“Making Time” for Reading: Factors That Influence the Success of Multimedia Reading in the Home

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Research indicates that electronic talking books (ETBs) can encourage and help children learn to read.

Many children love computers, and there has been much speculation and research about how educators might capitalize on this through the application of information and communications technologies (ICTs) in elementary education. In terms of literacy education, there is a growing body of research showing that electronic talking books (ETBs) can help children learn to read through support features offered, such as narrations, feedback, and sound effects. ETBs can also encourage children to read (Glasgow, 1996/1997; Passey, Rogers, Machell, & McHugh, 2004), although it has been acknowledged that research on literacy and ICT still has some way to go (McNabb, 2005).

We, the authors, decided to investigate what would happen if ETBs were used alongside or instead of traditional basals and library books for home reading as a means of encouraging reluctant readers to engage in reading at home, because it is established that reading at home is linked to higher achievement in reading (Allington, 1977, 2006). Further, family literacy is an important facet of children's literacy learning, and there have been calls to build bridges between home and school literacy practices. Edwards (2006), for one, has called for more research into the area of technology and home literacies.

The main aim of our project was to discover what factors influenced the implementation of ETB home reading programs; we wanted to learn what the students, teachers, and parents involved thought about this option for home reading, what barriers were perceived, and what factors appeared to facilitate the implementation of the program. Three schools in Australia participated in this 10-week project, and 41 reluctant readers were involved. Students in middle and upper primary (elementary) school were the focus, because these students often experience a slump in reading interest.

The study is significant in that it resulted in the identification of several facilitative and inhibitive factors that may be used to inform such interventions. That is, to maximize the likelihood that ETBs as home reading materials encourage reluctant readers to read at home, there are certain pitfalls to be avoided and positives to capitalize on.

What Are Electronic Talking Books (ETBs)?

ETBs are texts on CD-ROM or the Internet that feature not only the written word but also multimedia elements such as animations, narrations, music, and video. ETBs vary in the multimedia elements they include, although most have illustrations and some animations and all have text narrations. Some have text highlighting to help readers follow the narrator’s reading, which may highlight individual words, phrases, or sentences. Users have a degree of control over the features they will access, such as whether (or when) to listen to narrations or click on hot spots that activate animations.
Rationale for Using ETBs to Encourage Reluctant Readers to Read More

Features of ETBs that enhance their motivational value are many. First, the support that they offer, such as text narrations and animated illustrations, can make reading easier (Bus, de Jong, & Verhallen, 2006; Labbo, 2006) and ensure success for readers who struggle somewhat or who lack confidence; this aspect was highly relevant in our study, as many of the participants did not perceive themselves as good readers. Also, ETBs can allow students access to more difficult texts that they may not otherwise be able to read successfully, opening up possibilities of reading texts that are more age-appropriate and interesting.

Because of the computer's ability to provide pronunciation of words, or to read aloud with fluency entire sentences and texts, readers can concentrate on meanings rather than being hindered by decoding and fluency limitations (McKenna, 2002). Research evidence is available to show that ETBs can facilitate comprehension through the use of narrations, illustrations, and some animations (Doty, Popplewell, & Byers, 2001), and it follows that increased comprehension should promote interest and motivation to read. Byrom (1998) has pointed out the benefits of audio-books, which are simply audio recordings of books to which students can listen as they read the hard copy book. Benefits include exposure to print, visual word recognition, the removal of decoding barriers, and the stimulation of reading for pleasure. Byrom carried out a 10-week study in which reluctant readers used audiobooks and concluded that participants found this experience pleasurable and increased their confidence. Because ETBs also involve listening to a narration while reading the printed text, we hoped that similar benefits would arise in this context.

The interactivity and degree of user control afforded by ETBs is also motivational for many students; control, choice, and active participation are known to enhance motivation in a variety of learning contexts because they cater to individual needs and interests (McInerney & McInerney, 2002). Furthermore, the dynamism inherent in video, animation, and sound seem to be appealing to today's students, who are often used to the action and visuals inherent in TV and video games. Although books are sometimes thought to be a little “dorky” and uncool by students (Baker, 2002), especially boys, texts that are computer based are less likely to be perceived in this way (Oakley, 2005).

Embarrassment can be a barrier to students' motivation to read; students can experience social discomfort when they struggle in reading contexts. Because computers can offer a relatively private context in which to read (especially if headsets are used), embarrassment can be minimized (Hasselbring, Goin, Taylor, Bottge, & Daley, 1997). This may help students “save face,” even in the home context.

Simply hearing someone read interesting texts aloud with expression and enthusiasm is in itself motivational, not to mention beneficial for reading and vocabulary development (Cunningham, 2005). Some students are not read aloud to very often, due to parents and teachers having very busy schedules and, perhaps, not realizing the benefits of reading aloud to older students. Indeed, some parents are not able to read fluently. Because of the benefits of being read aloud to, we reasoned that having students simply listen to the ETBs would be preferable to them not engaging with written texts at all in the home context, although we hoped that they would read along too.

Rationale for Focusing on Home Reading

There are many pragmatic and ideological reasons for encouraging students to read more in the home context and for enlisting parents as partners in their children's learning. Darling (2005) suggested that it is empowering for parents to be involved in their children's schooling, and research shows that family literacy programs (Cook-Cottone, 2004) can definitely enhance children's reading performance.

Another reason for our focus on the home included the desire to bridge the gap between home and school literacies. Although it is acknowledged that all home literacies are important and valid, and it was certainly not an aim of this project to detract from existing family practices in any way, it was thought that ETBs may be an additional option for children and their families.

Finally, we hypothesized that there may be more spare time available at home than at school for children to engage in recreational reading; the school timetable in Australia is crammed and allows relatively little time for students to read for pleasure,
although many schools in Australia, including the participating schools, still allow some time for sustained silent reading. We also thought that the home environment might be quieter and less busy and therefore more conducive to engaging in reading.

The Reluctant Reader

The notion of a reluctant reader is admittedly somewhat difficult to pin down. The reasons for students’ reluctance to read vary. Sometimes reluctance is rooted in reading difficulties, but it is often due to a lack of interest in the text or in the act of reading, and may have little to do with reading ability (Worthy, Patterson, Salas, Prater, & Turner, 2002). Home backgrounds and parental influences are often a factor in determining children’s interest in reading. It is beyond the scope of this article to discuss in detail the factors that contribute to reading reluctance. However, existing research shows that factors including gender, reading ability and confidence, sociocultural context, text availability, lifestyle factors, and many others affect reading behaviors and attitudes (Baker, Scher, & Mackler, 1997; Guthrie, 2001). Some readers are reluctant simply because they are not “turned on” by available texts (Worthy, 1996).

For this study, a reluctant reader was defined as someone who showed little enthusiasm for reading in class (according to teacher reports), did not take many (if any) classroom or library books home, and spent significantly less time than average reading at home. The term reluctant reader, in this instance, does not include students with reading disabilities, although participating students were not high-achieving, confident readers.

Participating Students

We chose the 8–11 age group as the focus for this project, because this is when there is often a slump in interest in reading (Brozo, 2005; Pressley, 2006). Moreover, in Australia, there is an emphasis on early intervention, and struggling and reluctant readers in Year 4 (ages 8–9) and above do not tend to receive as much intervention as do younger students.

Furthermore, some research suggests that there may be disadvantages in using ETBs in early literacy contexts, as young students may become overdependent on support features offered, such as pronunciation of words (Lefever-Davis & Pearman, 2005). This is another reason for our focus on slightly older students, who had already mastered most basic skills of reading, such as identifying and decoding high-frequency words.

Participating students came from various socioeconomic backgrounds, with one school being in an affluent area, another in a middle income area, and the third in a lower income area. In this study, teachers were asked to nominate students who did not have reading disabilities. Boys and girls participated, although there was a slightly higher number of boys (17 girls and 24 boys).

Students nominated as reluctant readers (as defined previously) by their teachers were invited to join the study. Their status as reluctant readers was verified by researchers before the commencement of the study through the use of the Elementary Reading Attitude Survey (ERAS; McKenna & Kear, 1990) and a semi-structured interview, which asked how long they read at home each week, including school readers, library books, comics, newspapers, the Internet, and magazines. Fifteen percent of the students reported that they read for ½ hour a week or less, and 51% read for 1 hour. Twelve percent read for 1½ hours weekly, and 12% read for 2 hours. Only one participant reported reading for more than 3 hours per week. The students’ ERAS scores were generally low, with reading rarely being seen as a pleasurable activity.

Through the interviews, it became apparent that participating students perceived that they had not enough spare time in their lives to allow for more reading at home, because they engaged in many activities such as sports, watching TV, and playing games. We wondered if the use of ETBs might encourage them to reprioritize their out-of-school activities and make time for more reading. Compared with Australian students as a whole, who, on average, read for pleasure for 3.55 hours (boys) and 4.3 hours (girls) per week (Australian Bureau of Statistics, 2003), our results for students’ engagement in home reading was low, with the majority (66%) of them reading for an hour a week or less. The sample students’ reading time was certainly not on a level that most Australian teachers would see as adequate or the norm.

The Software Chosen for This Project

The ETBs chosen for this project were Australian products that featured fluent readings by adult
narrators. Texts with a limited number of hot spots and animations were selected to avoid distracting students with these somewhat glitzy multimedia elements. In other words, educational software rather than “edutainment” software was selected, as we considered this type of multimedia text to be more considerate in that all features related directly to the telling of the main story (Labbo & Kuhn, 2000).

This decision was informed by a previous study by one of the authors, in which it was found that reluctant readers and readers with mild difficulties tended to play with multimedia features if available (such as animations, visuals, and sound effects) for long periods instead of engaging with the written and spoken stories. However, when less glitz was available, these same students were happy to engage with educational rather than edutainment ETBs, even electing to skip playtime and part of the lunch break to read them (Oakley, 2002).

Some of the ETBs selected featured comprehension quizzes, which we presented as optional extras. All selected CD-ROMs had at least 10 stories or non-fiction texts on them. Text length varied, with most being between 200 and 500 words. The software was appropriate for the age groups, although some of the selected texts were somewhat on the easy side. However, it must be acknowledged that slightly easy texts are appropriate for independent and recreational reading. Also, it is noted that assessing readability of ETBs can be problematic and complicated because of multimedia elements and support features offered (Oakley, 2002).

**Implementation of the Home ETB Reading Projects**

Before the commencement of the project, we conducted hour-long information sessions at participating schools. The potential benefits of reading ETBs were explained to participating parents and teachers, and software was demonstrated. Approximately 80% of participating students had at least one parent attend a session, in which parents and teachers were given the opportunity to ask questions and to try out software. Parents were also shown a parent feedback form, and were asked to complete one of these at least once a week with reference to one of the ETB texts that their children read. This process entailed sitting with the child while he or she read an electronic text, observing the child’s behavior, and then discussing the text with the child to gauge comprehension and enjoyment. The feedback form involved ticking several boxes but also allowed parents to add comments, if desired.

Each classroom, depending on the number of participating students, was given 1 or more boxes containing approximately 12–20 take-home packs. Each pack contained 1 CD-ROM ETB, parent feedback forms, and an instruction sheet we wrote to help students and parents install and use the software (most of the software did not require installation, however). Teachers were asked to assist students in choosing a CD-ROM each week and to remind them to exchange them on a weekly basis.

**Data Collection**

At the beginning of the project, each student’s reading attitude was measured using the ERAS (McKenna & Kear, 1990), and semistructured interviews were conducted to learn about their reading behaviors and attitudes. In addition, parents completed a survey we designed about their children’s reading behaviors and attitudes and also participated in semistructured interviews. The ERAS was not intended to serve as a pretest because we had no intention of administering a posttest to measure any change in attitude as a result of this relatively short intervention.

Throughout the implementation, parent feedback forms were collected at least once a week to monitor how the students were using and enjoying the ETBs. This feedback was also intended to enable teachers to assist students in choosing and using appropriate ETBs and, if possible, to engage students in classroom activities that would build on the home reading. In addition, we asked parents to note how long students spent reading ETBs each week. At the end of the project, after one school term (10 weeks), follow-up interviews were conducted with participating students, parents, and school personnel.

**What Did We Learn About the Use of ETBs as Home Reading Texts?**

**Students’ Responses**

Overall, participating students indicated that they enjoyed the ETBs and had read more than usual during
the 10-week period of the ETB home reading project, with 10% of them (self- and parent-reported) reading all of the stories on a CD-ROM each week, which would add up to at least two hours a week. Two of the students quadrupled their time spent on home reading.

It is acknowledged that the students were not always reading in the same sense that they would read a traditional book; indeed, occasionally, they simply listened to the narrations and enjoyed the pictures. Nevertheless, it seemed encouraging to us that these reluctant readers were engaging with (and enjoying) texts rather than TV programs and video games. Although they led busy lives and reading was not a high priority for them, they seemed to make some time for the ETBs.

Despite the students reporting that they spent more time per week engaging with ETBs than they had previously spent reading traditional books, four of the 12-year-old boys reported that they still did not really enjoy reading, even in an ETB context. The few negative comments received from the students about the CD-ROMs included the following:

- Uninteresting texts
- Not enough choice of CD-ROMs
- Boring voices
- Stories too short
- Not enough control over the speed of the computer narration
- Too easy or too hard

Also, a couple of students indicated that they preferred traditional texts because they could carry them around and curl up with them. Conversely, one boy said he liked reading on the computer because he didn’t have to “hold it up.” (See Table 1.)

Parents’ Responses

Although the students generally gave positive feedback about the ETBs, there was a range of parental responses (see Table 2). The majority of parents thought that ETBs had led to improvements in their children’s reading abilities and attitudes, although two stated that ETBs were undesirable because their children were not really reading. Parents’ perceptions of what literacy is appeared to influence their response. Indeed, one parent thought that his daughter should be reading words only, with no pictures or other support features whatsoever being made available. A couple of parents commented that home reading ought to be at a difficult level in order for their children to progress; they had little knowledge about the benefits of easier texts for enhancing fluency and enjoyment of reading.

Despite the parents’ diverse opinions about the value of ETBs, the general consensus was that their children had preferred reading these texts to traditional printed books. Positive parental comments such as, “Mine wouldn’t get off the computer once he started. It was really helpful” and “Loves it! There’s improvement,” were received, as were less enthusiastic ones, like, “Useless! The tape [computer] does it all for them. It’s not teaching them to read. It should not have volume.”

Two parents suspected that a “novelty effect” may have been at play, and one mother wondered whether extra attention from herself and her partner may have had a positive impact. These are valid points that must be considered. In general, though, parents did not perceive that ETBs had led to an increased interest in reading traditional texts for their children.
and, indeed, one parent expressed concern that ETBs might further turn her child off “real” books and do more harm than good.

There was a range of responses from parents regarding the implementation of the ETB home reading program. Several parents mentioned that doing the parent feedback form was difficult due to lack of time (even though this was a simple checklist with several boxes to be ticked). As a consequence, only about half of the parents filled in a form for each week of the term. Five of the parents reported that they had found the project rewarding because, for once, their children had enjoyed reading stories and nonfiction texts. None of the parents reported having technical problems relating to the computer or the software, which was somewhat surprising to us.

Facilitating or Inhibiting Factors in the ETB Home Reading Program

Factors that seemed to facilitate or inhibit the ETB home reading scheme were drawn from the interview data. These have been categorized into student factors, home factors, school factors and software factors, and are discussed in the following section.

Factors That Facilitated the Implementation of the ETB Home Reading Program

Student Factors. An important student factor was the students’ possession of basic computing skills, so very few computer-related problems arose, apart from one instance of a student not being able to get the audio working. Parents did not need to spend time helping students navigate around the programs. Another student factor seemed to be their interest in the topics of the texts.

Home Factors. It would appear that parents’ attitudes played a crucial role in the success of the program. Their conception of what reading is played a key role; parents who included new literacies, such as reading multimedia texts, in their conception of literacy appeared to be more enthusiastic and supportive. Conversely, parents such as the father who thought that using ETBs was cheating and not real reading were less likely to provide a supportive environment for reading ETBs.

In a couple of instances, family members who did not usually take much of an interest in the participants’ home reading became actively involved in the ETB reading. For example, one 9-year-old boy loved reading ETBs because it gave him the chance to sit on his father’s lap with a laptop computer. This provided a high degree of motivation for the boy. Younger siblings were often involved in reading the ETBs, which was an unexpected spin-off.

School Factors. The way in which the schools “sold” the ETBs appeared to be an important factor; one of the participating schools presented the scheme as an exciting opportunity to do a new kind of reading at home, and this proved to be motivational to the

Table 2
What the Parents Said About ETBs

<table>
<thead>
<tr>
<th>Parent</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>J</td>
<td>Loves it. There’s improvement (in her reading).</td>
</tr>
<tr>
<td>J</td>
<td>Definitely helped him. He used his brother’s laptop.</td>
</tr>
<tr>
<td>J</td>
<td>It was exciting and new.</td>
</tr>
<tr>
<td>J</td>
<td>The computer made it more fun.</td>
</tr>
<tr>
<td>J</td>
<td>His competitive nature was stoked.</td>
</tr>
<tr>
<td>J</td>
<td>Getting a new pack each week (was the best).</td>
</tr>
<tr>
<td>J</td>
<td>This was the first time ever she wanted to read without being pushed! She read and listened to it but she didn’t like the stories.</td>
</tr>
<tr>
<td>K</td>
<td>Really good.</td>
</tr>
<tr>
<td>K</td>
<td>Good to start with but then it wore off.</td>
</tr>
<tr>
<td>K</td>
<td>Still needed to push him to read.</td>
</tr>
<tr>
<td>K</td>
<td>No change, needed encouragement.</td>
</tr>
<tr>
<td>K</td>
<td>There hasn’t been any change.</td>
</tr>
<tr>
<td>L</td>
<td>Useless!</td>
</tr>
</tbody>
</table>
readings are highly beneficial for enhancing fluency (Samuels, 1979).

Factors That Inhibited the Implementation of the ETB Home Reading Program

Student Factors. Two students reported that reading on a computer was not enjoyable because they could not hold the computer as they could a book. Another response was that they were very busy and had other hobbies and interests that took precedence.

Home Factors. Inhibitive factors included not enough time or peace and quiet, parents being too busy to supervise and encourage, and students having to compete with other family members for access to the computer. Monitoring home reading (computer based or otherwise) was sometimes perceived by parents as onerous. Also, as noted previously, a small minority of parents did not consider reading ETBs to be reading or did not appreciate the potential benefits of talking books, despite benefits being outlined in the introductory session at the school. This ties in with Baker et al.’s (1997) findings that many parents view literacy learning as “work” and “serious business,” particularly in the case of lower income parents. As a result of this project, we have devised some information pamphlets for parents to help redress this problem.

School Factors. There was not really enough involvement by classroom teachers, due to the project being taken up by deputy principals. This led to fewer links between home and school reading activities. In addition, some teachers did not appreciate the potential benefits of ETBs, such as the benefits to students of hearing models of fluent reading, following along with highlighted text, and reading easy texts. An information leaflet for teachers has thus been developed. Finally, schools that did not “sell” the project to the students and organize prompt and regular exchanges of ETBs did not appear to engender as much enthusiasm among students and parents.

Software Factors. The fact that the software was easy to use and did not require much technical assistance from parents helped the project run relatively smoothly; no parents commented about having to help children navigate through the software or install it. In fact, software did not require installation, which was also an advantage from a copyright point of view (software requiring installation onto the hard drive would have had to be uninstalled after use to comply with the software licensing regulations).

As is the case with traditional printed texts, students’ interests varied, and some were disappointed that their favorite genres and topics were not available in the ETBs provided. However, the software available did include a variety of story genres, including humor, mystery, and animal stories. Nonfiction genres included those commonly taught in Australian schools, such as reports, explanations, procedures, and arguments. Parents reported that children appeared to enjoy most of the ETBs they took home, as evidenced by positive body language (smiling, making comments) and reading the texts to the very end. On several occasions, students voluntarily read texts more than once. This is positive, because repeated
and sustain motivation. Teachers could also provide pre- and postreading activities in the classroom.

**Software Factors.** There is a relative shortage of appropriate and affordable ETBs available in Australia, and this proved to be a drawback. Students would have liked a wider choice of topics, genres, and difficulty levels. This problem may be alleviated somewhat by getting older students to create some ETBs. Fredrickson (1997) has shown that it is a fruitful exercise to get older students to write interactive books for younger students, and this can be done relatively easily using software such as Word or PowerPoint. (See the “Making Talking Books How to Kit” at www.nwt.literacy.ca/famlit/howtokit/talking/talking.pdf.)

Students indicated that they would have liked more control over the software, for example, to be able to skip parts, to speed up or slow down narrations, or to switch off animation and sounds. Furthermore, boring narrators emerged as an inhibitive factor. It may be advantageous if software producers could provide a choice of narrators (male, female, children, etc.).

As mentioned, the issue of readability of electronic and multimedia texts is problematic (Oakley, 2002). Parents and teachers or coordinators found it difficult to judge whether ETBs were at an appropriate level for participating students. Some were of the opinion that home reading ought to be challenging, and did not like the thought of students reading easy texts. This is contrary to research that shows that the reading of easy or independent level texts can be beneficial to enhancing fluency, comprehension, and positive attitudes toward reading (Hudson, Lane, & Pullen, 2005).

To help students choose good, appropriate ETBs, they could be given opportunities to preview them before taking them home, perhaps on a library computer. At the very least, reviews could be written by peers to enable potential readers to make a decision. ETB evaluation checklists, such as that proposed by Shamir and Korat (2006), are useful tools and can help teachers choose ETBs. Similar checklists could be devised for students to use.

**Concluding Comments**

Because the project ran for a relatively short time, it is not possible to come to definite conclusions about the efficacy of ETBs as a means of stimulating students to read more at home. Not surprisingly, given the time frame, there did not appear to be an improved attitude toward or increased motivation for reading traditional printed texts. However, the majority of the participating students in this study did read more when ETBs were taken home for home reading. For a list of resources pertaining to ETBs, see Table 3.

Limited links between home reading and what happened in the classroom were somewhat disappointing, if understandable, features of this particular implementation of a home ETB reading program. This could be overcome by classroom teachers being fully involved from the start, even if in collaboration with a coordinator such as the school librarian or deputy principal. Teachers and parents need to liaise about students’ learning (Darling, 2005), and this proved to be a difficult aspect of the implementation for a range of reasons, such as lack of parental time and limited understanding about how children learn to read. Parents need specific suggestions and clear guidelines about how to help and encourage their children to read at home (Padak & Rasinski, 2007), and this is also the case when assisting children to read ETBs at home.

Although this project was exploratory in nature and there is clearly much more research to be carried out in this area, we have identified several pitfalls and promising practices in implementing ETB home reading programs, which will enable such projects.

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**Table 3**

**Links to Online e-Books**

- **Woodlands Junior School:**
  www.woodlands-junior.kent.sch.uk/Games/educational/onlinestory.htm#talk
- **Read On Audio Stories (audio stories for elementary school children):**
  www.beenleigh.eq.edu.au/requested_sites/audiostories/index.html
- **Ziptales (subscription needed):**
  www.ziptales.com.au
- **CBeebies Stories (for younger children):**
  www.bbc.co.uk/cbeebies/stories
- **Awesome Talking Library (Awesome Talkster can turn any web page into an ETB, with text highlighting):**
  www.awesomelibrary.org/Awesome_Talking_Library.html
to be fine-tuned. Once such implementations are fine-tuned, it will be worth turning our attention to measuring accurately the extent to which they can encourage reluctant readers to read more at home.

Armed with insights gained from the implementation described, we hope to run a fine-tuned second implementation, this time with a longer duration. We will place more emphasis on measuring students’ time spent reading, nature of engagement, and extent of enjoyment. If ETBs “ignite the flame” in even a modest percentage of reluctant readers, they are surely a worthwhile addition to our repertoire as literacy educators.

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Cunningham, P. (2005). “If they don’t read much, how they ever gonna get good?” The Reading Teacher, 59(1), 88–90. doi:10.1598/RT.59.1.10


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