Raising Adolescent Reading Achievement: The Use of Sub-titled Popular Movies and High Interest Literacy Activities

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Abstract

Research in the area of adolescent literacy often highlights the connection between achievement and student engagement. This study suggests, particularly for students with low achievement in literacy, that combination of reading subtitles to increase reading mileage, accompanied by strategically targeted and collaborative language activities has the potential to lift achievement in traditional reading and writing tasks using printed material. The Audiovisual Achievement in Literacy Language and learning (AVAILLL) programme took place in five secondary schools over an intensive six week time period. Results from 186 secondary students aged 13-16, with low achievement in literacy, indicated very significant gains in both comprehension and vocabulary. This study also contributes to the growing research about ways to promote reading and engagement and achievement in adolescent reading.

Introduction

Teachers’ continual challenge to enhance student achievement in reading through increased motivation is the impetus behind an Audio Visual Achievement in Literacy, Language and Learning programme (AVAILLL), a programme designed to engage students in highly focused reading by providing them with the opportunity to watch popular movies (in English) and to simultaneously read the English subtitles of those movies. Originating in the United States within a science education context and using a combination of image and word to foster comprehension and fluency in reading, this cost-recovery only programme intervention also includes a variety of explicit literacy activities that interweave acquisition of literacy skills with watching movies (on DVDs), reading the subtitles on these movies, and reading extracts from the novels on which the movies are based. Students ‘read-watch’ movies and complete
a range of ‘games’ and activities which are designed to keep them on track when reading the subtitles, and to provide an opportunity for purposeful and focused reading.

There is a plethora of research exploring new concepts of literacy and modes of reading (Daley, 2009; Kress, 2003; Lankshear, & Knobel, 2003; Leu, Kinzer, Corno & Cammack, 2004; Luke & Freebody, 1999; New London Group, 1996). This article takes a narrower literacy focus on the improvement of the basic skills of vocabulary and fluency through the harnessing of the natural interest that students have in popular movies. The study set out to discover whether students with low achievement in literacy at secondary level made any gains in reading achievement during an intensive six week period of viewing movies with same language subtitles.

Using Subtitles for Reading Development

Several studies on the effectiveness of using subtitles for second language and bilingual learning and captions on television for below average readers (Danan, 2004; King, 2002; Koolstra & Bentejes, 1999; Kaskinen, Wilson, Gambrell & Neuman, 1993; Meyer & Lee, 1995; Stewart & Pertusa, 2004) have suggested that foreign (L1) students can acquire vocabulary in a foreign language (L2), when using subtitles while watching television. For example, the Koolstra and Bentejes’ (1999) study showed that word recognition proved to be more effective in the subtitled group, where there were inputs from three modes (listening, viewing and reading) rather than just two sources (listening and viewing). These findings, according to Vanderplank (2010), “confirmed the many anecdotal accounts that children can acquire elements of a foreign language through watching subtitled television programmes” (p. 20).

Same Language Subtitling

Same language subtitling (SLS) involves the subtitling of moving image into the same language as the audio (Kothari, Pandey & Chudgar, 2004). Known variously as Teletext subtitles in the UK, Same Language Subtitles (SLS) in India, and close captioning (CC) in the US, it was first introduced to the latter with the intention of improving access to television for the hard of hearing (Vanderplank, 1990). However, as Kothari and his colleagues (2004) demonstrated, subtitling can also be used equally effectively with hearing students.

In an earlier study, Kothari and Takeda (2000) demonstrated that same-language subtitled song programmes on television were effective in raising children’s reading. Exposure to SLS educational songs improved decoding ability in formal school settings in India. However, it was outside of the school context, where the watching of television with song subtitles more than doubled the percentage of viewers who became good readers, at the same time as halving the percentage of those who remained illiterate. The researchers concluded that the reading skill improvement was “a subliminal by-product of widely popular entertainment” (p.130).

Kothari et al (2004) also provide a theoretical explanation for why SLS has proved to be effective in raising literacy levels. They suggest that as the reading of subtitles is an automatic action, prior knowledge and habit formation are not prerequisites. If subtitles are present they will “be read and simultaneously processed with the audio in a complementary manner” (Kothari et al., 2004, p. 29). For many, the shift from engaging in predominantly picture viewing on television, to a focus on reading the subtitles evolves over time. Kothari and colleagues argue that those who have struggled to make meaning from printed text may suffer less failure when reading screen print, which in turn may create greater engagement and a more positive attitude towards reading in general. Extending the ‘reading mileage’, which is one important intended outcome of subtitle
usage, encourages the possibility of more students entering the ‘positive feedback loop’ (Stanovich & Cunningham, 1993). In other words, the more they read, the wider their vocabulary, and the wider their vocabulary, the greater their comprehension and therefore likely enjoyment of reading. This concept is known widely as the ‘Matthew effect’ (Stanovich, 1986, 1994).

But practice on its own is insufficient to improve reading. Explicit teaching, modeling and guided practice are also required. In an experimental study (Parkhill, Johnson & Bates, 2011) where one treatment group watched the subtitles without the associated literacy activities, the students did not make the gains of the experimental group who completed the full programme. Viewing film with subtitles has then the potential to present meaning in multifaceted ways through various modes, such as engaging audio, enhanced visual images and accompanying text. The multiple inputs appear to be a key factor. However, it would appear that the AVAILL literacy activities, most of which were collaborative in nature, were an important ingredient in developing student engagement and motivation.

Engagement and collaboration

The relationship between engagement and achievement in reading is clearly made in the literature (e.g. Alvermann, 2002; Dunstan & Gambrell, 2009; Guthrie, 2001; Guthrie & Humenick, 2004; Guthrie, Wigfield, Metzala & Cox, 1999; Pressley & Wharton-McDonald, 2006). Similarly, the value of students talking and working together is a common theme in the literatures on socio-cultural approaches to teaching and learning and on the use of new media technologies. Indeed Hickey, McWilliams and Honeyford (2011) argue that new media literacy practices rely on collaborative, social and context-specific activities. Many teachers use collaborative activities “to activate and maintain students’ intrinsic motivation and mastery goal orientation” (Guthrie, 2000, np) as was the case with AVAILL.

The AVAILL programme

Delivered as a six-week unit, AVAILL includes one hour of concentrated (focused) reading per day along with a variety of other activities that students complete either individually or in pairs, groups, or teams. Within the current New Zealand curriculum, it is relatively easy to argue how an instructional programme like AVAILL, also targets the five Key Competencies that underpin the New Zealand Curriculum: thinking, managing self, relating to others, participating and contributing and interpreting signs, symbols and texts.

All activities are designed to target the key skills of reading comprehension, reading fluency, vocabulary exploration and imagery (visualisation). Most tasks require collaboration with others and emphasise the participatory nature of student learning.

The explicit teaching activities below are examples of how collaborative group work is used alongside individual tasks to consolidate learning:

- **Surprise subtitles**: Encouraging rapid reading through the chunking of text. The movie is stopped at eight points and the students write the last subtitles they have read.

- **Next word hunt**: Focused vocabulary teaching and searching for certain words. The students are asked to write down all of the words that follow a common word, such as ‘we’, for 25 minutes of the movie.

- **Take a dictionary to the movie**: Extending word meanings. The movie is paused on a pre-planned subtitle containing a challenging word and students work in teams with a dictionary, record the meaning in context within a competitive time frame.

- **Fostering fluency**: Providing an oral/written link and reading with phrasing and fluency. The teacher reads in an extract near the end of the novel in robotic fashion. The students then read the same passage with a buddy with
phrasing and fluency. This provides the link between the book and the film.

- **Read it - see it**: Teaching visualisation to extend comprehension and recall. Similar to Picture dictation, students are asked to recreate/retell a scene in visual images from audio-only input.

- **A movie's worth a hundred words**: Building personal vocabulary knowledge by using contextual support used in movies. In a team activity, they discuss with group members the meanings of challenging words, which are then shared with the class. A vocabulary chart is developed which is then used to study for a quiz at the end of the activity. These activities are repeated in three other novel-based films that feature in the six week AVAILLL programme.

We found no other studies where same language movie subtitles have been used to enhance literacy outcomes for adolescent learners (in this case, 13-15 year old students) who are low achieving in literacy. Two earlier studies on the effectiveness of AVAILLL at the primary/elementary level in New Zealand (Years 5 to 8) had taken place in classes of mixed ability students (Parkhill & Johnson, 2009) with very positive outcomes in terms of achievement and self-reported enjoyment. Our research question, therefore, focused on investigating across a range of secondary schools how students whose literacy achievement was low, would respond to a programme delivered through the medium of film that emphasised fast reading and collaborative associated activities. We were interested in determining what gains in reading occur as a result of a six week intensive AVAILLL where captioned movies and explicit interactive literacy activities are used.

**Methodology**

We used quantitative and qualitative methods of data collection. The former were designed to explore numerical trends in achievement in vocabulary acquisition and reading comprehension, and the latter to gather participating students' personal responses to the programme. A mixed methodology approach allowed us to investigate more fully the effectiveness of the programme. Five self-selecting secondary schools participated in the research study. These schools approached the researchers and asked to take part in the study. Using the New Zealand Ministry of Education's decile ratings (Ministry of Education, 2010), the five state secondary schools ranged from decile 2 to 9. Four out of five of the schools were co-educational, while the fifth was a boys-only school. In total, 12 classes participated, all classified by their schools as students with the lowest achievement in literacy for both Year 9 (ten classes) and Year 10 (two classes).

The University's ethical consent procedures were followed. We obtained signed permission from teachers, students and the school management. Letters were sent home to parents seeking permission and we excluded data from students whose caregivers did not respond. A total of 189 students completed the comprehension pre-test and post-test sessions and 174 students attended both the pre and post-sessions for the vocabulary assessment. In preparation for the intervention, the teachers of the classes attended a one day training session to familiarise themselves with the AVAILLL program.

Control classes in each school were not used for two reasons. First, the use of standardised tests allowed for a comparison of the movement against the expected movement over the same time period. Secondly, the use of control groups in an earlier study had created some challenging ethical issues for those classes not receiving the AVAILLL programme. The high levels of enjoyment demonstrated and communicated by the experimental classes caused some negativity in students receiving the normal class programme, who felt they had missed out. Furthermore, the purposive nature of this sample differed from the previous study (Parkhill, Johnson & Bates, 2009) where the students were derived from mixed ability classes.
The pre-test comprised measures of reading comprehension and vocabulary from the Progressive Achievement Test (PAT) 5 for Year 9 students and Test 6 for Year 10 students. (Darr, McDowall, Ferral, Twist, & Watson, 2008). PAT tests are developed and standardised for New Zealand schools, allowing teachers to determine the level of achievement of their students relative to the achievement of students in the same level in Years 4 to 10.

Reading fluency, although inherent to success when reading subtitles, posed a challenge for the researchers in terms of the individual nature and time-consuming nature of the process. We also support the theory that fluency is more than reading rate and that it is intricately linked to the development of comprehension (Pikulski and Chard 2005; Rasinski, Rikli, Johnston, 2009; Samuels, 2002).

The teachers worked independently of the researchers over the six-week period. At the end of this time we post-tested the students using the comprehension and vocabulary measures of PAT Test 6 for Year 9 and PAT Test 7 for Year 10 students. We also asked the students to respond in writing to five open-ended questions aimed to eliciting descriptions of their experiences and reactions to AVAILLL, including whether or not they considered it had improved their reading. These included questions such as: Do you think you have got better at reading? Tell us about it.

We used analysis of variance (ANOVA; significance level 0.01) to determine if the mean differences on the pre- and post-test PAT scale scores and stanines for each group were significant.

To gain insights into student response to the programme, we coded the students' written responses to each of the five questions according to recurrent and specific words or descriptions. These responses were categorised under the headings: positive response, negative response, and neutral response.

Results

In terms of the quantitative achievement data, significant gains were recorded for both comprehension and vocabulary. Gains in comprehension scores, in terms of stanine and scale scores are presented in Table One and Two.

<table>
<thead>
<tr>
<th>Table One Year 9 and 10 Comprehension Scores</th>
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<tr>
<td><strong>Comprehension (N=189)</strong></td>
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<tr>
<td>-------------------------------</td>
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<tr>
<td>Stanine</td>
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<td>Scale</td>
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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 indicate a large impact. The changes in comprehension scores indicate effect sizes of 0.89 for the stanine scores and 0.93 for the scale scores.

Furthermore, between the two testing periods (approximately six weeks), significant increases were also evident in the scale score (t=12.8, df=188; p<0.01). The stanine scores (t=12.3, df=188; p<0.01) represented a significant increase as well. On all counts then, it appears that students made large gains as a result of the programme.
For vocabulary, the increases were also still statistically significant for both the scale score (t=4.27, df=173; p<0.01) and the stanines (t=4.2, df=173; p<0.01) but these increases were not as large. As Hattie notes, such effect sizes (0.32) are still educationally significant.

<table>
<thead>
<tr>
<th>Vocabulary (N=174)</th>
<th>Pre-test mean (stdev)</th>
<th>Post-test mean (stdev)</th>
<th>t (p-value)</th>
<th>Effect size</th>
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</thead>
<tbody>
<tr>
<td>Stanine</td>
<td>2.93 (1.34)</td>
<td>3.22 (1.18)</td>
<td>4.20 (p &lt; .0005)</td>
<td>0.32</td>
</tr>
<tr>
<td>Scale</td>
<td>51.77 (10.02)</td>
<td>53.90 (8.38)</td>
<td>4.27 (p &lt; .0005)</td>
<td>0.32</td>
</tr>
</tbody>
</table>

A group gain of 0.3 of a stanine in both vocabulary and comprehension over the period of a year is also statistically significant. The results for these secondary students showed improved stanine averages well beyond those expected over seven weeks of schooling. Students could be expected to remain on the same stanine provided that similar progress is made during the subsequent year (C. Dart, personal communication, 25 March, 2010).

The qualitative data gathered through the open-ended questionnaire completed by all students revealed overwhelmingly positive comments, despite the fact that many students faced difficulty when expressing themselves when writing. Many students considered that their reading had improved, particularly in reading fluency and vocabulary growth, typified by comments including: "It helped me understand much more words" and "because I'm improving in reading fluency" and "Yes, because I learned to read faster instead of stopping all the time when there were no full stops".

A very high proportion of students reported gains in self-confidence as readers. "I think I have gotten better as reading is easier for me" and "I can read much faster" and "I have got more confidence" were typical as were comments that highlighted student perceptions of vocabulary gains. This was evident in comments such as: "I know more words and I am more fluent", "I have because now I write down words and understand what they mean", "I've learnt that I have to read a lot more and to go over words carefully cos most words have more than one meaning". One student recognised that his oral reading was no longer as stilted in the comment "because I don't read like a robot".

Improved spelling was another self-reported gain, evident for example, in comments such as: "I was a bit bad at spelling and AVAILLL got me going and I feel very good about this", and "Some words I wasn't able to sound out properly but now I can".

The main characteristic of the programme identified by students was its novelty and enjoyment, which in turn led to feelings of motivation. The following quotations were typical: "I found it very different and unusual but I really enjoyed it. It was fun to do something a little bit different for a change". And "I loved learning that way. It gave me more motivation (motivation) and I wanted to learn more this way".

**Discussion**

Results of this study indicate the potential value of AVAILLL as a short-term enhancement programme for adolescents in schools. The following insightful student comment, however, recognizes that AVAILLL is just the beginning of the work needed to sustain
initial gains: "I think I got better saying long words and figuring them out but I think I just have to keep on reading a lot in my spare time".

Using same language subtitles of popular films as texts for instructional reading, along with associated language rich activities in an intensive, carefully designed short-term programme resulted in considerable progress, particularly in reading comprehension as well as in self-reported increases in text fluency. The qualitative data indicated that students also appeared to gain in self-confidence and self-efficacy, since their interest was engaged. As a corollary, the overwhelming majority of students also highlighted enjoyment and fun doing the activities as key phases for them in the programme. In other words, "it did not seem like reading" in the traditional school sense. Most stated that they "enjoyed working in teams", they "felt successful" and "believed [they] had improved" in a range of areas.

Constructivist views of literacy acquisition view reading as a process of interaction between the reader and text, with readers bringing their own experiences and cultural knowledge to the text, and to their understanding of language (Allington & Cunningham, 2007; Clay, 1998; Graves, Juel & Graves, 2007; Rossmannblatt, 2004). In this search for meaning, the reader is dependent on an existing store of organised knowledge in the mind that is referred to as schemata (Graves, Juel & Graves, 2007). Neuman, (2005) argues that similar to reading, television watching involves ongoing cognitive processing that is schema driven. Schemata direct a child's focus to pertinent parts of the programme in order to help them comprehend the meaning. Similar to reading, television viewing is also interactive and "requires mental elaboration, including perceiving information, drawing inferences and perceiving what is to come next" (Neuman, 2005, p.70).

In terms of the AVAILL programme, we also suggest that given the fact that the visual and oral contexts in movies and television are already pre-constructed and therefore readily available to the reader as visual clues, it may be that the case that prior knowledge assumes a lesser or at least different role when subtitles are used to build reading mileage.

We would also contend that one of the reasons students in this study were so engaged was because the programme used a familiar medium of film. While studying visual texts and/or films has not necessarily been part of a literacy curriculum in many countries including, for example, the US and UK, the New Zealand English curriculum has long included the study of moving and static visual texts, including film. However, instead of students viewing, analysing and interpreting a film, this intervention focuses more on developing reading 'mileage' or reading 'fluency', which, historically, is more often done in a written context. The dimension of need to focus on reading subtitles at the same time as they view and listen, in order to participate in the accompanying activities, may have meant that the reading process seemed less onerous. Kothari et al (2004) argue that reading SLS allows the reading experience to be less formidable, effortless and enjoyable. As a result, there is more likelihood of creating a positive attitude towards reading because "the experience of failed encounters is minimized" (p. 40).

While it would be possible to label such high interest materials and media as merely 'entertaining' or 'lightweight' and therefore easily dismissed, we argue that ignoring the kinds of visual literacy texts that students engage with in their personal lives is wasteful of a potential learning resource. Nonetheless, if such initiatives are to be implemented, the basis on which such texts such as popular films and such resources are introduced into the classroom must be shown to be pedagogically sound. Not should they be seen as panaceas or quick-fix solutions to longstanding and complex problems.

The activities that accompany the viewing/reading of each film are designed to appeal to the adolescent reader in that they are carefully scaffolded; are sufficient but not so numerous as to lose text.
momentum; include a mix of competitive and collaborative, individual and group approaches; and employ a range of language modes (visual, written and oral).

For adolescents who are struggling with reading, it would appear that same language subtitled films, in conjunction with high interest literacy activities may indeed assist with decoding and fluency, which, in turn, supports comprehension. The significant increase in comprehension scores (in only six weeks), for students who are underachieving in literacy appears to endorse this. For students to connect with text, they need to respond to it (Rhodes & Robnolt, 2009) and the visual, moving image, along with text subtitles, compels students to ‘read it/ see it/ get it’ simultaneously.

The test results, however, indicate gains in more than fluency. Not only were there significant gains for these learners in comprehension and vocabulary, but for the majority of students, the rich qualitative data also indicated enhanced engagement and enjoyment of reading also. Furthermore, after completing the programme, while several commented that “we were watching and reading at the same time” and that the experience was better than “normal reading”, others stated that they were motivated to read the accompanying novels on which the films were based. Still others enjoyed the combination of reading and the collaborative/competitive activities and the fact that their “learning seemed effortless”.

Such comments seem to indicate that students felt more motivated and engaged during their involvement in the programme. Indeed as noted earlier, strong links between motivation and engagement and achievement are numerous among studies of reading motivation. The self-reported data collected in this study indicate that a closer examination of the links between achievement and student motivation are warranted in relation to the AVAILLL programme in a future study. We were unable to identify which factors had the most impact – the subtitles alone or in conjunction with high engagement activities.

**Conclusion**

We do not advocate that using popular film with subtitles become the sole focus in literacy programmes for adolescent students who struggle with school literacy. However, based on the results to date, we would suggest that its potential as an enrichment or enhancement programme is worth further investigation. Using subtitles to promote reading mileage, along with meaningful reading activities, is one possible approach to bridging the current gap between school and home literacies, since such a link allows and provides for the attraction of moving images for adolescents. We suggest that using other media (in this case, film with subtitles) for low literacy students may well offer a potential and attractive addition to an emphasis on print media, particularly in a world where non-print media will likely continue to be the most meaningful, most engaging and most commonly accessed texts in the literacy lives of millennial generation adolescents. If we are to succeed as educators of low literacy achieving adolescents, we must continue to find ways that create engagement and motivation to read and accept the challenge to reconsider the content, form and nature of school literacies. The continual development and emergence of new media are redefining what it means to be an enthusiastic reader, which in turn must have an impact of how we teach reading in schools. Programmes such as AVAILLL may offer one such promising avenue.
References


Kothari, B., Pandey, A. & Chudgar, A. (2004). Reading out of the idiot box: Same language subtitling on television in India. *Information technologies and international development, 2*(1), 23-44.


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The theme of the next issue - in April 2013 - will be **Connections**

- the new standard that will be part of all three level of NCEA

We will be looking for articles about this new standard: how teachers are approaching it, how students are coping with it, and ways to be flexible and creative with it for different student needs.

If you would like to contribute something please contact Yvette Isherwood who will be editing that issue:
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