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Reading while viewing: the impact of movie subtitles as a strategy to raise achievement in comprehension and vocabulary

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Abstract

Research into the use of subtitling of visual media texts and their impact on the literacy achievement of students, including those from culturally diverse backgrounds, is an area of growing interest in literacy education. This mixed methods study, carried out with 222 mostly Māori and Pasifika learners in five primary schools located in a very low-socioeconomic area on the east coast of the North Island of New Zealand sought to discover whether viewing subtitled films, along with carefully targeted language activities, increased student achievement. The Audio Visual Achievement in Literacy Language and Learning (AVAILLL) programme presents meaning in multiple ways – audio, visual images and written – which simultaneously serve to engage students whose achievement lags behind that of their peers. Quantitative results demonstrated significant and sustained gains in reading comprehension and vocabulary for these students. Responses from focus group student interviews reported higher levels of engagement and self-reported gains in reading fluency and motivation.

Introduction

Although several international studies indicate that most New Zealand children are high achievers in reading (Kirkham, 2012; May, Cowles, & Lamy, 2013; Ministry of Education [MoE], 2007; Telford & May, 2010), reports of low achievement for some ethnic minority students and those from low-socioeconomic schools continue to suggest that conventional and current literacy practices have not proved effective, particularly for many Māori and Pasifika students.

Māori and Pasifika students

In the 2010/11 Progress in International Reading Literacy Study (PIRLS) data for eight to nine-year-old students, (Chamberlain & Caygill, 2012), the mean reading comprehension score of Māori (488) and Pasifika (473) revealed that these students lagged behind the international mean (500) and well behind their Pākehā/European (558) and Asian (542) counterparts. The mean score for all New Zealand students was 531. Similarly, the 2012 Programme for International Student Assessment (PISA), which assesses a much older cohort (15-year-olds) on a three-year cycle, once again highlighted an extremely 'long tail' of under-achievers, with Māori and Pasifika students (particularly boys) dominating the lowest-performing group and with results that were even lower than the previous 2009 results.

Kirkham's analysis of PISA data (2012) suggested that socioeconomic disadvantage, rather than ethnicity, is the key contributor. While there may be strong connections between underachievement and low-socioeconomic status, nevertheless it is the Māori and Pasifika communities who appear to be particularly vulnerable to effects of inter-generational unemployment and poverty and whose academic achievement appears to fall behind that of other ethnic groups as a consequence.

Visual media and AVAILLL

Children spend more time with moving images than they do with school work, and through this they acquire an enormous amount of knowledge and experience which some teachers are learning to access and develop (bfi education, 2003). Whilst the use of visual media such as film, television and DVDs has grown in primary schools, the presence of the subtitle facility on most recently released films creates new possibilities for reading advancement and engagement for use in school literacy programmes. The presence and engaging nature of visual and multi-modal texts and media for contemporary students is widely reported (e.g. Harrison Group, 2010; King, 2002; Mills, 2009).

This realisation was an impetus behind the initial development of the Audio Visual Achievement in Literacy Language and Learning (AVAILLL) programme in the United States. AVAILLL had its genesis when its developer, the late Dr Alice Killackey, a science teacher educator, discovered upon returning to the classroom that many of her high school students did not have the reading skills in English to engage successfully in the study of science. She observed, however, their interest in, and deep comprehension of, visual media in science. This realization motivated her to develop a programme that would, she hoped, engage her students in highly focused reading by giving them opportunity to watch popular movies and simultaneously read the English subtitles of those movies. In an unpublished study of 387 students in their first year of high school, Killackey found that below average readers increased their reading ages by an average of 2.16 years. Similarly, a pilot study that Killackey undertook in New Zealand indicated that the greatest gains in reading literacy occurred for low-progress readers and boys from ethnic minorities (Parkhill & Johnson, 2009).

Since her death, AVAILLL has been picked up and developed considerably by a specialist in literacy in Christchurch, New Zealand. It includes a teacher's guide, the six-eighth week programme guide and the appropriate DVD and optional PD from the developer. It aims to target schools concerned about their level of reading achievement.

AVAILLL is based on the hypothesis that using popular movies with subtitles not only enhances students' reading skills but has high levels of engagement and also motivates students to read. Alvermann (2002) argues that the level of student engagement is a key mediating factor in student achievement in literacy. "Measures of behavioral engagement, including self-reported effort (Skinner, Kindermann, & Furrer, 2009), amount of time spent (Guthrie, Wigfield, Metsala, & Cox, 1999), and observed concentration in reading tasks (Jang, 2008), have all correlated with reading achievement." (Guthrie, Klauda, & Ho, 2013, p. 10). Others have argued that providing relevant links between students' lives and reading instruction resulted in

higher volumes of reading engagement and achievement through enabling students to make connections and develop their understanding and meanings further (Lau, 2009; McNaughton & Lai, 2009).

Within the programme, engagement is deemed to be a result of movies with subtitles offering the "harmonious inputs" of simultaneous reading, viewing and listening (Parkhill & Johnson, 2009 p. 29). The collaborative nature of the AVAILLL activities and peer interaction also align with more recent literature on the development of intrinsic motivation and active participation in learning.

Same language subtitling (SLS)

Most research on the use of subtitling has been in relation to second language learners or hearing-impaired students (see, for example, King, 2002; Koolstra & Beentjes, 1999; Jelinek-Lewis & Jackson, 2001). The common term used in these contexts is same language subtitling (SLS). Kothari, Pandey & Chudgar (2004) demonstrated subtitling can be used equally effectively with hearing students through using same-language subtitled song programmes on television in India. These researchers found that exposure to SLS educational songs improved decoding ability in formal school settings. However, it was outside of the school context, where the watching of television with song subtitles was found to more than double the percentage of viewers who became good readers, at the same time as halving the percentage of those who remained illiterate.

For struggling or beginning readers, reading speed, word knowledge, decoding, vocabulary acquisition, word recognition, reading comprehension and oral reading rates can all be enhanced through SLS. Linebarger, Piotroski, and Greenwood (2010) also argue that the use of onscreen print in the form of captions is a meaningful and engaging context to extend word knowledge and comprehension, particularly for those students who are slow to develop and use the alphabetic principle or those who experience difficulty transferring comprehension skills from spoken to written language. In a study of 76 children who had just completed second grade, Linebarger et al. reported that beginning readers recognise more words and read faster and also allowed for a strong focus on central story elements when they viewed television with captions. A longitudinal study by Koskinen, Bowen, Gambrell, Jensema, and Kane (1997) also showed that those children who viewed television with captions, scored significantly higher on both word knowledge and comprehension than those who viewed without.

Extending reading mileage, another key intended outcome of subtitle usage, appears to encourage the possibility of more students entering what Stanovich and Cunningham (1993) call the 'positive feedback loop', where the more they read, the wider their vocabulary, and the wider their vocabulary, the greater their comprehension and therefore likely enjoyment of reading. This strong link between the amount read and reading development, known widely as 'the Matthew effect' is much reported in the literature (Stanovich, 1986).

However, practice on its own proves insufficient to improve reading; explicit teaching, modelling and guided practice are also required. In a single study review of SLS using a karaoke-style experimental intervention with explicit targeted cloze

activities (McCall & Craig, 2009), 198 Hawaiian secondary school students made at least a two-year gain in comprehension and this was sustained in subsequent years.

The AVAILLL programme

Using sub-titles for popular movies to increase reading mileage and enhance vocabulary and comprehension, AVAILLL combines images and words to foster comprehension and fluency in reading. Students 'read-watch' subtitled age-appropriate popular movies and engage in a range of collaborative-competitive activities designed to keep them on track when reading the subtitles. These activities provide opportunities for purposeful and focused reading.

AVAILLL, a one-hour-per day for six to eight week, cost-recovery (now NZ based and developed) literacy programme, is designed to enhance rather than replace normal instruction classroom literacy practices.

The purpose for this current study was to investigate whether viewing subtitled films, accompanied by a wide range of targeted activities using multiple inputs – audio, visual images and written words simultaneously – increased the achievement of students from diverse cultural backgrounds, who have not otherwise been successful in literacy learning. An earlier New Zealand pilot study on the effectiveness of AVAILLL (Parkhill & Johnson, 2009), indicated that Māori students, in particular, responded well to the programme in terms of both achievement gains and self-reported gains in engagement and we were keen to see if this was the case in schools which had a majority of Māori and other priority learners. We therefore wanted to determine results for Māori and/or Pasifika students aged between the ages of 8 and11 years and to see if any gains were sustained over time.

Methods

Research design

The two researchers were initially approached by four Resource Teachers of Learning and Behaviour (RTLBs) working in a low-socioeconomic area on the East Coast of the North Island, to investigate the effectiveness of an eight-week AVAILLL programme with all Year 5 and 6 students in five local primary schools, with school rolls ranging between 90–526. Priority learners comprised the dominant groups in all five schools (for example, school A 78% Māori and 15% Pasifika students, 7% NZ Pākeha or other). Four schools were classified as Decile 1 or 1a and one was Decile 3.

Overall, the majority of the students within the AVAILLL study of all Year 5–6 students were what the MoE now classifies as priority learners: 65.3% Māori, 21.5% Pasifika and 13.2% New Zealand European or 'other'. In total 222 students from all 12 mixed-ability classes attended the first, second (eight weeks later) and third wave of testing (six months later). Part five of the programme is designed to use popular movies of interest to years 5–6 (8–11-year-olds) and the movies included: *Water Horse; Meet the Robinsons; Nihm's Island; Win Dixie; Tales of Desperaux; Power of the Planet; Horton hears a Who; and How to Train a Dragon*. Each movie is based on an age-appropriate children's book.

This study employed a mixed methods approach. Quantitative data was obtained using first-, second- and third-wave data sets, designed to explore numerical trends in achievement in vocabulary acquisition and reading comprehension. Similar to previous studies (Rand Reading Group, 2002; Guthrie et al., 2013), we measured reading achievement as the students' ability to "answer questions requiring conceptual integration of text-based content" (Guthrie et al., 2013, p. 10). McKeown and Curtis (2014) suggest that, while many authors argue that there is a substantial correlation between achievement in vocabulary and comprehension, the actual nature of this relationship remains unclear (Tannenbaum, Torgeson, &Wagner, 2006. We were also mindful that vocabulary knowledge tends to be domain-specific (Tannenbaum, et al., 2006), so shifts in achievement may not be significant or directly attributed to the programme. Nevertheless, as word meanings feature prominently in the AVAILLL group activities and a multi-choice vocabulary measure is part of the PAT reading tests, we decided to measure any changes in vocabulary knowledge.

Since teachers wished all students to take part in the programme, there were no control groups in place. In order to mitigate this, we used New Zealand-standardised Progressive Achievement Tests (PAT) (Darr, McDowall, Ferral, Twist, & Watson, 2008) in reading comprehension and vocabulary, which allowed us to determine the level of student achievement relative to other students in a national sample. Their use allowed us to compare movement against the expected shifts over the same timeframe. PAT reading comprehension and vocabulary offer comparable normed tests for Years 5 and 6, so students completed different forms each time they were tested.

In preparation for the intervention, teachers of the classes attended a one-day professional development session about the AVAILLL programme. This was designed and conducted by the NZ developer of the AVAILLL programme; the researchers had no part in the intervention, which was modelled on Killackey's earlier work. The classroom teachers taught the programme to their individual classes, working independently of the researchers over the eight-week period. The four RTLBs administered PAT Test One for comprehension and vocabulary knowledge at the beginning (February) and at the programme's conclusion (April). Students were post-tested using PAT Test Two and six months later, retested by the same RTLBs, using Test Three to determine sustainability of results.

Qualitative data included personal responses to the programme gathered during the second wave of testing. The researchers gathered this data, conducting five separate focus group interviews with teachers and students separately, which were taped with permission, transcribed and checked against the full notes taken by one of the researchers during the interviews. The interview questions for teachers included but were not confined to: teachers and students' overall impressions of the programme; changes in student behaviour and/or engagement or motivation; implementation issues; responses to scripted nature of the programme; student feedback; shifts in individual students – interest in reading, motivation and engagement in reading; synergies and differences between AVAILLL and other aspects of literacy programmes; nature and focus of activities, and relevance of the popular films for students. In terms of student questions, we explored student positive and negative impressions, self-reports

of reading progress; most/least enjoyable and useful activities and reasons; and any changes in their leisure reading outside of class.

Ethical issues

Signed permission letters from parents, students and teachers and the school management were gained. Students who missed any of the three waves of testing were withdrawn from the study results. The research itself was self-funded by the researchers.

Data analysis

Scale score comparisons across all three tests allowed a fine grain of analysis. Analysis of variance (ANOVA; significance level 0.01) was used to determine if the mean differences on the pre- and post-test PAT scale scores for each group were significant. To determine differences in responsiveness across all three phases of testing for the three main ethnic groups, we investigated whether the latter exhibited different achievement patterns in their average scale scores over time. The Wilks Lambda test allowed us to determine whether there was a relationship in progress between the groups over time.

To gain insights into attitudes towards the programme, students' qualitative responses to each of the questions were coded according to recurring and specific words or descriptions. Focus group interviews contributed detailed responses to the programme.

Results

In keeping with previous studies (Davey & Parkhill, 2012; Parkhill & Davey, 2012; Parkhill, Johnson, & Bates, 2011), gains in scale scores for both comprehension and vocabulary over the eight-week time span were significant ($p < 0.001$). Table 1 shows the increase from the pre-test to post-test. Fewer students scored at one extreme or the other with less variation from the mean.

Comprehension

National norming data indicates that the average scale score twelve-month increase from March to March is 9.20 for Year 5 students and 8.20 for Year 6 students, an overall average increase of 8.70. In this study, the increase in only six months (May to November), for these students who had received the eight-week AVAILLL programme was 8.66, which is almost identical.

Table 1: Comprehension Scale Scores between Tests 1, 2 and 3

	N	Mean	Std. Dev
Test One (May)	222	32.67	13.31
Test Two (July)	222	36.08	10.25
Test Three (Nov)	222	41.33	10.29

The difference between Test 1 and 2 for scale scores in our sample was 3.6. There was a significant ($p < 0.001$) difference in the comprehension scale score mean between Time 1 (April) and Time 2 (June). There was also a significant ($t = 12.55$, df $= 222$, $p < 0.001$) difference in the comprehension scale score mean between Time 1 (May) and Time 3 (Nov). However, between these two, the effect size of 0.72 was higher, indicating that the reading mileage, skills and increase in fluency acquired in the eight weeks of the AVAILLL programme was not only sustained but developed further in the following months. Hattie's (1999) description of normative comparison points of effect sizes indicates that anything above 0.4 would mean that an innovation is working better than expected and is therefore educationally significant. Effect sizes above 0.6 are very significant (Hattie, 1999) and therefore may indicate a large impact.

Vocabulary

When compared with comprehension scores, vocabulary gains were smaller. While the gains in vocabulary scores between Times 1 and 2 were still significant ($p < 0.001$). There was also a significant ($t = 10.49$, df $= 241$, $p < 0.001$) difference in the vocabulary scale score mean between Time 1 (May) and Time 3 (Nov).

National norming data for vocabulary indicates that the average scale score twelve-month increase from March to March is 7.8 for Year 5 students and 6.3 for Year 6 students, an overall average increase of approximately 7.0. The increase in six months (May to November) for these students who had received the eight-week AVAILLL programme was 6.3, identical with an expected gain over 12 months for Year 6 students but less than the average for Year 5 and 6 combined (7.0).

Table 2: Vocabulary Gains for Scale Scores from Test 1 to 3

	N	Mean	Std. Dev
Test One (May)	242	35.99	13.99
Test Two (July)	242	38.06	11.41
Test Three (Nov)	242	42.10	9.83

Between Times 2 and 3, the gains were also significant ($p < 0.001$), with a larger effect size of 0.38. Between T1 and T3, the effect size is 0.50. Between all phases of testing, while not as large as the comprehension scores, the vocabulary gains were also statistically significant.

Achievement differences according to ethnicity in comprehension

The comprehension results indicate that there is a significant effect over time and also a significant difference across the testing phases by ethnicity. Over time, the ethnic groups exhibited different patterns of average scale scores. The lowest-scoring group on international and national literacy tests are Pasifika students (Crooks, Flockton, & White, 2007; Telford & May, 2010). However, it was this group that made the largest

gain; they not only sustained this level six months later (May-November), but also improved on it. The average gain score for Māori students is 9.00 and for Pasifika 9.55 scale points compared with only 8.66 for the whole AVAILLL group. The norming process for the PAT comprehension test (Darr et al.,, 2008) did not include separate average gain scores for Māori and Pasifika students hence national comparisons for these subgroups are unavailable. However, both the Māori and Pasifika groups exceeded the national yearly average for all Year 5 and 6 students in only six months.

Table 3 compares the mean scores across the ethnic groups at each time point (test). It shows that the mean score for the NZ European group is significantly different from both Māori and Pasifika groups at Time 1, and is significantly different from Pasifika at Time 2. At Time 3, the New Zealand European is (marginally) different from Māori (Wilk's Lambda [v=.953, f =2.66, df =4.00 df=436.00, p < 0.000]).

Table 3: Comparison of Mean Scores in Comprehension across Three Ethnic Groups

Ethnicity	Maori (n=145)	Pasifika (n=48)	NZ European/Other (n=29)
Test 1 (May)	31.71 (13.52)	30.60 (11.26)	40.89 (12.80)
Test 2 (July)	36.12 (10.32)	33.23 (8.43)	40.30 (11.44)
Test 3 (Nov)	40.71 (10.89)	40.15 (8.23)	45.76 (9.78)

These differences are also shown in Figure 1:
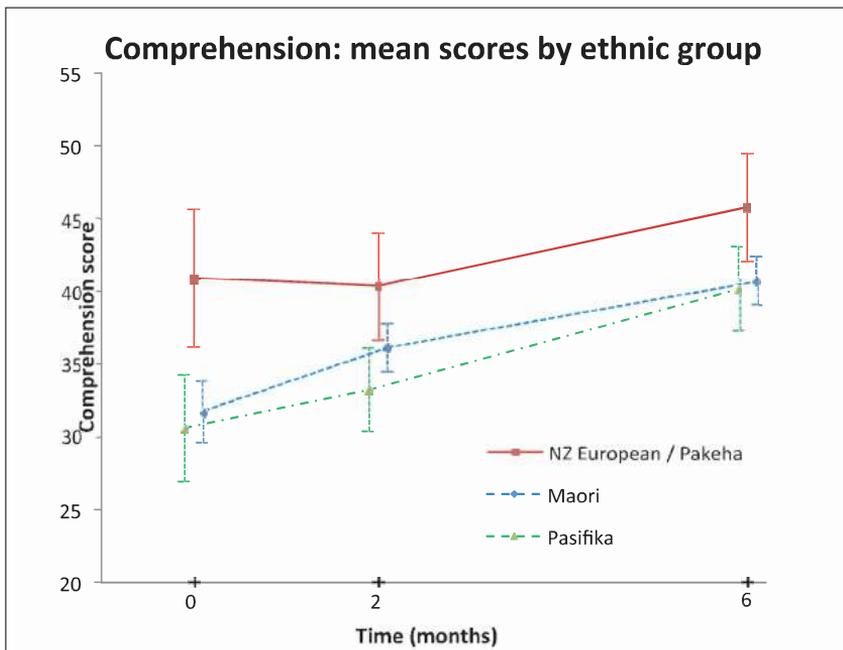
In Test 1, the NZ European group is significantly different from both Māori and Pasifika groups. However, by Test 3, the difference for Māori compared with the NZ European group is only marginally significant.

These differences are also noted below in Figure 2 for vocabulary gains.
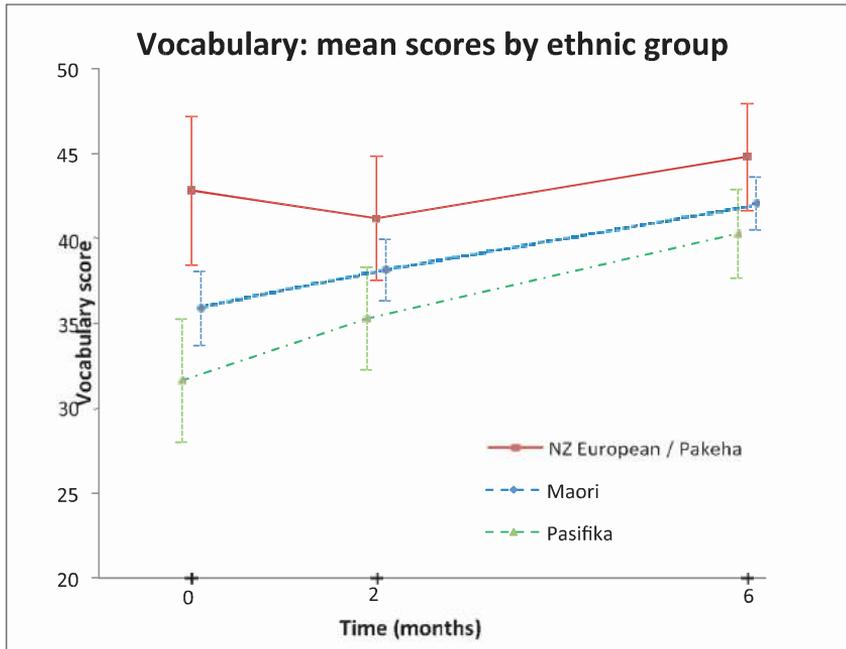
The scores on vocabulary show that Māori students increased significantly from Time 1 to Time 2 and from Time 2 to Time 3. On the other hand, NZ European and Pasifika did not show significant changes for Time 1–Time 2 but did for Time 2 –T3 and for Time 1–Time 3.

Focus group interviews

Focus group interviews took place with 47 students organised in individual school groups chosen by their class teachers from those who volunteered. Responses in each focus group revealed overwhelmingly enthusiastic responses to the programme. All students interviewed enjoyed the programme, with prevalent emotional responses like: *"cool", "terrific", "fun", "awesome", "easy", "helps you learn"* being the most typical responses. Reasons for their enjoyment, however, varied across several areas from: *"watching the movie"* to *"reading the subtitles was fun"* to *"doing the activities"* to *"watching the movie and also learning too"* and *"we didn't have to do normal reading"*. It appears that the novelty and resulting engagement value of watch/reading popular films, instead of more typical print-based texts used in primary classrooms may have played a role here.

As well, students unanimously believed that their reading had improved and teachers also reported this perception among most of their students, even if results did not bear

this out. This self-reported improvement clustered towards gains in terms of reading fluency particularly. All believed that they were able to read faster: *"I started reading slow and when I got used to it, I started reading faster"* and *"you have to read fast to read the last word before it's gone"* and *"the scenes change and you have to read a certain number of words in a certain time – makes eyes work faster before it changes".* Apart from *"we're getting more practice",* the connection between the reading and collaborative/competitive activities appeared to support students' focus.

Many reported a flow-on effect with their out-of-class reading. In one focus group, all the students said they were reading more, longer books. One student reported how her reading had changed: *"I used to read a chapter book a month and now I read one in a week 'cos I'm more into it."*

The majority also commented on their increased vocabulary knowledge – that they had learnt new words and found it a 'fun way' to do so. For some the visual context helped: *"I knew what the words mean because of the pictures on the movies too".* Others reported improvements in spelling and/or pronunciation. *"Sometimes there were hard words and I didn't understand them but when it came to AVAILLL I got really interested and I started learning those words by heart."* While such gains are not necessarily borne out by the vocabulary gains, there appeared to be a self-reported marked shift in attitude towards learning vocabulary in the majority of these students.

Several suggested that the activities made them process things in different ways, which, in turn, helped their understanding: *"I'm understanding reading better – I can retell what's happening now and would do it again."* While there were things students did not respond favourably to, these tended to be technical in nature: people not listening to instructions, the varied use and success of student assistants and some students found certain activities harder, easier, or less enjoyable than others. Almost all students expressed pride in the work they had done on the programme and most seemed reluctant to return to their normal classroom programme, with the dominant word from all groups being *"boring", "stink"* and *"less fun".* As one student suggested: *"You don't get to do fun activities, you don't get to learn new words, you don't get distracted by other things like in the normal reading programme cos everyone's quiet just to watch the movie"* and the perception of several was that: *"you just get to do boring worksheets"* in their normal programmes. Perhaps such comments had more to do with the nature of their usual classroom reading programmes than AVAILLL.

Overall, the main characteristics of the programme identified by students were its novelty and enjoyment, which in their view turn led to feelings of motivation and engagement. In one focus group, more than half the students, many of whom were chronic truants suggested that they wanted to come to school because of AVAILLL. This connection between achievement, motivation and engagement with the programme is one worth closer exploration.

Teachers

The focus group interview with the 12 teachers from all participating schools also revealed a positive response to AVAILLL. Over half the teachers had noticed an increase in attendance, with one boy in a particular class coming every day while the

programme was operating but no longer attending when it was finished. A unanimous response was that the *"students loved it"*. A male teacher was particularly enthusiastic about the variety it offered: *"Was looking forward to doing it as I really love watching movies myself and I like the idea of working with the whole class as well as when you have them all levelled with reading groups they know who's top, middle and bottom so I liked the idea of pulling them together for a term and doing some reading as a whole class so everyone's on the same level."*

The use of age-related popular movies in class was justified through the increase in reading, particularly in regard to the book that the movie was based on: *"Great they were fired up with links to the books or chapters and having them side by side, made them realise they should read the book and … lots of my children asked if they could read the book afterwards."*

The teachers addressed in different ways the structured nature of AVAILLL, which includes a very detailed teacher's manual with DVD timings and introductory 'how to' scripts for the different activities. One teacher stated: *"To start with it was great as everything was done for you and then I started realising that some of the wording was a bit difficult for my kids so I changed it into my words – which was the same but easier for them to understand. As long as you read it before then you could adapt it."* While she appreciated the scaffolding provided, once she had the *"hang of the Programme:"* she modified where appropriate.

Overall, teacher enthusiasm matched student enthusiasm, partly based on what they saw as improved achievement and motivation for those students who had previously struggled, on a positive tone in the classroom and on students' self-reported improvements in confidence and self-efficacy. Their major concerns lay around students' ability to transfer and maintain their gains and interest in reading.

Limitations

As described above, there were no control groups as all of the Year 5 and 6 students in the five schools took part in the six-month study. Although the progress in six months almost matched the average gains of non-AVAILLL students over 12 months, it cannot be assumed that progress is uniform for students over a period of 12 months, particularly as investigation into the 'summer effect' in low-income areas has recently received attention in literacy research (see meta-analyses by Kim and Quinn, 2013). Furthermore, when the normal classroom literacy programme resumed after the eight-week programme, detailed information on what was 'normal' was not obtained but would undoubtedly vary between the participant schools. Data on reported changes of attitudes to, and engagement in, reading six months after AVAILLL had concluded was also not obtained.

Discussion

Research into the use of media and their impact on the engagement and achievement of students, including those from culturally diverse backgrounds is attracting increasing attention in literacy education. Not only were the results from this study statistically significant but they were sustained and improved on several months after the programme

had finished. Similar to the data from pilot studies in both New Zealand (Parkhill & Johnson, 2009) and the United States (Killackey, unpublished study), ethnic minorities made the greatest gains. Interestingly, these results compared favourably with the Hawaiian SLS single study reported earlier (McCall & Craig, 2009), with a similar sustainability effect size of 0.7 for comprehension found in both studies.

A similar trend emerged in this study that has appeared in our previous investigations (Davey & Parkhill, 2012; Parkhill et al., 2011). The largest impact occurred for those students scoring below or well below, national averages (in this case 63%) before the commencement of the programme. For some competent readers, their results remained constant or even declined slightly. One explanation could be that, within an hour per day of instructional reading for six to eight weeks, these readers would be exposed to longer and more complex texts, thereby increasing opportunities for extension of more sophisticated reading strategies and engagement in deeper analyses of texts than those featured in AVAILLL.

In another sense, the use of moving image media within schools could begin to acknowledge the ways children come to language and literacy via wider and more familiar cultural, community-wide experiences. It leverages students' media habits outside of a classroom context as consumers of popular television, movies, computers, videogames and social media and serves to bridge that important gap between school and home literacies. Making links between the home and school lives enables culturally diverse students to make connections and develop their understanding and meanings further.

However, just viewing popular films in classrooms is insufficient for growth in literacy achievement. As Van den Broek, Kendeou, and White (2009) argue, what is important is using various media strategically and encouraging engagement in particular processes and concepts that the student would not normally attend to. In the AVAILLL programme, it is not the subtitles themselves that produce comprehension and vocabulary gains (Parkhill et al., 2011) but the deliberate focus on developing reading mileage and response to words and meanings through the reading of subtitles, reinforced by carefully targeted and designed, high-interest, and largely group activities.

Studies on the achievement of diverse students (see, for example, Bishop, 2010 & Macfarlane, 2010) have indicated that high engagement has a strong link with learning and achievement for Māori and Pasifika alike. Making links between the home and school lives enables Māori and Pasifika students to make connections and develop their understanding and meanings further (McNaughton & Lai, 2009). When a teacher acknowledges the experiences and values that a student brings to literacy activities, then engagement is more likely to occur. AVAILLL attempts to achieve several of these goals: it brings the familiar medium of popular film into a classroom setting, it utilises collaborative approaches to literacy activities and it promotes enjoyment and engagement in a low-risk environment, an important mediating factor in successful learning (Alvermann, 2002; Pressley, 2006; Stanovich & Cunningham, 1993).

Along with engagement, both student and teacher voices also emphasised a growth in self-efficacy as a result of the AVAILLL programme. Pressley (2006) suggests that reading self-efficacy influences a student's commitment to reading and that motivation

is connected to academic achievement in reading comprehension. It may well be the case that the high engagement generated by the programme has had some spin-offs in terms of increasing interest, confidence and self-efficacy in reading.

Conclusion

While AVAILLL is far from a panacea or quick fix for students whose academic histories have been dogged by poor attendance, low motivation and under-achievement, we suggest that it could well become part of a much-needed "cultural toolkit" for teachers (Ford, 2012, p. 33) to raise achievement for those students from cultural and linguistic backgrounds which differ from the majority culture and those who may not have responded well to a conventional, print-based culture in our schools.

We also suggest that the introduction of different media into middle primary/middle-school classrooms could provide one possible avenue for the teaching and learning of reading skills that have traditionally been hard to learn for a significant proportion of the population, especially those from ethnic minorities (Van der Broek et al., 2009). In NZ settings at least, film as a genre is not taught in primary schooling. However, from the perspective of English language learners, King (2002) contends that the intrinsically motivating nature of Hollywood films provides many pedagogical possibilities and can act as a vehicle for engaging students in literacy activities. While traditionally, in primary or elementary school settings, popular movies have been viewed as a medium for entertainment, we argue that they have the potential to provide a rich resource for developing vocabulary and meaning making in literacy class programmes which recognise the role that multi-modal nature of texts, media and 21st century technologies play in young people's lives (King, 2002).

Research that focuses specifically on the connection between achievement, motivation and engagement in reading, using a variety of multimedia texts and digital technologies warrants further exploration.

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