The Lure of Podcasting

“In what ways can including podcasting with KPE in teaching and learning activities contribute to reading outcomes?”

eFellowship Project
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Abstract:

This participant case study explored the use of a 21st century technology to raise student achievement outcomes in a traditional literacy. The technology provided the opportunity for students to have their voices heard by an authentic audience, and was used in the context of a strategically constructed teaching and learning cycle. It was never presumed that the technology itself, podcasting, would significantly contribute to reading outcomes. It was expected that the interest and enthusiasm engendered by using it would lure the students to participate in a programme that required; reading and understanding books, reading scripts, and interaction with text-based technologies such as blogs and emails.

There are a number of reading programmes being successfully used in New Zealand schools to raise students’ reading ability. The instructional reading programme at Pt England School is based on Dr Gwenneth Phillip’s ‘First Chance’ programme. The KPE (Korero Pt England) podcast was strategically designed to lead students through teaching and learning activities which would require them to use the reading skills they have learned in authentic contexts. The students were motivated to participate by opportunities to use the technology and interact with wider audiences, if they were not intrinsically motivated by reading.

This study observed that the sample group of 27 students involved in podcasting with KPE significantly improved their reading habits and their attitude to reading books during the course of the study. They also had improved reading ability (accuracy, comprehension and fluency) as measured by standardised testing.
Introduction:

I have been teaching at Pt England School, a Decile 1a primary school in Auckland, since 1991. During this period I have had a variety of part time and full time roles, mostly in the areas of Reading, GATE and ICT. This includes teaching as a full time ICT specialist for 5 years and facilitating the Pt England ICTPD contract for our cluster of schools from 2004 - 2006.

From September 2005 I have been involved in a podcasting project, Korero Pt England (KPE), which is based around students reading New Zealand fiction and presenting their book reviews to a global audience through a podcast hosted on iTunes USA. This has been a motivating process for our senior students and seems to have led to a higher degree of engagement in the reading process than many of the traditional reading activities carried out in classrooms.

Pt England Primary School is located in Glen Innes, Auckland, New Zealand. I have chosen to highlight three areas of the most recent report from the Education Review Office (2006) which are pertinent to this research:

1. The make-up of the school community (diverse students from low socio-economic backgrounds)
2. The participation of the school in a Schooling Improvement Initiative
3. The school’s well established eLearning capacity, both integrated in the classroom and through the creation of school-wide and Auckland-wide television programmes (PE.N.N. and schoolTV)

The ERO report says:

“Trustees and staff of Pt England School provide a caring educational environment for children of the local community, who are mainly Pacific and Māori families. The principal and senior managers provide effective leadership. They have built a supportive school culture that is conducive to a sense of belonging and emotional well being. Strong relationships between the school and its community are evident....

The school is a lead school for the Ministry of Education ‘Tamaki Achievement Pathways’ initiative, which supports the school in the use of assessment data to measure and promote student achievement. For several years senior managers have had a strong focus on improving children’s ability in reading and have been developing teaching strategies that are appropriate for the students attending the school. The senior management team has supported teachers to implement teaching practices introduced by Dr Gwenneth Phillips, including the practice of teachers working regularly with groups of three children to improve their reading....

Children’s literacy development is well supported through the use of ICT. Authentic tasks provide children with opportunities to develop and practice literacy skills. Students prepare and distribute audio files over the internet (podcasting) and plan, prepare and present television programmes for school and national broadcasting. These real-life activities develop students’ organisational skills and promote their learning through increasingly complex oral and written language.”
The Story So Far:

This research project has its beginnings in July 2005 when I attended the NECC conference in Philadelphia, USA. At this conference there were a handful of sessions discussing the use of podcasting in education, with a particular focus on tertiary education. I attended these sessions out of curiosity because I had begun listening to some podcasts. I had never considered using this technology in education because the technical process was too complex. At this same conference Apple Computers chose to launch a new version of their music database software, iTunes v4.9, which included a simple podcast aggregator. This meant that anybody who knew how to use iTunes could now subscribe to podcasts without needing further technical expertise.

At this point I began to sense possibilities for the use of podcasting as a teaching and learning activity, and as another vehicle for our students to gain an authentic audience. The discussions in the school management team in the term prior to this had been focussing on the literacy (under) achievements of our students and ways to continue to address this. Podcasting appeared to have the capacity to be used to target this.

I wrote some ideas down on the flight home and when I arrived back at school asked if any teachers would be interested in developing the concept further and piloting it in their classrooms. Otalani Meleisea, who was team leader of the senior syndicate and taught a year 6 class, and Sandy Erick, another teacher of a year 6 class, were enthusiastic starters. We created an informal committee with Otalani and Sandy implementing the project in the classrooms with support from their ICT lead teacher, Andrea Tele’a. The principal, Russell Burt, upskilled a group of senior students technically on the use of the recording equipment, and I became the publisher and took on the challenge of learning how to create a feed and publish it through iTunes USA.

The teachers played their students a range of podcasts from schools around the world (none from New Zealand were available at that time) and the reflection sessions following brought out a number of suggestions from the students for KPE, including the need for a stinger or jingle that would give KPE a unique identity. Several options were tried and the result was the original composition “You’re listening to KPE” rap with a beat box, which has been commented on (and copied) by listeners around the globe. A logo design competition was held amongst the students and the winning logo, designed by Paul Pamaka, included the by-line “We want you to hear what we have to say”.

We decided to call the podcast ‘Korero Pt England’, using the Maori word for “to chat or to speak”, and that it would be commonly known as KPE. The context for KPE was to produce a book review, using an emerging technology, that would engage the audience and motivate our students to read books. We chose to focus on New Zealand fiction for a variety of reasons, a major one being the ability to create something unique which may be of interest to a global audience.

Many other education podcasts created by students have a much wider scope in content and style of presentation, often changing from show to show. One of the constraints of working in a Schooling Improvement environment is the need to target innovation and strategies specifically in order to raise student achievement outcomes. Research shows that a whole language approach to literacy is ineffective with decile 1 students, and particularly with Maori and Pasifika, but a programme designed to meet their needs can be highly effective (Nicholson,1999; Phillips, McNaughton, MacDonald, 2002). This is affirmed
by the eLearning Action Plan for Schools (2006 - 2010 p10) which states that, “...it is the teacher’s strategic and deliberate planning of the learning and use of ICT that will ensure the desired learning takes place...”.

We chose to use a talk-show format with two people involved in the recording - a person acting as the host who is referred to as the ‘DJ’ and the interviewee. Keeping it to two participants made it technically easier to record using the gear we had available at the time. A third person was involved in the podcast, a technician. At that time recording a podcast was more technically difficult than it is now, and it was important to have a student who took charge of the recording to allow the podcasters to concentrate on their interview. Two years down the track the decision over whether to use a technician or not is up to each podcaster, and often the third person is there as a voice coach rather than a technician.

We decided to publish KPE as a weekly show as our experience with television over the years had given us a number of insights:

- Being regular, reliable and consistent is important to maintain a loyal audience
- A daily show is a huge undertaking and we already have that pressure with our daily television show, PE.N.N.
- Monthly episodes have too long a gap in between.

We set out to involve as many students as possible producing podcasts, with the best one each week being published on iTunes and the rest being available on our school network.

Between us we created a template for the script to ensure it had a recognisable profile (important from a marketing perspective) but more importantly that it included elements of a narrative structure essential to reading comprehension: plot, characters, setting and theme (Dymock & Nicholson, 2001). We also included a section for adding a discussion of an aspect of ‘kiwiana’ in the podcast, hoping that this would attract listeners from other countries. Our pilot episode, which was never published, was recorded by two ex-students of Pt England School who were now high school students. They created a lively and engaging episode which modeled the concept of the show and motivated the Year 6 students to embark on their own first attempts. This was very different from our experience with television, which was much easier to implement because students have already spent years as viewers before they were asked to make their own videos. Interestingly, since that time a number of schools around New Zealand have told us that they use KPE in the same way - as an exemplar to inspire their own podcasting efforts.

Our initial expectation was that this project would take some time to launch. Everyone involved put a lot of energy into it and with the support and inspiration provided by their buddy classes, the first episodes went to air in September 2005. Although podcasting was selected as word of the year in 2005 by the Oxford University Press,( publishers of the New Oxford American Dictionary) it was still a very new technology and most people had little idea of what we were doing or trying to achieve. Our first indication that this was something much bigger that we had imagined was when we were contacted by Dave Jobbings from ‘Podcasts for Educators’ in England who was setting up an online data base of education podcasts and featured KPE on it. At the same time we were surprised to see our podcast designated a “Top Podcast” by iTunes USA Music Store.

While gaining an authentic audience was one of the goals for KPE, we had some very foundational curriculum objectives: to increase our students’ level of engagement in literacy and improve outcomes in reading, writing, speaking and listening. We were able to
observe this happening and the classroom teachers often spoke of the things they were noticing; an increased output in writing (for the students in 2005 a glance through their written language books showed a greatly increased volume of writing since the students had begun writing scripts for podcasting), a new motivation to read - particularly for boys, the modeling of English for NESB students, the opportunities for listening created, and the improvement in oral language which was apparent by listening to successive podcast episodes. However everyone involved was so busy with the daily requirements of teaching that no-one had time to measure the effects on student outcomes in a consistent way.

What I wanted to find out:

We were coming under increasing scrutiny from a variety of sources: those within the school wanting to know what this activity was really doing for our students; a visit from the Education Review Office (ERO); various branches of the Ministry of Education; media, and from other schools around New Zealand coming to visit to see podcasting in action. It was at this time that I successfully applied for an eLearning Fellowship from the MoE to be released from my duties for a year to investigate “The Lure of Podcasting”.

The main purpose of this research is to examine how the use of a 21st century technology, with the opportunity to have their voice heard by an authentic audience within a strategically constructed teaching and learning cycle, contributes to the reading outcomes of the students involved in the project. The research question is, “In what ways can including podcasting with KPE in teaching and learning activities contribute to reading outcomes?” Sub questions to this are:

• “In what ways can including podcasting with KPE in teaching and learning activities contribute to changes in reading habits?”

• “In what ways can including podcasting with KPE in teaching and learning activities contribute to changes in reading attitudes?”

• “In what ways can including podcasting with KPE in teaching and learning activities contribute to changes in reading fluency?”

• “In what ways can including podcasting with KPE in teaching and learning activities contribute to changes in reading ability?”
Definitions:

Podcasting
Podcasting is digital audio on the internet accessed via a subscription process known as RSS. Podcasts can be audio only, enhanced with pictures or video based. What makes them distinct from other such content on the internet is the subscription process - once you subscribe it comes to you when you open your podcast aggregator (such as iTunes). If you have to visit a website to locate it each time, then it is not a podcast.

Podcasting with KPE
Podcasting with KPE is a much narrower concept than podcasting in general. When we talk about podcasting with KPE we are talking about the specific programme we have intentionally designed to hook students into literacy: providing them with an engaging technology to use which requires them to participate in some traditional literacy practices as part of the process. In other words, to produce a podcast episode, KPE requires that students read a book and write about it. Thus the teaching and learning activities mentioned are more descriptive of a literacy programme than a technology programme. The diagram (above right) demonstrates how KPE is used in teaching and learning activities:

1. The students have opportunities to listen to podcasts, sometimes as a whole class, sometimes in groups and sometimes individually.
2. Reflection occurs in a variety of ways, formally and informally. Formal reflection can be teacher-led or may involve students recording their reflections on a worksheet designed for this purpose. Informal reflection can occur orally (eg. peer to peer, adult to student) or in written form (eg. blog comments, emails). Some of this reflection comes from the listening audience outside of the school with the students receiving emails from listeners around the nation and the world, and from time to time from authors who have noticed their work being podcast. In July we added a blog to support KPE. Most of the comments on the blog come from staff and students at school, but there are an increasing number of comments from outside as well - including the Mayor of Auckland who has subscribed to KPE and authors who have found the podcasts.
3. Reading a New Zealand authored book can occur as part of the class reading programme, in the library, Sustained Silent Reading (SSR) sessions, at home, during school or outside of school.
4. Summarising the plot has evolved over time to being a process where the students try to write in 10 bullet points (or less) the main ideas from the plot. They have a worksheet designed for this purpose if they choose to use it or they may write in their books.
5. Writing a script for some students is an independent process, for others done in collaboration with their partner (who will be the DJ for the podcast) and for
others is done with a teacher. This year there has been more opportunity for students to write their script with a teacher because I have been available to support them in this way. It is at this stage of the process that students have a script ‘conference’ with a teacher. The focus of the conference is on the literacy elements of the podcast; what the book is about and the underlying themes, the written script, asking open-ended and penetrating questions, personalising the script to ensure the student voice comes through, and devices to engage the audience.

6. Rehearsing the podcast script requires the person who read the book (interviewee) and the DJ to get together and practice their oral reading. Their aim is to make the podcast sound as relaxed and unscripted as possible, while speaking in a clear voice so that their overseas listeners can understand what they are saying.

7. Recording the podcast involves a computer, a microphone and a quiet place to record. It is not possible to make a quality recording in a busy classroom, so they either record outside in the corridors or book a time to use the purpose built podcasting booth (an enclosed area at the end of their corridor).

8. Editing the podcast is the opportunity to remove mistakes and sound glitches, equalize sound levels and produce the highest quality of sound recording possible. It also involves taking photos to include in the podcast and adding the stinger and links to websites through embedded URLs.

9. The publishing process involves creating the feed for the podcast episode and uploading it to iTunes. Although it would be possible to teach students to do this, it is the part of the process I have always done for several reasons. Initially it was because when we started out it was technically difficult and involved using XML. Although there are simple solutions available now, KPE is still being podcast using Feeder - because it works! We were blocked from uploading podcasts to iTunes by our internet provider (SchoolZone), so I had to do it at home through my own internet account. Also with students working independently on much of the process it was found to be helpful to have a teacher as part of the process at the publishing stage.

‘Reading Outcomes’
for the purpose of this study is researched under several categories:

1. Habits - the quantity of books being read, the frequency of reading occurring, changes to reading habits at home and the complexity of the books being chosen to read.

2. Attitudes - how students feel about reading books and which aspects of the KPE podcasting process are most influential in any change of attitude

3. Fluency - the ability to read phrases and sentences smoothly and quickly, while understanding them as expressions of complete ideas (Logsdon, 2007)

4. Reading Ability - this is most often expressed as a reading age and in this study incorporates two aspects; how well the students understand what they are reading (comprehension) and how accurate their reading is (decoding).
What does the Literature say?

This study focused on the use of an emerging technology to lure the students into participating in a teaching and learning cycle of activities designed to improve literacy outcomes, including reading. With that in mind this literature review looks at:

- Podcasting as a technology
- Reading outcomes
- Podcasting with KPE

Podcasting as a technology

Podcasting is very much a product of the twenty-first century. It was around 2004 that it started to become accessible to the general population. Prior to that it was predominantly known only to a small group of enthusiasts, often bloggers. The story of the history of podcasting is very much a work in progress and can be tracked on Wikipedia as it is being written (and rewritten). As Brittain, Glowacki, Van Ittersum & Johnson (2006) say, “Podcasting is a new technology with an evolving definition. The term is generally considered to be derived from combining the words iPod and broadcasting. Podcasting involves making audio and video files available for download on a routine basis via subscription.”

However, it is not its specific technical capability that is attracting an increasing number of educators’ attention so much as what they envisage it can contribute to teaching and learning opportunities. When writing as one of the early observers of podcasting Dubber (2005) said, “The shift to digital and computer-mediated means of consumption and production, while not without its problems, has generated new possibilities for community and human interaction.”

Radio, which had played a significant role in New Zealand education in parts of the 20th century, had largely gone out of fashion by the turn of this century. Due in part to the technical capability of podcasting, and the distinctive iPod which signalled its arrival, audio was rescued from relative obscurity and quickly re-established a prominent place in the digital technology revolution of the early 21st century. “Audio (had) been neglected and underused in recent times. Today, audio is experiencing a renaissance because of the spread of portable audio players, broadband internet and software tools” (Schlosser & Burmeister 2006 as cited by Edirisingha, Rizzi, Nie & Rothwell, 2007). Educators are beginning to sense new possibilities for how audio can be utilised in schools.

Podcasting has been viewed as a disruptive technology in education. This is intended as a positive term and was first coined by Clayton M. Christensen in 1995 (k12wiki, 2006). Wikipedia defines a disruptive technology or disruptive innovation as a technological innovation, product, or service that eventually overturns the existing dominant technology or status quo product in the market. Anyone seen a Walkman lately, or tried to find a functioning cassette player?

Quentin D’Souza in the k12wiki (2006) explains that an aspect of podcasting’s disruptive capacity is that it, “makes the creation and distribution of audio and video content available to an author, making broadcasting them available to all without restrictions from government regulation, geography, or time availability.” An example is given, “Podcasts
have the ability of being used by students to present information to others without having to be there face to face.” The power has shifted from the content being created and distributed by external agencies, to being in the hands of the individuals. For students, this means they can produce what they want to and distribute it how they want to. For the audience this means they can listen to it when they want to, where they want to and how they want to.

Wes Fryer (2005) on his own podcast and in the show notes available on his web page notes that, “Under certain circumstances, podcasting can fundamentally transform the perceptions of students about school, their roles in the learning process, and the value of their daily activities shared via podcasts with a global as well as local audience. Podcasting can be used constructively as a disruptive technology in our quest for literacy.” He lists five aspects of podcasting which make it disruptive: the ability to publish audio at will; the dramatic expansion of potential and authentic audience; the disintermediation of the traditional "RCA-casting" means of production; authentic audience and potential for interactive communication.

These possibilities, often realities, have led Tavales & Skevoulis (2006) to note that “Podcasts are simple, effective, dynamic tools that will change the ways that students and educators interact in the classroom and in cyberspace.” Educators and students who are using podcasting frequently agree with this sentiment. (Dlott, 2007; Richardson, 2006) With this technology available educators have the opportunity to completely rethink how they ‘do’ teaching and learning with students.

As a relatively inexpensive, and uncomplicated, technology the potential for podcasting to bridge the digital divide (Wikipedia -this term refers to the gap between those people with effective access to digital and information technology, and those without access to it) has been recognised. Chan & Lee (2005 p65) say that, “Podcasting provides a low-cost, low-barrier tool for disseminating content across the Internet.” In contrast to multi-media authoring and digital video production, podcasting (particularly audio only) can be experienced as a much less threatening technology.

Dr Don McCubbrey also believes podcasting has far-reaching educational potential for disadvantaged communities, whether it’s inner-city schools or impoverished developing nations. “Imagine if a class in Nairobi could listen to podcasts from other countries. Podcasts can democratise learning,” he says (Lum 2007).

The early recognition of the potential value of podcasting in education came from universities. Perhaps this is because initially the technology was much more complex, or perhaps it is simply as Oliver (2001) states; “There has been a global movement to implement modern education technologies in universities.” The university students themselves were early adopters of this technology for their personal use. By 2006 Lum writes, “All over the country, college faculty and administrators are plugging themselves into one of the newest—and hottest—technologies in an effort to better connect with students...National studies show that more than 80 percent of college students own at least one device that can download and play recordings.” This makes it a highly viable technology to use with university students.

Media attention has been directed to the use of podcasting in universities (Lane, 2006) and across the world we were made aware that in the August 2004, Duke University distributed iPods to all 1,600 of its entering first year students (Belanger, 2005; Carlson, 2004). Duke saw the iPod not only as a music player, but also as a tool to disseminate
course content, a recording device for classroom and field use, a study support tool, and a file storage and transfer medium (Belanger, 2005).

Use of the iPod in higher education has now spread to dozens of universities and hundreds of applications (Pascual, 2007). The ability to combine video and audio in the newer iPods has increased the range of instructional uses. A common theme in all the accounts of integrating iPods in the classroom is the ease with which faculty and students can generate and distribute content. (Brookshire, 2007)

Early concerns were expressed that recording lectures and distributing them via podcast would mean that the adoption of this technology could lead to higher rates of absenteeism; however, a strong majority of students reported that the availability of podcasts had no impact on their attendance. (Lane, 2006; Bongey, Cizadlo & Kalnbach, 2006)

Where educators have begun to use podcasting in more ways than simply transmitting recorded lectures, feedback from students is enlightening. Edirisingha, Rizzi et al (2007) conducted a study with undergraduate students at Kingston University in the UK. They used podcasts as an integral part of student support activities. The Kingston sample of students enjoyed learning with podcasts because it was a ‘different way of learning’ – it was attractive and new. They perceived it as a mix between entertainment and learning which stimulated their interest in the subject. Their experience of learning with podcasts pointed to the possibility of carrying out formal learning through activities and mind-sets that are not generally associated with learning, but with entertainment and relaxation. Some of the words students used were ‘new experience’, ‘another way of learning’, ‘new way of learning’, ‘a kind of entertainment’, ‘relaxing’, ‘not really serious learning’ and ‘learning just happens’.” These researchers note that, “Podcasts have the potential of providing a more informal and engaging learning experience.”

While the universities blazed the trail, it was not long before primary and secondary schools began to explore the possibilities of podcasting. Early podcasts published included “Radio WillowWeb” (est. 2005) in the United states, Radio Sandaig (est. 2005) from Scotland, and Korero Pt England (est. 2005) from New Zealand. Two initial barriers to educators introducing podcasting with their students, fear of technology or complete ignorance of its existence, have been identified by Tavales & Skevoulis (2006). They say that this “has frightened away many prospective educators, thus robbing students of the opportunity to learn from not only listening to, but creating these podcasts.”

Students from Pt England School who present an overview of podcasting to weekly tour groups of educators visiting the school can verify the ignorance still apparent in 2007. As part of their presentation they ask how many people know what podcasting is. Very rarely does the resulting show of hands encompass every one in the room and it is often a fairly even divide. Tavales & Skevoulis (2006) go on to say that “This will certainly change as more and more educators become aware of the software’s simplicity and ease of use. They will then be able to appreciate its importance and begin to use it as an effective eLearning tool.”

The Ministry of Education in the eLearning Action Plan for Schools has highlighted a need for teachers to become confident and competent users of technology. “Effective teaching for all students will depend on teachers becoming confident and capable users of ICT and understanding how to integrate ICT effectively into the classrooms in order to achieve the desired learning outcomes for students” (MoE, 2006 p10).
The emphasis is still very much on the learning outcomes but new ways of teaching and learning are being called for when using new technology. David Warlick (2005 p210) says, “The simple fact is that twenty-first century tools do not work very well in twentieth century classrooms. Information, today, is different, and we have to be willing to rethink a lot about how we teach, what we teach, and even why we teach.”

Podcasting has become a buzzword since it was recognised as word of the year in 2005. The technology it is associated with has high recognition and desirability, especially among young people. But there is evidence coming out of education research to support the statement with which Warlick (2005 p286) concludes his book:

“The most important thing to remember about technology in our classrooms is that it is not about the technology. What gives the experience meaning is the information, and sharing information in ways that have power, that influence other people, that make all of our lives richer and more interesting.”

Reading Outcomes

When discussing reading outcomes for this research the context is that of low decile schools as Pt England School is a decile 1a school. School decile in New Zealand is related to socio-economic status. A school’s decile indicates the extent to which the school draws its students from low socio-economic communities. Decile 1 schools are the 10 percent of schools with the highest proportion of students from low socio-economic communities. (PISA, 2000).

When the KPE teaching and learning cycle was being co-constructed by teachers at Pt England School it was with an awareness of the learning needs and the cultural perspectives of our diverse group of students, and we endeavoured to create it with these in mind. We were also informed by the literature regarding the impact of pedagogy and teachers on student learning outcomes.

The starting point in the literature was the work of Adrienne Alton-Lee who was commissioned by the Ministry of Education to publish in March 2003 “Quality Teaching for Diverse Students in Schooling: Best Evidence Synthesis”. This work was primarily intended to “provide a source document to develop user-friendly and accessible versions of the information in consultation with, and for, teachers and policy makers” p21. Her summary found that “Quality teaching is identified as a key lever for high quality outcomes for diverse students” accounting for up to “59% of variance in student performance” p3.

The outcomes researched in this study were attitudes to reading, reading habits and reading ability (fluency, accuracy and comprehension). It is worth noting the 10 characteristics of quality teaching that Alton-Lee has identified as being linked to student outcomes as we believe they are evidenced in the KPE cycle:

1. Quality teaching is focused on student achievement (including social outcomes) and facilitates high standards of students outcomes for heterogeneous groups of students.
2. Pedagogical practices enable classes and other learning groupings to work as caring, inclusive, and cohesive learning communities.
3. Effective links are created between school and other cultural contexts in which students are socialised, to facilitate learning.
4. Quality teaching is responsive to student learning processes.
5. Opportunity to learn is effective and efficient.
6. Multiple task contexts support learning cycles.
7. Curriculum goals, resources including ICT usage, task design, teaching and school practices are effectively aligned.
8. Pedagogy scaffolds and provides appropriate feedback on students’ task engagement.
10. Teachers and students engage constructively in goal-oriented assessment.

John Hattie (2003) has also published evidence from a synthesis of over 500,000 studies into the influences on student achievement and he finds that after the 50% variance that the students supply themselves, the teachers make the biggest difference. In his inaugural lecture to the University of Auckland in 1999 Hattie makes the point that, “It is teachers that make the difference, but only teachers who teach in certain ways” p12. These ways included:

1. Innovation - a constant and deliberate attempt to improve the quality of learning...capturing the enthusiasm of the teacher and the excitement of the student
2. Feedback - ‘dollops of it’, providing information how and why the child understands and misunderstands and what directions the student must take to improve.
3. Setting of appropriate, specific and challenging goals
4. Some teaching methods eg reinforcement, instructional quality, direct instruction
5. Structural Innovations in schooling which alter the probabilities of the core effects occurring.

Speaking eight years on at the EARLI conference, Hattie (2007) states the major influences on achievement still include the teaching process, though the terminology now includes ‘learning intentions’ that the students understand and ‘challenging success criteria’. These ways of teaching are evidenced within the the podcasting with KPE cycle and through the rubric associated with it.

Despite the government of the time announcing in 1998 that “by 2005, every child turning nine will be able to read, write and do maths for success” (McDonald, 2006), low decile schools were far from achieving this in 2005 when KPE began. The tendency of low decile schools to occupy the bottom literacy stanines had been well documented (PISA 2000), with decile 1 students starting school with lower mean scores in all the measures used to test 5 year olds (Nicholson, 2002; Phillips, McNaughton & MacDonald, 2002). Although successful programmes have been introduced by these researchers, such as described in Picking up the Pace (Phillips et al, 2002), there are still a disproportionate number of older students underachieving in literacy in decile 1 primary and secondary schools. eg. The asTTle reading results for our cluster of schools in the Tamaki Achievement Pathway (TAP - a Schooling Improvement Initiative) in February 2006 showed the Year 5 TAP cohort range was 291 - 429 whilst the National Year 5 mean was 462.

Whether it is the (lack of) experiences brought to school from home (MoE 2006; Nicholson, 1997; PISA 2000) the teaching process (Hattie, 2003; Phillips et al, 2002) or lack of cultural connection (Bishop, Berryman, Tiakiwai and Richardson 2003; Parkhill, Fletcher & Fa’afoi 2005) the literature was telling us that students in low decile schools are more likely
to experience lack of success in reading and, as they get older, lack of enjoyment (MoE 2006).

We were mindful of the cultural diversity of our group of students and as well as physically consulting with leaders in our Māori and Pasifika communities we drew from the literature. McDonald (2006 p28) informs us, from her interpretation of the PIRLS (2001) study, that “A long tail, disproportionately made up of Māori and Pasifika students, and students whose home language is not English, creates the so-called ‘gap’ between the best and worst readers”. Studies from Māori and Pasifika perspectives reach similar conclusions about these students and their reading outcomes; it is likely that a lack of motivation and engagement in reading will lead to negative attitudes to reading and poor reading habits. And they are more likely to be underachieving in reading ability if in decile 1 schools.

The Focus on Māori Achievement in Reading Literacy results from PISA (2000 p8) not only present low achievement for Māori students in low decile schools in comparison to the rest of the population, but also address motivation and engagement in reading. These three headings are amplified in the report; “Māori students generally express less interest in reading than other ethnic groups; they also report lower engagement in reading; ... and participation in more limited recreational reading activities”. These elements are all explored in this case study.

The findings of Bishop, Berryman et al (2003) from their research project were ground breaking. They talked with Māori students and those involved in their education to find out what it would take to improve their educational achievement. Whilst teachers tended to see Māori students’ under achievement as the result of their families’ circumstances, students’ indifference to education or the structure of the school, the students themselves were quite clear - the most important influence on Māori students’ educational achievement was the quality of the in-class face-to-face relationships and interactions between the teachers and Māori students.

Bishop, Berryman et al(2003 p214) cite the Ministry of Education (2001), “There have been some positive contributions to improving Māori achievement. These include the development of New Zealand based evidence that the relationship between learning success and socio-economic background is not immutable and that learning improvement can be effected in a relatively short time”. And their own findings from their research project, after extensive teacher professional development, were “When teacher-student relationship and interaction patterns have changed as a result of a process of fully supported professional development.... changes include: Māori students' on-task engagement increases, their absenteeism reduces, their work completion increases, the cognitive levels of the classroom lessons are able to increase, and their short-term achievements increase; in many cases, dramatically so”.

Parkhill, Fletcher & Fa’afoi (2005 p79) conducted a research in the Pasifika community in Christchurch to find out ‘What makes for success?’ in literacy. They acknowledged that Pasifika students in low decile schools were more likely to have low levels of literacy, but for the purpose of this study they identified Pasifika students who were achieving and set about finding out what they identified as the contributing factors to supporting their success in reading and writing. “The study high-lighted the importance of home-school relationships, the central role of the church and the maintenance of cultural identity for Pasifika people, the centrality of parental love and support, the importance of high expectations from school staff and parents of Pasifika students’ success, and to a lesser extent, the importance of an ICT-supported learning environment”. A subsequent investigation in 2006 (Fletcher ,Parkhill, Fa’afoi & Taleni) into perceptions of the barriers to
success in literacy with a group of Pasifika students experiencing difficulty revealed that most of the children underachieving did not read at home and did not select reading as a preferred classroom activity.

The Ministry of Education has funded a longitudinal study of 500 New Zealand learners which began in 1993. In 2005 this cohort turned 16 and another phase of the study was published. One of the competencies being tracked is reading comprehension and some interesting findings emerged. Literacy and enjoyment of reading was a key factor distinguishing the high scorers from the low scorers. “However, it is not enough just to learn to read - one of the strongest indicators of positive engagement in school and learning was the enjoyment of reading. Those who enjoyed reading also had the highest scores for positive relationships with family and friends and showed less risky behaviour” (Wylie, Hodgen et al, 2006).

This gave us confidence that our focus on reading outcomes should be broader than reading ability or “a process by which the child can, on the run, extract a sequence of cues from printed texts and relate these, one to another, so that he understands the precise message of the text” Clay (1979). Research shows that good readers can become better readers simply by the act of reading. Clay (1989) states that “Once a certain command of reading is attained one’s reading improves every time one reads.” In her observations of what children read Clay (1991) estimated that a child making high progress in reading in a year read something in excess of 20,000 words in his first year of instruction and the low progress child probably read less than 5,000 words.

Dymock and Nicholson (1999) observed a similar trend and noted that, “There are positive effects from exposure to print.” A particular benefit is the exposure to complex vocabulary (‘rare words’) that are more likely to occur in printed text than even adult speech. “The connection between the amount of reading done and reading proficiency has been well known and accepted for a number of years. Less well known but of equal importance has been the finding that more access to reading materials leads to more reading, and subsequently higher reading achievement” (McQuillan, 1998 as cited in MoE, 2006).

There would appear to be much more involved than a technical ability to decode and understand text. And there is much more at stake. “There is often a correlation between the range and quality of a students’ reading and the student’s development as a writer. Reading broadly gives students rich models to draw on when crafting their own writing” (MoE, Ontario, 2004) A quotation from a letter written in 1857 by by one of France’s best know creators of reading material, Gustave Flaubert, may better express its global importance, “Read in order to live.”

**Podcasting with KPE**

This final section of the literature review examines the phenomenon described in this case study as *podcasting with KPE*. A quick google search reveals that there are a number of articles available online and via the print media about podcasting with KPE. As their information source is often the author of this study I will ignore that and examine the literature influencing podcasting with KPE from two different perspectives. First from a sociological perspective and then from a teaching and learning perspective.

At first glance it could simply appear to be a strategically constructed cycle of teaching and learning activities. But it has rapidly grown into more than that. I believe the term coined by
Jean Lave and Etienne Wenger (1991) describes what Podcasting with KPE has become - a community of practice.

It may seem unusual to contemplate children of 9 and 10 years of age forming a community of practice, but Smith (2003) suggested, “There was significant mileage in exploring how communities of practice emerge within schooling, the process involved and how they might be enhanced.”

Exploring the writing of Wenger on his website, Communities of Practice, leads me to conclude that this is a valid descriptor for Podcasting with KPE. His brief definition, “Communities of practice are groups of people who share a concern or a passion for something they do and learn how to do it better as they interact regularly,” encompasses both the technical and literacy aspects of Podcasting with KPE. He expands this further; “Communities of practice are formed by people who engage in a process of collective learning in a shared domain of human endeavour.”

Wenger proposes that there are three characteristics which must be present to identify a community of practice:

1. **The domain.** It has an identity defined by a shared domain of interest. Members value their collective competence and learn from each other, even if few people outside the group value or recognise their expertise.

2. **The community.** In pursuing their interest in the domain, members engage in joint activities and discussions, help each other and share information. They build relationships that enable them to learn from each other.

3. **The practice.** The members are practitioners. They develop a shared repertoire of resources: experiences, stories, tools, ways of addressing recurring problems - in short a shared practice.

It is the combination of these three elements that constitutes a community of practice as a way of knowing and learning.

Wenger provides a table to answer the question, “What do communities of practice look like?” He states that “communities develop their practice through a variety of activities.” Wenger states that communities of practice may be found in education so I have replaced his examples with ones from Podcasting with KPE.

<table>
<thead>
<tr>
<th>Wenger’s Activity Suggestions</th>
<th>Examples from Podcasting with KPE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Problem solving</td>
<td>Students working on technical issues with sound quality discover how to select the sound source in the system settings of the computer.</td>
</tr>
<tr>
<td>Requests for information</td>
<td>Students respond to requests from teachers and students from elsewhere via email to answer questions about podcasting. Teachers conduct workshops.</td>
</tr>
<tr>
<td>Seeking Experience</td>
<td>Has anyone else read this book...Do you know what the theme is? Who knows where to find the jingle to put at the beginning of the podcast?</td>
</tr>
<tr>
<td>Wenger’s Activity Suggestions</td>
<td>Examples from Podcasting with KPE</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>----------------------------------</td>
</tr>
<tr>
<td>Reusing assets</td>
<td>Sharing the podcasting rubric with teachers from other places who ask us for it. Creating a template for the scripts so students can tweak it to suit themselves.</td>
</tr>
<tr>
<td>Coordination and synergy</td>
<td>Two students read the same book so they can both contribute to the one podcast episode.</td>
</tr>
<tr>
<td>Discussing developments</td>
<td>Using the blog as a way to give feedback, suggest ideas, comment on new podcasters and new ideas.</td>
</tr>
<tr>
<td>Documentation projects</td>
<td>Students have presented at a National Education conference, sharing their project. A presentation about the project is available on teachertube.com</td>
</tr>
<tr>
<td>Visits (from people wanting to view your practice)</td>
<td>During 2007 40 parties of educators have visited the school to see Podcasting with KPE and 4 different groups from media publications</td>
</tr>
<tr>
<td>Mapping knowledge and identifying gaps</td>
<td>Listening to other podcasts to hear what trends are coming from other schools. Following other blogs, especially those related to podcasting. School wide assessment data being used to track student reading outcomes.</td>
</tr>
</tbody>
</table>

Lesser and Storck (2001 p832) point out that communities of practice do not have to be primarily face-to-face. “There is nothing in the classical sociological definition of communities of practice that rules out communication media such as emails, discussion groups or chat rooms as support mechanisms for participating in distributed communities of practice.” And in 2007 I would add blogs, wikis, video conferencing, skype and iChat as mechanisms used by participants in the KPE community of practice.

There is recognition emerging in the literature from initial research into podcasting in education contexts that the key is the pedagogical approach used when including podcasting. A statement I heard from a man presenting a workshop on his class podcast at a New Zealand education conference in 2006 “ It doesn’t matter why you podcast - you don’t need a reason. Just do it ‘coz it’s fun!” is not one that would find a lot of support. The opposite sentiment is expressed by Laing, Wootton & Irons (2006 p517) who say, “Don’t make it an option – integrate the podcast into the learning and teaching environment.”

There are aspects of podcasting which may intrinsically raise student achievement, particularly the speaking and listening components. But the implications of Hattie’s (2007) work would suggest that this is most unlikely. Powerful influences on student achievement like feedback, reciprocal teaching and metacognition strategies do not reliably occur through random instances of listening to podcasts or recording yourself speaking on one. The teaching and learning activities built into the podcasting with KPE cycle are designed to offer multiple opportunities to impact student achievement.

The starting place with podcasting is listening, just as the starting place with creating film is viewing. You need to be a reflective viewer of movies before you can create quality film.
yourself. You need to become a reflective listener of podcasts to improve the quality of your own podcasting work. Ideally this would include listening to other people’s podcasts more than your own to be exposed to a wide range of genres and styles.

Historically, radio is a form of audio that has been used in New Zealand education ever since it became available. There were a variety of purposes, and students up until the 1990’s were accustomed to it having a place in their school life. And then it went out of fashion. Perhaps there is some truth to the lyrics of the Buggles song released in 1979 “Video killed the radio star!” Chan & Lee (2005 p62) say, “Audio has been vastly neglected and underused as a teaching and learning medium in recent years”. The advent of digital audio has started to change that and audio is making a reappearance in schools. “Digital audio is cheap and simple to produce and manipulate, due to the availability of basic sound recording and playback hardware. This makes a “just-in-time” delivery model possible” (Chan & Lee 2005 p63). Professional development for teachers in using this technology is supported by an increase in mp3 player ownership and the multiplicity of devices owned by children and adults that will play them (Edirisingha, Rizzi, et al, 2007; Lum, 2006).

And this listening is not only occurring on mp3 players. In a University of Washington podcasting project a key finding was that “Students tended to listen to podcasts on computers rather than mp3 players” (Lane, 2006). This finding is probably the experience of New Zealand schools as well. There would be more opportunity to listen in class on computers than on portable devices.

Benefits have been documented from listening to podcasts for students from Non English Speaking Backgrounds (NESB). When a New Mexico State University lecturer, Dr M. Ann Brock, used podcasting with her students she discovered that, “Because the podcasts can be played over and over, they boost the students’ command of the (English) language” (Lum, 2006).

Van Hees (1999) cautions that, “Listening is the receptive mode of oracy. It is not and cannot be separated from the other modes of language. Inevitably a student being assessed in listening will have to display or produce in another mode, otherwise listening is not measurable or assessable.” Thus the reflection component of the podcasting with KPE cycle is essential to gauge the impact of a podcast listened to.

Laing, Wootton & Irons (2006 p515) express the belief that “Podcasting is still a passive approach to learning and teaching; I speak, you listen.” This must mean that they allow no opportunities for reflection in their podcasting process. Chan & Lee (2005 p60) state that, “Students learn by reflecting on their experiences and social interactions, from which they formulate “mental models” representing their own understanding of the concepts”. Opportunities are provided in the KPE cycle for students to reflect orally with their teachers and peers and to reflect in written form through blogs, worksheets and emails.

Students may give and receive “effective, specific appropriately frequent, positive and responsive feedback” (Alton-Lee, 2003 p6) or feedback from their teacher (Hattie, 2007). But the opportunities for using online tools for reflection are increasing, “More than simply make and consume audio content for portable mp3 players, podcasters and their listeners are exploring online social activity around that programming.” (Dubber, 2005 p16)

Much has already been said earlier about reading, so I look outside of education to the work of a world leader in the area of reading and technology, Oprah Winfrey. “Since
beginning Oprah’s Book Club in 1996, Oprah Winfrey has revolutionised book publishing and re-energised fiction reading in America. Viewers from all walks of life have been exposed to a wide variety of authors and voices because of the program. Oprah’s enthusiasm for a book can make it rocket up the bestseller list” (Stager 2000). “One of the lessons of Oprah’s Book Club is that television may be used to enhance the reading of books.” A passionate reader using appropriate technology is able to positively influence a wide number of people and persuade them to become readers too. In a different league from Oprah, Pt England students have also had the opportunity to share their reading experience with a global audience.

Writing is an essential element of the podcasting with KPE process and students are motivated, in part, to write because there is an authentic audience to share it with. Warlick (2005 p 207) is speaking of using technology tools when he writes, “We know that we learn things more powerfully when we must plan, organise and express information to other people with a goal in mind”. He goes on to elaborate, “When comparing the writing quality from 7th graders who were working for a grade, and the quality of their writing when the audience was other 7th graders in another part of the world, Riel and Cohen found that students wrote more, wrote in greater detail and took greater care with grammar punctuation and spelling” (cited by Warlick 2005 p208).

As part of the writing experience students get to spend quality time with the teacher having a script ‘conference’. Bishop, Berryman et al (2003) talk about that relationship, where the students gets to spend time with the teacher. “Students... articulated a dissatisfaction in the way they were being taught preferring approaches that enabled interaction with teachers in small groups or 1:1 with an increased amount of commentary and feedback about their academic progress.”

The thoughtful student discourse talked about by Altin-Lee (2003) in the tuakana teina role (where the learner and the teacher shift roles) is another work where the importance of the time a student spends with a teacher in a learning relationship is mentioned. And Hattie (2007) writes of the significant influence of reciprocal teaching and teacher student relationships on raising student achievement.

There is a place for podcasts which are, in effect, soliloquies. But a strength of podcasting with KPE is the opportunity to work collaboratively with a partner. Dubber (2005 p16) mentions that the creation of podcasts occurs in a social environment, and his own podcast ‘Dubber and Spoons Take the Bus’, was a superb example of this. The Ministry of Education in Ontario (2004) in a paper designed to improve boy’s literacy skills state, “Some boys need to talk through their ideas before they are sure they understand what they have read and before they commit them to paper effectively. Failing to provide this social component, for the opportunity to verbalise ideas before reading or writing about them, can create a problem for some boys.”

From a Pasifika perspective, Parkhill, Fletcher and Fa’afoi (2005) record the students in their study preferring “learning, problem-solving and creating in groups” and the students commenting positively on the time spent buddy reading with children from another class. The positive influences of peer collaboration on learners is also mentioned by Alton-Lee (2003) and in the PISA research (MoE, 2004).

The by-line for Korero Pt England that the students came up with themselves, “We want you to hear what we have to say,” expresses another powerful learning aspect of the Podcasting with KPE model. Hamilton (2006) says, “When student voice is really heeded,
students feel respected, understand their views make an impact, have greater control over their learning and generally feel more positive about school. The key reason, however, for listening to student voice, is surely to improve student learning, by allowing the students to articulate their thoughts about their learning."

At different stages of the draft oral language framework ELLF (MoE 2005 draft) poses the questions, "Are my listeners able to understand me" or "Do my perceptions of my proficiency in spoken language match my listener’s perceptions?" Important questions if the purpose of speaking is so that other people hear what you have to say.

The KPE podcast has been published using little more than the teacher’s iBook laptop and the Garage Band software installed on it. The ability to use up-to-date and engaging technology is often a draw card with students, and fortunately in podcasting, "The learning curve for the software that is needed to create these is very shallow; the software tools are very easy to use. Further, the tools needed to create these are freely available" Tavales & Skevoulis (2006). It is possible to develop a more sophisticated product with more hardware (such as microphones) and as the students’ technical expertise with digital audio develops, but the baseline requirements are very accessible to most students.

Whether one is Oprah Winfrey or a decile 1 student in New Zealand, there is no doubt that publishing to an authentic audience is powerful. Warlick (2005 )says on page 20 “Students can publish their work using compelling media, to real audiences, receiving authentic audience feedback”. He continues (p211), “As students are producing their information products they should have an audience and goal(s) in mind. Who will be interacting with this and how do you want to affect their behaviour?”

When quoted in the New Zealand Herald (2007) University of Auckland faculty of education senior lecturer John Roder pointed out that the Pt England model of podcasting with KPE is a 'mature model'. He said that podcasting was still in the emerging phase in many schools but it had the ability to enhance learning. "A lot of schools shy away from it because it seems to be not connecting to the basics, when in fact if the teaching is there, it will probably do a much better job of teaching the basics."
Who was involved in this research?:

At Pt England School the classes work in teams and for this case study the senior team, led by Toni Nua, agreed to include podcasting with KPE as part of their literacy programme. This meant that 5 classes were involved, 150 mostly Year 5 and 6 students, and 5 classroom teachers.

Of the teachers involved, 2 had no previous experience in podcasting with KPE, one teacher had been involved from the very beginning and co-constructed many of the processes used, one had had a limited experience the previous year with a group of Year 6 students and one had contributed to KPE from time to time in her previous Year 2 class. Of the 150 students, 30 at the most had limited experience of KPE from the previous year and 9 of those had published an episode.

I continued in my role as publisher of KPE, and added a support role to teachers and students where requested. This support ranged from no active involvement in one class through to taking groups of students through the process on a regular basis in others.
How did this outwork in the classrooms?

The classes were to continue teaching literacy using the school-wide methodology developed as part of our participation in Dr Gwenneth Phillip’s ‘First Chance’ programme. Instructional reading in the classes is done in small groups based on the students’ reading ages with a focus on comprehension. Students continued to go to withdrawal programmes such as Reading Support (a programme using volunteers and a ‘Pause, Prompt, Praise’ process), Rainbow Reading (an audio-facilitated reading programme), NESB (a programme for students from a Non English Speaking Background), SEG (funding for a remedial literacy programme) and Extension (a programme to extend the students of high academic ability).

Into this mix, podcasting with KPE is included as a teaching and learning activity. The range of inclusion varies between classes from a limited number of students involved to almost total involvement. 78 students across the 5 classes had participated in podcasts published on iTunes either as the DJ or the interviewee. The teachers were surveyed at the end of the research period to find out the extent of this inclusion in their classes. Each teacher supplied a percentage against the components of the KPE cycle to indicate how many students in the class had experienced each activity. The mean across the five classes is displayed below, along with the range between classes. Listening to podcasts is the only activity that all students in the five classes participated in. Publishing the podcast to iTunes was only done by an adult.
Case Study Sample Group

I selected a group of 27 students as the research sample. They were sub grouped by reading age into 3 groups:

- a group of 9 reading one to three years below their chronological age
- a group of 9 reading at their chronological age
- a group of 9 reading one to three years above their chronological age

The reading ages were taken from the school data base. At the end of each school year the entire school is tested using PM Benchmarks to establish a Reading Age. This test is administered to all Year 3-6 students by the same teacher (Pat Reid) to maintain consistency. The Reading Age includes reading accuracy and comprehension, with students needing to achieve both to move up a level.

There was an attempt to select students as evenly as possible from all 5 classes, of both genders and across the ethnic groups represented at Pt England School. The selection process was further narrowed by identifying students who were the least impacted by literacy intervention programmes. This was not always possible eg the students reading above their age were likely to be participating in the Extension programme. The students selected have all attended Pt England School from Year One.

With transience being an acknowledged factor in decile 1 schools, I selected more students in each group to track than required, knowing we would lose some during the course of the study. At the end of the data gathering period, the groups were evened up by counting who had published the most podcasts in the period and taking the 9 who had podcast the most in 1 of the groups, and in the group where more had left (leaving less than 9) adding the student who had podcast the most in that category and fitted the criteria above.

The mean number of podcasts published by the sample group was 6. The range was 2 - 14, and the most frequently occurring number was 5.

The student who published 14 was a Pasifika boy who was in the group reading at their chronological age. He was a student who reported in the September survey that at the beginning of the year he hated reading, and by the end he loved reading.

The four students who only published 2 podcasts included a boy in the high ability group who at the beginning of the year liked reading and was reading at home and for his own enjoyment. He appeared not to need extrinsic motivation to encourage him to read. The other 3 students all had significant periods of absence from school during the research period; two for health reasons and one for poor attendance.
Informed Consent

Informed consent was obtained from all participants. An ethics permission form explaining the research project was signed by all students selected and their parents. It allowed for the collection and storage of data and the publication of images and audio. All participants were informed that they were able to withdraw at any time.

All students and teachers identified in this report have given permission to be identified by their real names. They understand that this identification is intended as a public acknowledgment of their significant contribution to Korero Pt England and the research resulting from it.

Data Collection Methods

The methods of data collection used were:

- Student surveys
- Student interviews
- Teacher surveys
- Teacher interviews
- Student emails and blog comments
- Standardised Reading Tests

Students Surveys

Two different surveys were used:

The first survey was given to all 150 students in the senior school early in February. This was to find out about their reading habits in the previous year. Each class was taken into the school library and students were asked to write down the names of the books they had read last year on a worksheet provided. They were free to wander around the library to prompt their memories and to talk to other students as they completed this. There were two teachers present during this to offer assistance. They were given up to one hour to complete the task and there was a high degree of on-task behaviour during this activity from all classes.

The student definition of reading was...
The second survey was given to targeted students at the end of Term 3, which was the end of the data gathering period. The students who had completed podcasts during Terms 2 and 3 were asked to complete a paper-based survey. The survey contained 13 questions where they simply had to colour in a face on a 1-5 scale. There were 4 questions with a choice of yes or no. There was one question at the end asking them to write a sentence. The survey was conducted in small groups of 4-6 students at a time, with each group being a mixture of students across the 5 classes. Every question was read aloud to the students and definitions were given all the way through eg what is meant by ‘reading’. They were encouraged to chatter whilst they completed it. The surveys were compared at the end of each group session and it was verified that the students gave individual responses, not group ones. The survey questioned them about attitudes to reading and podcasting activities, their reading habits, and their own perceptions of their reading ability.

Student Interviews

The sample students were interviewed individually at the end of term 2 and the answers were recorded on Garage Band. They were asked about their attitudes to reading and podcasting with KPE and about their own perceptions of their reading ability. Their responses were transcribed and used as anecdotal comment alongside the September survey.

Teacher Interviews

Classroom teachers were interviewed individually at the end of term 2 and asked to reflect on their observations of student attitude to podcasting with KPE in general and to reading in particular. They were asked to comment on the reading material their students were choosing. They were also asked to use a PMI (Plus, Minus, Interesting) format to organise their thinking. These interviews were transcribed and themes were analysed from the answers given.

Teacher Surveys

A brief written survey was given to the teachers at the end of the data gathering period to find out to what degree podcasting with KPE had been used as a teaching and learning activity across the 5 classes in the period surveyed. They were also asked for final written comments on their observations of its impact on them as teachers and the students as learners. These comments are reproduced in full on page 53.

Student emails and blog comments

The students use a communal class email account and as they responded to emails from listeners in New Zealand and around the world the outbox became an additional source of information about podcasting in general and reading specifically. Their comments to each other on the KPE blog also give insight into their attitudes. These comments were made independently of teachers and the patterns emerging support the responses given in the September survey.

Standardised Reading Tests

To measure reading ability, we collected data before and after, using the testing regime already operating in the school, plus one other:
PM Benchmarks

"PM Benchmark Kit" is a comprehensive reading assessment resource, which includes 30 levelled texts ranging progressively from emergent level to reading age 12. Students at Pt England have a half year and end of year reading age measured using the PM Benchmarks. The reading age is established when a student achieves 95% accuracy AND 100% comprehension on a leveled test. The half year running records are administered by the classroom teacher, and the end of year ones for all Year 3 - 6 students are administered by our Reading Support teacher, Pat Reid. These are recorded on the school data base, so for all students in the research sample group there is an annual PM Benchmark recorded from Year 1 to the present. Using this measurement gives us a long term picture of the students’ progress.

AsTTle

Assessment Tools for Teaching and Learning (AsTTle) is given to all the students of our cluster of schooling improvement schools at the same time, and at Pt England these were administered by the team leader, Toni Nua. The students in the research sample sat these assessments along with the rest of their class in March and September. The filters for the test were set for the whole cluster and both times included: some understanding, some finding information and some knowledge. The difficulty set for Year 5 was: most level 2 and few level 3. The difficulty set for Year 6 was; many level 2 and some level 3. The results of these assessments showed the progress made by individual students and the whole year group over the period measured. We added one other test that is not used regularly with these students to give an immediately before and after picture of the student’s progress.

PROBE

The Probe Reading Assessment is designed to provide in-depth data about a student's ability to read and understand text. This test has not been used with students at Pt England School before. I administered this to the research sample students prior to the data gathering period and at the end. Each student had an individual running record taken in April and again at the end of September to assess their reading age, including comprehension. It was also used to measure their reading fluency. This meant that their reading was recorded and words-per-minute (WPM) were calculated on a text that the student passed for accuracy and comprehension.

How the data was analysed

Having observed students involved in the KPE process in 2006 I had a sense of what the outcomes had been for the previous group of podcasters. These students had left the school to attend an intermediate and no data had been formally gathered or analysed from this group. The core phenomenon for this research was reading, but the context was podcasting, which involves student voice.

It was agreed that the data gathered around student reading ability would be based on the standardised testing already existing in the school and this would be analysed statistically showing group means. This was compared with their own progress; over time, with national normed expectations and with their peer group at Pt England School.

The use of surveys and interviews enabled student voice to contribute to the data. The survey was analysed statistically to establish group mean responses to the questions asked. The interviews were analysed for themes and patterns emerging and this was used to triangulate the responses given by the students in the written surveys.
What did we find out?

Habits

In answer to the question, “In what ways can including podcasting with KPE in teaching and learning activities contribute to changes in reading habits?” we examined the quantity of books being read, the frequency of the reading occurring, changes to reading habits at home and the complexity of the books being chosen to read.

The reading habits of the students were surveyed initially in February as described on page 25. This was to give us an overview of all the students in the senior school and we felt it was important to capture their recollections of their reading habits from the previous year while it was still fresh in their minds. This meant that their first library period for 2007 was spent filling in a survey which asked them to list as many of the books they had read last year as possible. There were a significant number of students who were unable to recall having read any books at all in 2006. Several students had only read the Bible - an important aspect to acknowledge (Fletcher, Parkhill, Fa’afoi & Taleni, 2006). And many of our able students had not been choosing to read books that reflected their reading ability, instead choosing to read picture books or very easy first chapter books, which would also limit their opportunities to develop vocabulary and comprehension (MoE, 2006).

It was not the intention of this study to analyse this initial survey more closely, but to use it to reference the end of study survey results. In their final survey the students were asked to compare the books they now read with their reading material last year. It was found that 74% of the responses given very closely resembled the answer they gave in February. For the other 26%, their recall of their choice of 2006 reading materials was higher (ie more complex) in September than when surveyed in February. This would suggest that there is a wider gap between what was read last year and now than is displayed below.

Question 10 of the survey asked “What kinds of books did you mostly read last year?” and Question 11 asked “What kinds of books do you mostly read now?” The 1-5 scale was clearly explained to the students with examples of the types of the books shown to them:

1. picture books
2. sophisticated picture books
3. first chapter books (pictures on every page, limited text)
4. chapter books (such as Kiwi Bites - some pages have pictures)
5. big chapter books (novels, with no pictures)

![Graph showing reading habits change](image.png)
There was a clear shift in the choice of reading material for the 26 students responding to the survey, with the mean of the whole group shifting from 2.74 last year to 3.89. Each of the 3 ability groups show a shift from one category to a higher one, but interestingly the students reading at their age and the students reading above their age both say they now read books in category 4 (4.0 and 4.20 respectively). It would have been hoped that students reading above their age would be reading in category 5 and a number of suggestions have arisen from comments made by teachers, students and a parent.

Parent: “..... (my child) says that it takes a long time to create a podcast if you read big books...”

Student: “....I don’t have enough time to read big chapter books...at school we are too busy...I don’t read at home much...”

Teacher: “.....(this student) is really busy with extension and the things she gets asked to do...I think it is lack of time as well... I know she is busy after school too with the extra things she does...”

Teacher: “... (a difficulty is) kids having time to sit down and read - in class time...”

Teacher: “I think the only down side is the time factor...children having enough time to read in class - there are too many things in the day that they just don’t have time to sit down and read a whole novel. Even in a week, they’ve got to be motivated to do it at home if they really, really want to get their podcast up...”
At the end of term 2 a number of students had expressed concern that they didn’t get enough opportunity to read either at school or at home and that they needed to have a quiet environment to read in (Fletcher, Parkhill et al, 2006). Students were quite clear that the daily 15 minutes of sustained silent reading (SSR) in their classes did not provide opportunity to read in the ‘Flow’ (Csikszentmihalyi 1990). This was seen as a time when you skim-read or flicked through pages of books, rather than the definition of reading they have come to understand. Discussion with the classroom teachers led to me offering to supervise a weekly silent reading session in the school library during term 3. This was available for the literacy block (9 - 11 am) and students were able to stay for as long as they liked, provided they read without talking or disturbing others. This has been very successful and was extended to students as young as 6 years old. At one time we had 60 students reading silently in the library. Students were able to come and go from the library- staying as long as their concentration lasted or their teacher allowed.

Another aspect of their reading habits surveyed was the quantity of books the students read. Question 9 of the September survey asked “Do you read MORE books since you began podcasting?”. The answers were on a 1-5 scale with

1. way less
2. a bit less
3. the same
4. more
5. way more

The total group mean response was 4.65, with only 2 individual students in the group responding that they read the same. All others were reading more or way more. There was very little difference between the ability grouped responses.
While there was a clear increase in the number of books the students read in general, Question 12 which asked, "Do you read more books at HOME since you began podcasting?" had mixed responses. A resounding ‘yes’ (87%) from the group reading above their age was countered by a ‘no’ (67%) from those reading at their age. Those reading below their age had a yes from 67% of their respondents.

One of the changes in practice at Pt England School which may have impacted the group of students reading above their age was a change to the library policy. At the beginning of the year when the first survey was conducted asking students to list the books they had read last year it was noted that many of the very able readers had been reading picture books most of the time. When a discussion was held between the library staff and the literacy curriculum leaders it was concluded that a policy of not be allowed to take books home may have been contributing to students selecting books which could be read quickly. The policy was changed at the beginning of the year and students were now allowed to issue books to take home.

We were interested in finding out whether the frequency of reading books had changed and first asked the students to think about how many days of the week they usually read books on, including the weekends. Some discussion was encouraged to establish patterns for the events of the week at school and after school, and then for habits at the weekend. For some students this was very straightforward with verbal responses such as "I never read at the weekend" being quickly offered. For others time was needed to think through a detectable pattern. They were asked to respond on a 1-7 scale, with the total number of days they usually read being the number recorded.

The mean of the total responses was 4.88, and when separated into reading ability groups, only the students reading above their age read consistently on the weekends (they read 5.87 days a week). The range over the total group was from 2 days to 7 days a week.
Question 17 then asked the students, “Compared with last year is this less, the same or more?”. The mean response from the total group was 4.85. In the group reading above their age there was a 100% response saying that they read more often than last year. The other two groups varied between the same amount and more.

Comments made by the students in the July interviews support the responses they have chosen in this survey and many made informal comments as the case study progressed:

Student: “...it encourages me to read more books every day...sometimes I ask my Mum if I can go to the library and look for a good book to podcast about...”

Student: “…I read more books than last year. a lot more...”

Student: “…I read higher books...”

Teachers varied in their comments on changes in student reading habits:

Teacher: “…it’s really hard to know as a teacher.... I think parents may know better, yeah...I haven’t really noted WHAT they are reading...”

Teacher: “(the students who are podcasting with KPE) are really, really going for it now. They’re picking big complicated texts that they are happy to have a go at because their confidence is there...”

The students report changes in their reading habits over the period they have been podcasting with KPE. They say that:

• They read more books in general (non-scientifically described as ‘way more’)
• 62% read more books at home
• They read more often (on more days of the week)
• The complexity of the books they choose to read has increased by at least one category
Attitude

To answer the question, “In what ways can including podcasting with KPE in teaching and learning activities contribute to changes in attitude to reading?” we wanted to find out if any changes had occurred first of all. Then we wanted to find out which aspects of the KPE podcasting process were implicated in this change. The students were interviewed individually after one term of podcasting, and their transcribed responses were taken into account when developing the paper-based September survey they completed. The student surveys were used to gather data and teachers were interviewed to see if their observations confirmed the information the students had given.

The September survey started with a simple question, “Do you enjoy podcasting with KPE?” They were asked to respond on a 1-5 scale and all 26 selected either 4 (I like it) or 5 (I love it). The group mean response was 4.85. The actual response was that 4 of the 26 students recorded a 4. The other 22 recorded a 5. The responses were sorted by reading ability, by gender and by ethnicity. Whichever way you look at it, the students were reporting a very positive attitude to podcasting with KPE. The below average readers, females and Pasifika students groups each responded with 100% giving it a 5.

Under a sub-heading “These questions are about reading” the students were verbally given the definition again of what reading is (and what it is not). Then they were asked a direct question about their attitude to reading.

Question 6, “Has your attitude to reading changed this year?” They had to circle a YES or NO and 100% responded YES.

Then they were asked how much they liked reading last year, and how much they like reading now that they have been podcasting with KPE. The survey began with a cover sheet asking them to write details such as their name, age and year level. They were also asked to write the name of the teacher they had last year and the class they were in. This was designed to trigger memories of the previous year and as they completed the form they chatted in the group about their classes last year.
The questions “How much did you like reading last year?” and the question “How much do you like reading now?” are represented as a comparison in the graph to the left by reading ability groups. Again reading was defined as a personal activity, not a class or teaching activity. A change in attitude of more than one category is represented overall and in each ability group.

The 1-5 scale was 1 (hate it) 2 (don’t like it) 3 (neutral) 4 (like it) 5 (love it)

The question “How much did you like reading last year?” was the only question in the survey where there was a significant gender difference.

The range of responses was 1-5 with the only negative responses coming from boys. Three boys gave reading a 1 last year and one boy gave it a 2. These same boys had a shift to 4 (one student) or 5 (three students) this year.

Whether their memories of last year are accurate or not, it is clear from their responses to the survey that their perceptions this year are that reading books is a much more positive experience for them now than it used to be.

Comments made by students when they were interviewed individually in July and asked a very general question, “What do you think is happening with your reading?” also indicated a change in attitude:

Boy 1 “...before I didn’t used to like reading because I couldn’t read...now I can...”
Boy 2 “...last year I didn’t used to like reading...yeah, I like it now...”
Boy 3 “...I didn’t used to read at all last year. I didn’t like it. Now I like reading...”
Interviews conducted in July with the teachers asked them to comment on the attitude to reading of students who had been podcasting with KPE. One teacher was unable to comment as had not noticed any changes. The comments the other four teachers made covered several aspects:

• Sustained Silent Reading (SSR) time has become more productive and on-task

  "...I think I've noticed a big change...especially during SSR... because so much of the class is into Reading now you can feel that when it's SSR time there's more of a feeling like 'let's get into SSR'...you can just feel that they settle in so much quicker... sometimes they don't want to put their book down, whereas at the beginning of the year lots of them did..."

• Library visits are sought after by the students, who now want to take books out

  "Yeah, definitely library time, it has been... half the class is just rushing to go and find different books that they could podcast..."

  "they definitely are seeking NZ books... obviously!! I think it has just improved their "want to read' basically..."

  "They hate it when we miss the library... funny enough more boys are disappointed about when we miss library times than the girls and it's just because of podcasting, looking for books...it's a nice surprise."

• Enthusiasm, motivation and engagement mentioned by all four teachers

  "... yeah, it's been incredibly motivating..."

  "... Mainly increased motivation in wanting to read, especially for boys in the class ... it's a real hook for them, so they see others podcasting, they want to do it too... so it encourages them to read more books and they're more keen to read at home – I think- and definitely more keen to read in class ..."

  "... It's a lot easier to engage them, like I don't have to say anything... it's 'can I please do my podcast,'... especially with some I've noticed, like with D... He's not the typical person who would sit down and enjoy a book, but he was really keen to hurry up and get on with the actual reading, so... it is DEFINITELY a motivator for reading for ALL the kids. Not just the ones who can read, which is really cool..."

  "...enthusiasm for reading has grown hugely in all of the group... Enthusiasm. That's it. Their attitude is... like I said, they've got a purpose for it now..."

  "...the children are wanting to read. It's given them a reason to actually sit down and ... yeah be motivated to independently go and source books and read..."

  "I think you notice the biggest difference from people who just did not like reading at all to really enjoying it and wanting to podcast and wanting to look for another book..."
“I think the biggest thing is motivation. Getting them keen for reading, and with that building the fluency... the more they are reading, the better they are getting at reading. They are not only reading more but it gives them a wide audience and they get feedback from that so they get lots of positive feedback from having been doing lots of reading.”

• Individual students mentioned

“...I’m thinking of C in particular (she) has just blossomed and I think really the only thing that has changed for her is probably podcasting...”

“...With H and K ... you notice the biggest difference, from people who just did not want like reading at all to really enjoying it and wanting to podcast and wanting to look for another book...”

“...L, M and C...I guess their reading... the range of their reading.. has increased. I think KPE in general kind of opens that up because you are listening to people discussing and having an enjoyable chat and laugh about a book that lots of kids probably haven’t even considered reading...”
Because KPE is designed so that students have to read a book as part of a process, a series of questions was included to find out their attitude to the various components of podcasting with KPE, including reading.

Question 2 began, “There are lots of different things we do with podcasting. Tell me how much you like each different activity.” The students had a series of faces to colour on a 1-5 scale with

1. hate it
2. don’t like it (neutral)
3. whatever
4. like it
5. love it

The responses of the total group to each sub-question are detailed below:

<table>
<thead>
<tr>
<th>How much do you like:</th>
<th>Mean</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>2a... reading the New Zealand book?</td>
<td>4.65</td>
<td>3 - 5</td>
</tr>
<tr>
<td>2b...library visits?</td>
<td>4.62</td>
<td>3 - 5</td>
</tr>
<tr>
<td>2c...writing the plot?</td>
<td>3.92</td>
<td>2 - 5</td>
</tr>
<tr>
<td>2d...conferencing the script?</td>
<td>4.66</td>
<td>3 - 5</td>
</tr>
<tr>
<td>2e...practicing with your DJ?</td>
<td>4.81</td>
<td>3 - 5</td>
</tr>
<tr>
<td>2f...recording the podcast?</td>
<td>4.81</td>
<td>4 - 5</td>
</tr>
<tr>
<td>2g...listening to your OWN podcast?</td>
<td>4.19</td>
<td>1 - 5</td>
</tr>
<tr>
<td>2h...listening to other people’s podcasts?</td>
<td>4.73</td>
<td>4 - 5</td>
</tr>
<tr>
<td>2i...going on the blog?</td>
<td>4.39</td>
<td>3 - 5</td>
</tr>
<tr>
<td>2j...emailing?</td>
<td>4.54</td>
<td>3 - 5</td>
</tr>
<tr>
<td>2k...talking to visitors about podcasting?</td>
<td>4.31</td>
<td>3 - 5</td>
</tr>
</tbody>
</table>

NB: This was introduced in July and not all students had done this - they were instructed to respond 3 if they had not had an opportunity to blog.

NB: Students who had not been given the opportunity to do this responded with 3.
As illustrated in the graph below, enthusiasm was expressed for all aspects of the cycle except writing, which was more neutral. None of the activities received a negative group response.

![Comparing All Podcasting Activities](image)

After they had rated the activities individually the students were invited to identify the three they most liked.

![Question 3: What are your 3 favourite activities in the podcasting process?](image)

There was a clear preference expressed by the group towards the most liked aspects of podcasting:

1. F - recording the podcast (using the technology)
2. A - reading the book
3. E - working with a partner

Talking to visitors and conferencing the script with a teacher were fourth equal - both of those activities involve spending time being recognised and valued by an adult.
After the students had completed the whole survey, they were invited in the final question to write a response to “What is the best thing for you about podcasting with KPE?” The comments they wrote were sorted into similar groupings and analysed to see how they compared with the attitudes expressed earlier in the survey. In order of the frequency mentioned, they spoke about:

- using the technology and recording gear
- reading - enjoying books and noticing improvement
- audience - knowing that they are being listened to
- working with a partner
- interacting with visitors
- escaping work - ‘doing KPE’ is not seen as work

An observation about writing: Writing received the lowest rating from the students in question 2, the lowest ranking from the students in question 3 and didn’t rate a mention from anyone in their volunteered comments for question 18. However the lure of podcasting was powerful enough to get them doing something that they didn’t enjoy because it was seen as an important part of the whole process. Students were self-motivated to begin the required writing process and invariably wrote enough to cover an A4 sheet of paper when outlining the plot and themes before they came to have a script conference with the teacher.

Implicit in the podcasting process is the sense of audience. Comments from the students in the interviews held in July, and informal statements made throughout the year, had made it apparent that audience is important to them.

**B:** “…you get to tell nearly the whole world. It’s cool…”

**C:** “…every time we do a podcast we get shared around the world…”

**CD:** “…heaps of people learn about our podcasts all around the world…”
CT: “...it goes out to different countries and because my friends can hear it too...”

HT: “...reading so the world can listen to it...”

MV: “…I like getting people to listen to it...”

PM: “…our podcasts gets put in America and it feels famous...”

TT: “…I get to publish and it goes on the internet and people hears it...people around the world...”

The September survey followed up on these comments with a question about audience and a question to find out which audience was important to them. Question 4 asked, “Do you like knowing that people listen to you?” The students responded by colouring a face on the 1-5 scale, with one being the very negative response and five being the very positive one. Their responses were very positive, with a total group mean of 4.6 and only one student had a neutral attitude to this. All the others responded 4 or 5. There was little gender difference in this attitude or ethnic difference. The only group that showed a slightly higher response was the above average reading group.

The students had told us very clearly in the comments above that they liked people around the world listening to them. Question 5 asked them to rate five groups of listeners on the 1-5 scale by asking, “Who do you like listening to YOUR podcasts - your friends, your class, our teachers and the principal, people around New Zealand and the world, people at home (friends and family)?”

The students had a definite picture of who they didn’t like listening to them as much - their class. The discussion between students as they completed the survey was consistent across the groups. Some students didn’t enjoy the experience of having their podcast played to the whole class. The question didn’t allow for clarity around whether it was the sound of their voice played on loud speakers or embarrassment or the reaction of other students or other factors they didn’t mention in their conversations. The attitude of the total group to this question ranged from 1 to 5 with a mean of 3.69. The negative responses came from the students reading at and below their age.

The audience the total group most appreciated was the NZ/global one (4.9) followed by teachers/principal (4.73). Friends (4.57) and whanau (4.23) completed the picture. Whanau was the only other group of listeners to draw some negative responses and also had a range of one to five.

The reading ability groups saw the below average readers equally happiest with the teacher and global audience; the students reading at their age rated the global audience
most highly; the students reading above their age were unanimous in rating the global audience most highly.

The outbox of the class’ email accounts contains many comments that exemplify these findings in emails students have sent in reply to podcast ‘fan’ mail:

“...it was my first time being a DJ. U helped me all the way. Thank U...”

“...I loved working with you. Thanks for your comment...”

“Thanks for that tip... You’re a really good helper and a principal. We will do even better next time...”

“... have you listened to my podcast and remember to listen to my next one...”

“...have you listened to my new podcast, it is called Ratso...The next book that I am going to podcast is called Gladys the Goat. So I’m looking for your comments...”

“...thank you for your compliments and it was great meeting you...we hope you are still listening to our podcasts. Make sure you stay tuned...”

“...Thank you Mr Burt. I thought it was a very good podcast as well. I hoped you liked it and I agree with your statement it made me very happy...”

“...To Mr Hubbard, Mayor of Auckland. Thanks for your encouraging comments. I’m glad you like my podcasts. Reading books and recording podcasts is awesome...”

![Question 5. Who do you like listening to YOUR podcasts?](chart_image)
During the course of the research it became apparent from observation that different students were more motivated by different aspects as the examples given indicate:

J “...I’ve got 16 comments on (the blog about) my podcast”

Students gathered in the corridor looking at the map on the wall, with pins marking the countries where KPE subscribers come from, and some regulars were notable for monitoring it.

S: When showing visitors around the school, coming to ask for the trophy we won (ComputerWorld Excellence Award-2006) to show to them, and saying “We are winners”

Students (R/L/B/K) - always asking to take the iPods home when their episode is published

Opportunity to have individual time with the teacher to develop their script - asking for appointments before school, lunch times and after school so they don’t miss out: “Dear Mrs Burt. Thank you for helping me and my DJ, SF. It is pretty funny. I loved working with you. It was amazing thank you for helping me do my first podcast. from L....”

Emails from the principal very important to some; “I am glad you liked my podcast maybe you can listen to my next podcast...”

Emails from strangers important to some; “Thanks for your comment, it made me feel good inside...”

The students reading above their age appeared to be differently motivated as a group. This group rated significantly higher having their podcasts listened to, talking to visitors about podcasting and receiving emails about their podcasts. When they were asked “who do you like listening to your podcasts?” they scored 4 of the 5 categories more highly than the other groups did. The students reading below their age were more appreciative of the teacher and principal listening to them. This was the only group where using the technology didn’t rate most highly. Compared with the other two groups they were slightly less influenced by working with others and listening to other kids’ podcasts. The sense of audience and the enjoyment of reading came through in a variety of ways as being their motivators. This raises the question, is the lure of using the technology not as important with these students? Or is it possible that they already get enough opportunities to use technology in their school life in other ways? The appreciation of an authentic audience came through strongly and podcasting with KPE has provided that for them.

The findings to the question, “In what ways can including podcasting with KPE in teaching and learning activities contribute to changes in attitude to reading?” began with establishing whether or not they can contribute. The answer from the student surveys was an emphatic yes, with the students identifying the degree of change across the group. They responded that they were in a neutral-to-liking state last year. Now they are in a liking-to-loving state. The boys who reported negative attitudes towards reading last year now say they are in a liking-to-loving state. This was supported by comments from 4 out of the 5 classroom teachers who had noticed this change.
We went on to find out which aspects of the KPE podcasting process were most influential in this change of attitude. The students were interviewed individually after one term of podcasting, and their transcribed responses were taken into account when developing the paper-based September survey they completed. All the categories surveyed received positive feedback, and writing the script was the only area that did not fall in the 4-5 area of the response scale.

When asked to rate each category individually the students rated recording their podcast and rehearsing with a partner most highly. When asked to select their three favourite activities from the categories given they nominated recording, followed by reading and rehearsing with a partner. At the end of the survey the students were given the opportunity to write down their favourite activities and again, recording the podcast was the most frequent response followed by reading and a sense of audience.

The lure of using the podcasting technology was clearly the most enjoyed activity in the process and the enjoyment of reading had been enhanced in the process.
Fluency

The ability to read fluently is an important reading outcome for students and one that is often not measured because ‘reading is something a person does inside their head’ (Jennings, 2003). As podcasting with KPE includes students reading aloud (when rehearsing and recording their podcast script) and reading silently (when reading a book) we felt it was important to measure oral reading fluency as well as their ability to decode and comprehend text (MoE, 2006).

To answer the sub question “In what ways can including podcasting with KPE in teaching and learning activities contribute to changes in reading fluency?” their oral reading fluency was measured using the PROBE Reading Assessment kit. In early April I tested each student individually. I conducted a running record to establish their current level of accuracy and comprehension and I used the Garage Band software on my laptop to record this with the students’ knowledge and consent. They were asked to read the text aloud ‘in your best reading’. A microphone was placed nearby as the students read and after the session it was a straightforward process to measure the length of time from beginning to end, and calculate the number of words read per minute.

At the end of September, the students were recalled and asked to read the identical text for a second time (again using the instruction ‘in your best reading’) and again the number of words per minute was calculated. The only variance between the two testing situations was that at the first reading it was an unseen text, the second time round the text had been read once - four months previously.

Of the 27 students in the sample group, only 22 participated in both the before and after PROBE fluency testing. 4 of the other 5 students were absent either in April or September (the test was conducted prior to school holiday breaks) and for one student the recording technology malfunctioned.

![Reading Fluency: Words Per Minute](image)

Mean increase in WPM from April to August: Measured using PROBE
As the graph shows, the fluency of the total group had a mean increase of 22 WPM. The greatest increase was shown in the students reading below their age, with a mean increase of 28 WPM. Those reading at their age increased by a mean of 26 WPM and the above average group increased by 12 WPM. The above average readers were mostly very confident and articulate readers at the April testing, and the quality of their reading would have diminished if they had read significantly more WPM.

This data was also viewed by gender (Females 22 WPM and Males 23 WPM) and by ethnicity (Pasifika 26 WPM, Maori 20 WPM and Other 18 WPM). There is no significant gender-based difference, and the greater difference between the Pasifika and Other group would be anticipated because 3 of the 4 Other students are also in the Above Average group. The 12 students in the Pasifika group are represented in each of the reading ability groups, with 3 reading above their age, 5 at their age and 4 below their age.

An anecdotal account of the students’ increased reading fluency is available online through the iTunes music store. By listening to the students’ podcasts published early in the year and the podcasts published at the end of term 3 it is evident that their reading fluency has increased. However this is not as measurable (as using PROBE) because the use of audio editing software means that the quality of the earlier podcasts was able to be significantly enhanced digitally. This enabled the WPM to be increased by removing the silences between words and increasing the apparent fluency.

It was initially intended that the published podcasts would be used as data to measure changes in reading fluency. The way in which the students recorded their podcasts, often editing as they went, meant that this could not be used as a reliable method. In order to get as many podcasts published as possible and capitalise on the students’ motivation and enthusiasm I decided to encourage their desire to edit as they recorded, particularly as it became apparent that this was enhancing some other aspects of their reading.

It is this technical capability which appeared to contribute to the increased fluency of some of the readers in the below average group as the anecdote below describes:

I demonstrated to 2 boys how to use the editing tools in Garage Band to split the audio track and delete the long silences between words, and then to ‘budge’ the words up closer together to make it sound less hesitant and more fluent. As the boys took over and started doing the editing themselves and playing the results back, it was clear that this was an ‘ahaa’ moment.

*C said, “I could save a lot of time if I just read like this couldn’t I Miss?”*  
*J said, “Yeah, that is how we are s’posed to read...It sounds better...”*  
*C replied, “I’m gonna try that next time...”*

The fluency of C improved by 39 WPM from April to September.

The combination of; reading text he had created, working collaboratively with a partner he chose, using a technology he enjoyed, physically manipulating the audio track, critically reflecting on his own work and receiving positive feedback about the outcome appears to have led to an understanding that he has the ability to make positive changes in his own reading fluency.
A contributing factor to the gains made in fluency when tested would have to be the awareness the students were developing themselves about what fluent reading sounds like. Words such as “good reading, expression, interesting voice” had become part of their reflective process. This can be seen from a sample of comments students have left on each other’s blogs about their podcasts:

“I have listened to your podcast, it was great. I do have advice for you. Try to sound like you are talking to another person. Have expression so you make people want to listen to your podcast...”

“I really enjoyed listening to your guys podcast. I loved the way use presented it. And I love your voices they are fantastic. Keep it up...”

“yous guys did great on your podcast I really enjoy listening to your guys podcast. I think yous were amazing and yous gave it all yous got well done.”

“Great podcast. I really enjoyed listening to it because of all the effort and expression you guys put into it.”

“I liked your podcast because M talked clearly...”

“Hey great podcast you guys. It was very clear speaking. I really like eating fish too.”

“Outstanding podcast I loved the way both of you guys used expression. You also made me laugh”

Comments left by adults on the blog reinforce the belief that fluent reading enhances the listening experience and is appreciated by the audience:

“Boy you guys did a good job on the interview! L has a voice that he uses with expression...”

“Nice podcast you guys. Very good expression and excellent description of the story. I think you did a great job of this. I really enjoyed listening to the story.”

“I really liked the way L drew Dick Hubbard out and got him talking naturally and enthusiastically about the book that he liked reading...”

“I was immensely surprised and delighted to find one of my children’s books being reviewed in a sophisticated and elegantly produced Pt England School podcast. I think they did a terrific job, and having had a few years in the entertainment unions I know there is an endless search for bright and fresh talent.. author...”

“Your voices are really interesting and you picked a good book to talk about.”

“I really enjoyed hearing about No Home For a Gnome. You both made it sound really interesting and you spoke so clearly. Well done girls.”
Ability
The ability to read at primary school is most often expressed as a reading age and in this study incorporates two aspects; how well the students understand what they are reading (comprehension) and how accurate their reading is (decoding). To answer the question, “In what ways can including podcasting with KPE in teaching and learning activities contribute to changes in ability to read?” we wanted to find out if the students had observed any changes themselves and to measure this using standardised testing procedures.

Survey Data
The September Survey asked the students about their reading ability. Question 13 was a yes/no one and asked, “Are you a better reader now than you were at the beginning of the year?” There was an emphatic YES from 100% of the students.

Question 14 asked them to attempt to quantify this, “How much better are you?” The response options were; same, bit better, way better. I took it for granted than none of them would feel they were worse. The mean response was 4.23 - between a bit better and way better. This reflected the range, with no-one selecting ‘about the same’, a response they weren’t offered in the previous question. The students’ reading below their age were marginally the most confident about their improved ability to read.

The students’ confident responses to the survey question were backed up by comments they gave when interviewed. Even in July after one term of podcasting with KPE, they spoke of being better at reading:

CH: “When I read books I get to read more better...”
DH: “I like (podcasting) because it improves my reading”
UL: “I can read better sometimes..”
BB: “It’s getting better...coz I just read...I used to have to read a book in a whole week...and the last one I read in two days...”
CT: “Before I didn’t used to like reading because I couldn’t read...Now I can...”
CGT: “The words are better... I know most hard words that other people can’t do...”
HT: “Just by practicing reading...just keep on practicing and I get the words right...”
PM: “It’s going great...I’m getting better at it (reading)...”
TT: “Cos in class I read hard books now instead of easy books...”
One of the class teachers commented at the July interview:

“...the thing I've found (is) that during our one-on-one readings or our reading circles with our groups that they're (the KPE podcaster) finding and inferring a heck of a lot more information than they normally would have. They're actually looking under the surface as opposed to usually just reading it and reciting it back to me....where as the kids who aren’t involved with the podcasting process....I don’t think they are picking up the same amount of inferential information as those kids are...I think the thing is that they can see a concrete purpose for what they’re doing with their reading...”

Question 15 was more challenging for them to think about and each survey group had quite a bit of discussion amongst themselves while they decided what they were going to answer. The question was, “Do you think you can read better in your other school work since you began podcasting?” The verbal examples I gave after reading this question were, “for example, when your teacher gives you written questions for numeracy or when you read information for your topic study (a term they understand to mean science and social studies)” This question asked for a yes/no response.

The total group mean response was 69% saying yes. There was variation between the ability groups. The students reading below their age said yes (67%) the students reading at their age were closely split with only 56% saying yes, while the students reading above their age were very confident that they noticed an improvement in reading transferring to other areas of their schoolwork. 88% of that group responded yes to the question.

The teachers were asked, “Do you notice any transfer from podcasting with KPE to any other areas of the school curriculum or school life in general?” Four of the five teachers commented on the technical skills the students had gained being noticeable when doing other eLearning tasks. And four attributed the improvement in the oral language skills of their students to this. Some of the responses made were:

“They have been teaching the other students how to do it (create voiceovers for movies)...and I guess it’s through the podcasting that they've got stuck into Garage Band and started wanting to make music and stuff like that to go along with the things they are doing.”

“I had a couple of kids that could record in the first term...and we had so many glitches and problems...but now I know I could send the whole
class (to record a voiceover for a movie) and they would all be through in 2 or 3 hours...”

“They started off their eLearning tasks recording in Garage Band and I noticed a couple of podcasters were so much more confident with how to use it and control it (than the others)...”

“Definitely, doing their voiceovers for movies. They are a lot more independent with using gear... I think it has really shown. In their ICT projects where they have had to do a voiceover they are thinking about the quality of the actual recording, the quality of their voice and even the content.”

“The children actually understand what it is to be expressive... and better intonation I think when they are speaking... that’s definitely improved...in their general speech...”

“Even if they have never made a podcast themselves, they listen to others during their reading tumbles and it helps them with their oral language... it helps them with expression and you can really notice it when they actually come to do a podcast themselves...”

Comments were also made by the teachers about social benefits from podcasting:

“The brilliant thing with emails and blogging is that someone else is contributing to that (giving the students feedback)...Kids love getting that feedback...”

“From listening to podcasts they’re a lot more analytical, critical about other people’s work...”

“The people that work on podcasts in my class are a lot more friendly towards each other than they used to be because they have got an established connection because they are all part of this group... so socially it has been really good...”

“Kids who (take others through the podcasting process) feel quite empowered....because they know it is a powerful thing to be able to take other people through the process and be able to record for them. And they can make (their friends) successful at podcasting, so a lot of them are doing that. You can see they are so excited...”

**Testing data**

The data gathered to measure the students’ reading ability came from three different standardised tests and was administered by three different adults. I am aware that there is no control group to compare this data against. We decided it was unethical to attempt to create a control group as one of the underpinning school values is based on the right of every child to participate. And even had we had attempted to do this, podcasting with KPE is so pervasive throughout the senior school that it would not have been possible to find a group of students who were not impacted by it in some way. This decision is confirmed in hindsight partly by some of the comments from teachers, indicating that even students who never got to do more than listen to KPE episodes were influenced in a variety of ways. There was also a proselytising effect observed where students took it upon themselves to teach other students how to ‘do KPE’ outside of the teachers’ planning.
asTTle
All the students in years 4, 5, and 6 sit asTTle reading tests twice a year. The tests are administered by their team leader and entered into the asTTle data base. Because we are part of a schooling improvement cluster, the filters for the test are set by the cluster co-ordinator and remain consistent from test to test for the cluster data gathering purposes. All students sat the first asTTle test in March and the second one at the end of August.

When the results are viewed by gender the boys (+50) in the sample group progressed significantly better than the girls (+32). They came within 7 points of closing the gap of 28 points which separated them in the March test. Ethnicity did not have such an influence on the difference between outcomes, with 5 points separating the Maori group who made the most progress and the Pasifika who made the least. The reading ability groups had 17 points separating the progress of the highest scoring group (those reading at their age) and the lowest scoring group (those reading above their age).

The year level graph compares the total KPE sample group students’ mean progress with the total year group at Pt England School who sat the test. In both year 5 and year 6 the students in the KPE podcasting sample group made more progress in asTTle reading than their classmates. The KPE year 5 group gained 35 points whilst all year 5s gained 25. The KPE year 6 group gained 49 points whilst all year 6s gained 27.
PM Benchmarks

A running record is taken for each student in the school twice a year and recorded in our school data base. The mid year one is taken by the classroom teacher and the end of year one is taken by the same person in the junior school and the same person in the senior school to keep the data collection as consistent as possible. From year 3 onwards the reading age is achieved only if the student has satisfactory accuracy (95%) and comprehension (100%). Pat Reid has been conducting the end of year running records for a number of years and it was this data that was used to determine the initial ability groups for the students in the research sample.

This data is able to be displayed for each student over a five or six year period, depending on their year level. The following graphs indicate the progress made from end-October to end-October each year by the students on the sample group. The first graph is for the current year 5 students in the KPE sample. The second graph is for the current year 6 students in the KPE sample.
Where there is no information displayed on a section of a column, it is because the student made no progress that year.

The mean progress for 2006 of the total group was calculated as was the mean progress for 2007. The total number of students is 27, with 9 reading below their age, 9 reading at their age, 9 reading above their age.

<table>
<thead>
<tr>
<th></th>
<th>Mean progress 2006</th>
<th>Mean progress 2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total sample group (n=27)</td>
<td>1.05 years</td>
<td>1.74 years</td>
</tr>
<tr>
<td>Year 5 sample group (n=13)</td>
<td>1.04 years</td>
<td>1.96 years</td>
</tr>
<tr>
<td>Year 6 sample group (n=14)</td>
<td>0.86 years</td>
<td>1.53 years</td>
</tr>
</tbody>
</table>

**PROBE**

The PROBE Reading assessment is designed to provide in-depth data about a student’s ability to read and understand text. This test is not routinely used at Pt England School simply because of the length of time required to administer one running record. I decided to use this test because it was not part of the testing regime. This meant I could administer it at a time that suited the research project; immediately prior to the project data collecting starting and at the end of the period. This meant that each student was tested with PROBE at the end of term 1 and the end of term 3. PROBE also determines a reading age for individual students based on accuracy (96% needed to achieve the level) and comprehension (70%) required to achieve the level.)
The timing of the testing meant that both times there were students absent who had either
gone on holiday early or had other reasons for extended absences (eg at health camp).
This meant that the number of students in the total sample group, who had been tested
twice, was 23. (9 in the below average reading group, 7 reading at their age, 7 reading
above).

The mean increase for the total group was 1.5 years. This displayed as a range from 1.4
years in the below average group to 1.6 in the other 2 groups. Again the gender difference
was small (females 1.6 yrs, males 1.5 yrs) as was the difference by ethnicity (Pasifika 1.6,
Maori 1.5 and Others 1.5).

The three different reading tests used to measure the students’ reading ability all confirm
what the students had been saying about themselves. Their reading ability has improved.
Although the tests can not be compared with each other, and there is no non-podcasting
group to use as a control, we can observe the same trend across the data collected.
The asTTle test measured reading comprehension by looking at their ability; to
understand, to find information and their knowledge. The podcasting sample group had
made progress in this during the year, and had made a mean progress of 16 points more
than their peers in the same year level at Pt England School.
The PM Benchmark uses a running record to measure reading accuracy and
comprehension, giving a reading age. The podcasting sample group had improved their
reading ages by a mean of 1.74 years. Longitudinal data demonstrates that this group
made more progress this year compared with their own progress last year (1.05 years
progress).
PROBE running records administered over a shorter period also found the students in the
podcasting sample group had improved their reading ages - by a mean of 1.5 years.

The trend across all three measures of reading ability shows students with increased
reading ability. The students themselves attribute this to podcasting with KPE. The adults
involved in the project are aware that quality classroom teaching, and for some students
literacy intervention programmes, will have also contributed to the improvement in reading ability measured in these students.

The September survey asked the students in the final question to write “What is the best thing for you about podcasting?” A number of students chose to write statements about podcasting having made them better at reading:

“It helps me to read better and understand more books”
“to be better at reading and what you do with reading”
“I’m getting better at reading. I felt like reading has just gone easy”
“the best thing is when you get to learn more about reading and then you get used to it and you start to do more.”
“Learning to read better”
“It makes me a better reader. I love Podcasting!”

Final Words from the classroom teachers

The five classroom teachers were each invited to add concluding thoughts to the case study from the perspective of teachers and learners. They were asked to express a noticeable positive and a noticeable drawback on a written survey form. The table following quotes their complete responses:

<table>
<thead>
<tr>
<th>Teacher</th>
<th>Positive</th>
<th>Drawback</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teacher 1</td>
<td>Motivation</td>
<td>Fitting everybody in for podcasting activities in group situations rather than whole class</td>
</tr>
<tr>
<td>Teacher 2</td>
<td>Higher level of engagement with related reading tasks</td>
<td>Time for conferencing, checking scripts etc</td>
</tr>
<tr>
<td>Teacher 3</td>
<td>Students are engaged and enthusiastic about reading and the tasks</td>
<td>The time needed with students to write scripts</td>
</tr>
<tr>
<td>Teacher 4</td>
<td>Provides an authentic interactive context to motivate and engage the kids in their learning</td>
<td>The time needed to conference children individually to get the podcast ready to publish</td>
</tr>
<tr>
<td>Teacher 5</td>
<td>Increased motivation for reading for children</td>
<td>Monitoring and input required when trying to run as a group activity (ie keeping track of where children are at. 1-1 need for conferencing as not all children are reading the same book)</td>
</tr>
</tbody>
</table>
**Podcasting with KPE in the classroom from a learning perspective:**

<table>
<thead>
<tr>
<th>Learning</th>
<th>Positive</th>
<th>Drawback</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teacher 1</td>
<td>It’s fun to listen to the podcasts</td>
<td>The amount of time involved in the process</td>
</tr>
<tr>
<td>Teacher 2</td>
<td>Authentic audience and feedback</td>
<td>Novels and chapter books are more difficult to summarise (because) they take more time</td>
</tr>
<tr>
<td>Teacher 3</td>
<td>Students develop greatly improved reading comprehension and decoding skills along with improved oral and writing skills</td>
<td>The limit of just NZ fiction genre of the books</td>
</tr>
</tbody>
</table>
| Teacher 4 | • Increased motivation and desire to read and deconstruct book  
• Increased ability to retell plot including relevant details  
• Greater fluency and expression when reading orally  
• Increased reading mileage | None to mention |
| Teacher 5 | They get to see something they’ve created published and heard by a huge audience | writing/script summary |

The teacher feedback is unanimous in selecting attitude as the area to comment on positively, from both a teacher and learner perspective. Whether couched as motivation, engagement or enthusiasm the message is clear. The class teachers observe podcasting with KPE contributing to significantly improved outcomes in attitude to reading.

The clear negative message coming through from the classroom teachers is about lack of time to interact individually with students about their literacy. It is interesting to note that no concern has been expressed around time in regards to the use of the technology. The way the podcasting with KPE cycle has been designed allows the students to work independently (either as individuals, in pairs or in groups) for a large part of it. But there does come a time when a conference with the teacher is needed to discuss the book or the script and give the students feedback or feed forward. With 30+ students in most of their classes this is clearly a challenge.

This is further complicated by our agenda to encourage students to read more complex material. The books not only take longer for the students to read, but if the teacher is to engage meaningfully in a conference, and give meaningful feedback, she needs to have some idea of what the book is about too. Although many reading programmes for older readers have been based around students reading individual material (eg Core Libraries - Ashton Scholastic), they have often had a commercially produced set of questions or activities and answers provided to cope with this. One of the motivators for the students appears to have been the ability to select books from anywhere (though limited by the NZ fiction genre as noted by one teacher). And replacing the pencil-and-paper based activity cycle with 21st century technologies was the most significant motivator reported by the students.
Conclusion
This project set out to discover what impact the use of podcasting technology within a strategically designed cycle of teaching and learning activities had on student reading outcomes. The research asked questions about the students’ reading habits, their attitude to reading and their reading ability. It examined the impact of using this technology as a lure to motivate students to read more frequently, to read more challenging material and whether they were becoming better readers in the process.

The results add to research beginning to emerge that shows that podcasting has the potential to engage learners (Ed), to overcome barriers for diverse learners (Lum, 2007) and to change the ways teachers and students interact (Tavales & Skevoulis, 2006). This research shows that:

• The KPE teaching and learning cycle led the participants through multiple opportunities to reinforce the traditional literacies of reading, writing, speaking and listening by giving them motivating reasons to participate. It enabled them to participate in a community of practice during the process.

• The teachers and students involved in the research did not mention having any difficulties with using the technology.

• The students expressed a high degree of satisfaction with the process and particularly noted that; using the technology, reading books, working with a partner, having an authentic audience and positive interactions with an adult were significant motivators for them.

• The outcomes for students showed very little difference whether sorted by gender or ethnicity. Maori and Pasifika students, who have often displayed low achievement in pencil and paper based literacies, in this study have improved their reading outcomes. This was also the case for boys, with the exception of attitude outcomes.

• The students’ attitude to reading has improved, particularly amongst the boys. A number of boys reported negative feelings to reading last year, and by the end of the study period no student reported negative or neutral attitudes to reading. This improved attitude included visiting the library, SSR in the classroom and students independently sourcing books.

• The students’ reading habits improved over the study period with students reporting they read more books in total now, read more books at home, read more frequently and the complexity of the material they choose to read has increased.

• The students’ reading ability (fluency, accuracy and comprehension) improved during the study. All students participated in their ‘regular’ instructional reading sessions with their classroom teachers. Some students were receiving additional instruction in withdrawal groups. The mean progress of the sample group was above the national norm in two standardised tests (PROBE and PM Benchmarks) and above the school norm in asTTle.
• The multi-faceted nature of the KPE cycle appeared to offer a variety of motivators (or lures) to appeal to a variety of learning styles and needs.

• The students reading below their age and at their age displayed similar responses in all areas of the research. There were individual differences noted, but as a group they appeared to find the opportunity to use the technology within the KPE cycle highly motivating and their reading outcomes improved through the period they participated.

• The students reading above their age had similarly improved reading outcomes, but their survey responses suggest they were differently motivated. They began the year with a more positive attitude to reading, the complexity of reading material selected was higher (though not where it should be for their reading ability), they read more at home, they read more often and obviously their ability level was higher. The group mean showed a pattern of progress as did their individual scores. However the motivators were different for this group, with authentic audience displaying the most prominence. The reading outcome that most needed raising for this group was their reading habits. Would simply keeping a reading journal that was monitored by an adult, and providing more opportunities for them to read and access written material at school have been sufficient for these students? It possibly would have been enough to raise their outcomes, but what value do we place on their obvious appreciation of an authentic audience which came through strongly? Podcasting with KPE certainly provided that for them.

With the results of this research showing that including podcasting with KPE in teaching and learning activities can make a significant contribution to reading outcomes, important questions arise:

• How do we find time to hold individual conferences with students as frequently as they need? This challenge for the school and the teachers cannot be ignored. The significance of the role of the teacher comes through in the literature (Hattie, 2007; Alton-Lee, 2003) and technology, no matter how inviting, is not enough on its own.

• Can the ‘podcasting with KPE’ literacy cycle be replicated using other cutting edge technologies? In the context of Pt England School, could video production with PE.N.N. be strengthened to become a literacy cycle, rather than a linear progression with a publication end point as it is at the moment?

• Can this cycle approach be replicated by other schools in other contexts?

• This research did not include students reading more than 3 years below their age or recent immigrants to New Zealand. How would podcasting with KPE contribute to their reading outcomes?
Acknowledgments

The students of Pt England School deserve a huge thank you for participating in this project with generous enthusiasm and openness. You people are always prepared to give new things a go and to share your knowledge and skills with others. And you are so good at it! Keep striving to succeed.

To the staff of Pt England School - same! Thanks heaps. You people are notable for being prepared to stretch yourselves, take on new things and put yourselves out to help the kids succeed. And that includes our principal, Board of Trustees and parent community.

To the original group of podcasters back in 2005 (teachers and students) who took on this idea in faith and showed me how it would work in the classroom. You are awesome! And the group of teachers this year who put up with me researching around them, answered my dumb questions and answered surveys. And the group who helped me with literature, critique, friendship and ideas. Thanks to all of you.

To Renaissance Education Division and individual staff there who have supported this research and KPE from the beginning - when you really didn’t have a clue what I was talking about either. Thanks for your faith and assistance. It is much appreciated.

To the Ministry of Education who provided the eFellowship, to the team at CORE who mentored and supported, and to the other ‘fellows’ who inspired. Thank heaps.

There is a large and inspiring group of New Zealand authors who have contributed to this research project as well. Some of you have done so knowingly and most have been unaware. Please keep writing outstanding stories for kiwi kids - and we will keep trying to market them for you!

And finally to my family. Russell, Georgie, Ashleigh and Max. You know what you have been through and put up with, including knowing more about podcasting than you ever wanted to or asked to. I love you.
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