanctity' of the book in reading programmes is at risk of being usurped by popular media, in this case film. However, the highly engaging nature of the activities, increase in reading mileage, connection with the book and the mental imagery that are supported by the programme's techniques, assists to actually position books as valuable and essential resources for enjoyment and entertainment. I consider that this programme has huge potential to motivate students in becoming life-long readers. The highly engaging nature of the programme exposes students to the joys and rewards that the written word still offers enhanced by the presence of multimedia entertainment.