

Sabbatical Report Term 3 2014

Investigate how e-learning can support and motivate reluctant and underachieving students, particularly in literacy and numeracy.



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Purpose

To strengthen the schools ability to motivate our reluctant and underachieving learners, using information and communication technologies where appropriate.

Background and Rationale

In 2013 I completed a dissertation to identify how information and communication technologies can motivate reluctant and underachieving readers. I went into the study fully expecting that the students would love using the technologies and that this was a good way to motivate them. Let's face it a lot of money is being put into equipping students in ICT. In short my study found the opposite. All of the students interviewed preferred reading traditional hard copy reading resources i.e. books, over reading on devices. This in fact demotivated them to read.

This made me query if the focus we were putting on using ICTs was the right direction to move in for this group of students.

Information and communication technologies have always been a part of my teaching and over the last 28 years I have held responsibility for co-ordinating ICT in all of the schools I have worked in. The New Zealand Government is investing large amounts of money to support the use of ICTs in schools including 'fibre in schools', 'school network upgrades', 'network for learning', as well as the laptops for teachers scheme, to name but a few. Technologies are developing at an exponential rate. As soon as a new technology is made available its successor is already being developed. There is an increasing

pressure on schools to 'keep up' with such technological advances and to integrate devices and resources into classroom programmes. Buzzetto-More, Sweat-Guy, and Elobaid (2007) claim that the current generation of students are fascinated by new technologies and consider them to be a natural part of their environment. Buzzetto-More et. al. (2007) believe that e-books in particular will change the way we understand reading and represent the future of reading in the digital age.

According to Sanacore (2010), reluctant learners do not complete tasks, they avoid challenges, and are satisfied with just getting by academically. They are often capable of doing well but do not seem concerned about achieving in school.

With the increased interest in digital technologies and the push for students to become more technically competent it was of interest for me to investigate whether such new technologies actually provided the motivation and interest as speculated. This study was conducted with a focus on students not achieving to the New Zealand National Standards.

Methodology

Motivating our underachievers is top priority for all schools. These are predominantly our 'target group'. Finding the key can be complex and individual. During this sabbatical I visited primary schools that were of a similar decile and school demographic. I didn't want to be limited to this so also sent a generic email out to schools across the country to gather a broader base of information. In all I visited schools in Auckland and sent out 50 emails. I received responses from five schools. I am also a member of the Virtual Learning Network for e-learning and the discussions posted in this forum are based on school practice in e-learning.

Findings

School demographics

The schools I visited were decile 6 and 7. The schools that answered via email were predominantly decile 10. This in itself was interesting with lower decile schools not wanting to participate. The reasons for this can only be speculated.

All schools deemed themselves 'multi-ethnic' with a range of ethnicities across the schools. For most schools NZ European was the largest ethnic group. Only one of the schools was a full primary.

Devices used in schools

A range of devices were used by the schools including, interactive whiteboards, PC's, tablets, ipads, shared COW's, laptops, chromebooks, netbooks, digital cameras, story phones, radio broadcasting equipment and listening posts. There were more devices available per student in decile 10 schools than there were in decile 6 and 7 schools. Only one school used a fully implemented BYOD scheme. Three other schools were trialling this and the remaining schools were setting themselves up for this in the future.

Computer Based programmes used

Schools used a range of software packages and programmes for specific cohorts of students and generically across the school. Three of the schools were using Google apps. Three schools were using Sumdog. Five schools were using STEPS to Literacy. Other programmes and applications used specifically for underachieving students included: Mathletics, PM readers and writing, Audacity, Maths Knowledge Builder, e-ako maths, Skoolbo, IXL, Sunshine Online, Khan Academy, My Lexia, Study Ladder, Literacy Shed, Reading Eggs, RAZ kids reading, and First Steps.

Most students had access to the programmes and applications used by specific schools while in school, and some had access from home as well. Specific students had access to remedial type programmes according to need.

Effectiveness of the programmes used

Many of the programmes used gave the teacher and student feedback about progress they had made and next steps in learning. These programmes included Sunshine Online, Mathletics, Sumdog, Skoolbo, e-ako, My Lexia, STEPS and Study Ladder. Schools used this information to help determine the programme's effectiveness in assisting target groups of students with improving student achievement. All schools used anecdotal evidence to determine the

effectiveness of programmes. This included measuring student levels of confidence in learning areas as well as motivation to learn and engagement. 'RAZ kids reading' uses a motivation questionnaire both pre and post programme. Results have proven to schools that some of the programmes are successful in accelerating student progress.

Motivating underachieving students

All of the schools used anecdotal evidence to determine if students were actually motivated by using these programmes. Evidence ranged from greater engagement of students, feedback from parents, to actual student feedback and willingness to come to school early to access the programmes. Only one school could specifically state that they asked their students if they felt more motivated by using these programmes. Specific programmes were used for target groups to accelerate learning and student achievement results showed that significant progress had been made by the target groups.

Implications and Conclusions

From this study it is clear that schools use a range of information and communication devices in their schools. Many schools allow student's access to a large number and range of devices on a daily basis.

Previous studies concluded that students preferred reading hard copies of books rather than reading on devices. Part of this was due to the use of tablets with touch screens. When students used these they often inadvertently scrolled to the next page and due to their reading difficulties did not have the skills to find their place again. Some students liked to use one to one pointing and when they touched the screen the word would be highlighted or moved or deleted and they did not have the skills to fix this. This would indicate that the choice of device that is used for underachieving students was of great importance. Students would require the skills to use the device before they attempted to use specific programmes to eliminate this demotivating factor. The implications for this are of great importance for teachers wanting to use ICTs with their reluctant and underachieving students. The difficulties experienced manipulating text on a tablet were exacerbated by the students pre-existing difficulties with reading.

This caused frustration and may serve to further damage the students' self-concept around their reading ability. Factors such as underachieving students struggling to concentrate for longer than 10 minutes when using digital devices should impact the decisions made by teachers as to what format to use when working to motivate this cohort of students.

The range and effectiveness of programmes and applications was large and growing. Some of the schools were trialling programmes to determine effectiveness and had already determined some programmes were best used as support for existing programmes as evidence had showed they were not as effective as initially suggested. It takes time to investigate the effectiveness of programmes but it seems logical to do so before giving these to students to use as they may have the opposite effect of demotivating students and thus impacting negatively on progress.

The greatest implication that perhaps came from this study was the need to ensure we capture student voice on the effectiveness of programmes and the use of ICTs. Teachers and school leaders mainly relied on anecdotal evidence when making decisions regarding the effectiveness and motivational impact of programmes on underachieving students.

It is always difficult catering for the needs of every student in a school with the limited financial resources available to some schools. Using digital resources is a way around this, as the licences for multiple user electronic books and programmes tend to be cheaper than purchasing hard copies of books and multiple users can access them at any one time. For the classroom teacher it is important to find resource material that is of interest to a group of students. This will increase the students' motivation to learn and will promote them to access their learning resources, perhaps more regularly.

Benefits

Lastly there are benefits to using online resources particularly for the use of multi-functional technologies and interactivity with the user, including activities that can be completed after the main learning component. Ciampa (2012) states that reading software with multimedia features can promote motivation in reading and can help to address the gap in achievement for underachieving

readers. Felvegi and Matthew (2012) found that using reading material with multimedia functions gave students greater control over what they read and over the features available with online text.

Another benefit is the ability of some programmes to determine the ongoing progress of students and sharing this with the students, the teacher and parents. This was seen as a major motivating factor in students' success by participating schools. Being able to see progress and to work towards a goal such as a reward system made students want to use the programme more and they gave up their own time to access this.

Summary

Motivation is a crucial factor in engaging students in learning. Living in a technologically capable time our expectation might be that students of this era who have smartphones, electronic tablet devices, and a multitude of computer devices available to them, would be motivated to learn by using these devices. This study found that the type of programme used and the type of device used plays a big part in determining the motivational factor for students. It would be important for educators to determine their students' preferences before making assumptions as to what and how students want to learn and what will make a difference to students' achievement. It is not just the 'what' students want to learn but the 'how' students prefer to learn that requires consideration.

For my next steps I have enrolled in the 'Leadership in e-learning' paper at the University of Auckland for semester one 2015; and the 'e-learning in Practice' paper for semester two. This will allow me a different perspective to continue researching this area of study.

References

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