

Does viewing movies with subtitles count as reading?

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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).

Such realisations were the catalyst for the initial development of the Audio Visual Achievement in Literacy Language and Learning (AVAILLL) programme in the United States. AVAILLL had its genesis when science educator, the late Dr Alice Killackey, discovered 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 she hoped would 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 In an unpublished study of 387 students in their first year of high school, Killackey found that below average readers increased their reading ages by an average of 2.16 years.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 Professional Development from the developer. It aims to target schools concerned about their level of reading achievement.

The AVAILLL programme 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. Guthrie, Klauda, & Ho, (2013) suggest that, "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." (p.10). Still 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).

Delivered as a six to eight-week unit, AVAILLL includes one hour of focused reading per day along with a variety of other activities which students carry out either individually or in pairs, groups and teams. All activities are designed to target the key skills of reading comprehension, reading fluency, vocabulary exploration and visualisation. Each of the activities briefly described in Table 1 requires collaboration and emphasises those participatory approaches necessary to support and consolidate learning.

Most research on the use of subtitling has been in relation to second language learners (see, for example, King, 2002; Koolstra & Beentjes, 1999) or hearing impaired (Jelinek-Lewis & Jackson, 2001). The common term used where the same language features for both the audio and subtitle 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

Table 1. AVAILL activities

Surprise subtitles:	Encouraging rapid reading through chunking of text. When a DVD is stopped the image and subtitles are not visible. For this activity, the movie is stopped eight times and the students write down the last subtitle that they have read. As the spoken text can be slightly different from the subtitles, just listening to the movie is insufficient. This activity helps to train the students to read subtitles while watching the movie and also encourages rapid reading and fluency as they must keep up with the pace of the movie.
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 (e.g., 'we') for 25 minutes of the movie.
Take a dictionary to the movies:	Extending word meanings. The movie is paused on a pre-planned subtitle containing a challenging word. Students work in teams with a dictionary to 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 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 film and the novel.
Read it - see it:	Teaching visualisation to extend comprehension and recall. Similar to Picture 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 from the movie. In a team activity, students discuss with group members the meanings of challenging words. These are then shared with the class. A vocabulary chart is developed which is used to study for a quiz at the end of the activity.

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.

Over the last six years we have had the opportunity to research the implementation in a number of contexts including:

1. A pilot study with 240 Years 5 and 6 students in five New Zealand schools with low socio-economic rating (Parkhill & Johnson, 2009);
2. An experimental study with 323 Year 7 and 8 students in six New Zealand schools, including sustainability data (Parkhill, Johnson, & Bates, 2011);
3. A Years 9 and 10 study with 189 low literacy achievers in five New Zealand secondary schools (Parkhill & Davey, 2012);
4. A study in Queensland with 98 Year 6 and 7 students (Davey & Parkhill, 2012);
5. A study in five high poverty schools in New Zealand comprising Years 5 and 6 students from predominately Maori (65%) and Pasifika (15%) backgrounds that included sustainability of progress data (Davey and Parkhill, 2014).
6. A whole school intervention of Years 7 and 8 students in a large multicultural intermediate school (approximately

800 students) conducted over two years (report nearing completion). In all of these studies, the Progressive Achievement Test (PAT) standardised test of reading comprehension and vocabulary (Darr, McDowall, Ferral, Twist, & Watson, 2008) was used to measure progress. Tests One to Seven were administered in accordance with the different age groups. A different form of the test for each level was used for the pre-test, post-test and sustainability assessment. PAT tests are developed and standardised for New Zealand schools, and so allow 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.

Qualitative data were also analysed from a range of focus group and individual interviews with both students and teachers separately. The quantitative data explored numerical trends in achievement in vocabulary acquisition and reading comprehension whereas the qualitative data gathered participating students' personal responses to the programme.

The data in all of the studies showed remarkably similar trends, despite the different age groups, school SES (socio-economic status) levels and geographical location. The results over all the studies indicated that the AVAILL programme had a significant impact, particularly for Maori and Pasifika and low progress students. Analysis showed that statistically significant gains were recorded for both comprehension and vocabulary across all studies. Results indicated improved stanine and scale score averages well beyond those expected over six to eight weeks of schooling.

Sustainability data (Parkhill, Johnson, & Bates, 2011; Davey and Parkhill, 2014) were collected in three of the studies listed above. These results were even more revealing. For example in Study 5 listed above, in the six months between Test One (May) and Test Three (November) for comprehension, the 222 students had a mean scale score gain of 9.66 scale points which resembles that of the expected scale score gain for one year which is recorded as 9.2 for Year 5 and 8.2 for Year 6 (Darr et al, 2008).

The third study (Study 6) involving sustainability data suggests that for the low progress students in particular the increase in mean scale score far exceeds that of expected progress over the year (Darr et al, 2008). The report on this study is due for release shortly.

Across all interviews a number of themes recurred. The responses highlighted their enjoyment, the belief that the program helped their reading and assisted other academic areas, and engendered (renewed) interest in reading and reading subtitles in their leisure time. Typical comments from the students' written evaluations and responses in interviews include:

'I didn't even realize I was reading.'

'It was awesome and I'm sad that we have to do lame worksheets that don't teach you anything [now].'

'I can understand more difficult words.'

'AVAILLL - it was absolutely excellent. I am speechless!'

'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.'

Teachers were also uniformly enthusiastic about the programme and its impact on student motivation and interest.

'We all loved doing it and I'm not looking forward to going back to normal programme.'

'I've noticed a huge increase in their vocabulary. I have five children who are the lowest of Year five and I've noticed this increase has been amazing for those children. They're using really interesting words.'

Conclusion

A key recommendation from a New Zealand Education Review Office (ERO) (2012) report on priority learners suggested that school leaders need to investigate and introduce new practices known to accelerate progress and to ensure that the impact on their students is assessed accordingly. Instances where school leaders and teachers have dared to be innovative and creative in their response to 'at risk' learners are particularly highlighted (ERO, 2012). Most children have already had extensive experience with television and digital communication technologies on entry to school. Recent research has indicated that most successful schools work within the culture and understandings that young students bring to school (Bishop, 2010; ERO, 2012).

Using media strategically, as demonstrated by the AVAILLL program, promises to provide one potential tool for teaching literacy skills and strategies that

have proven to be difficult to teach for a substantial segment of the population (Van den Broek, Kendeou, & White, 2009). We suggest that the use of moving image in the classroom has the potential to bridge the gap between home and school literacies, by providing meaningful learning not only in literacy but with possible spin-offs for other curriculum areas and provide one more tool in the teacher's kete.

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