‘What effect does creation and use of ICT based ‘Energisers’ have on student engagement?’

Ministry of Education

2008 E-Learning Fellow

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FINDINGS

METHODOLOGY

INTRODUCTION

ACKNOWLEDGEMENTS

ABSTRACT

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Abstract
This research used the intervention of student made ‘Energisers’, to observe the engagement levels of students when they created and participated in ‘Energisers’; and the impact of ‘Energisers’ on learning. An ‘Energiser’ is defined in this research as a 2-3 minute movement exercise made for students by students using ICT. The created ‘Energisers’ were used at any time during the school day when the classroom teacher or students felt that they were feeling ‘flat’ or disengaged in their learning.

The research found that ‘Energisers’ had a valuable impact on learning because they helped in students to be more focused. Students were completely involved in the process of creating their ‘Energisers’ and therefore had full ownership of them. Students used a variety of ICTs that they had not used in the past to create their ‘Energisers’. This had significant effects on student engagement.

‘Energisers’ were shown to increase students’ heart rate, depth of breathing and general energy levels. However, even though ‘Energisers’ can ‘lift’ the class energy levels, help students be better prepared mentally and physically, it is ultimately quality teacher practice after an ‘Energiser’ session that will lead to a sustained improvement in student learning. It is crucial for the teacher to spend time within the first 5 minutes after an ‘Energiser’ to actively re-focus the learners by making connections and learning meaningful for each student.

Time is precious in any school, and for teachers to have ‘Energisers’ at their finger tips can save time and allow for more learning time for students, since ‘Energisers’ involve limited equipment and require little management of students.

It must be noted that not all students are disengaged at the same time. However, ‘Energisers’ benefit all students (engaged or disengaged) by providing an energetic micro-break.
ACKNOWLEDGEMENTS

I would like to acknowledge the support of the Ministry of Education for granting me 0.8 release from the classroom to pursue a special interest of mine.

Thank you to the Isleworth School Board of Trustees, School Staff, Room 1 and their parents for being supportive throughout my research. A very special thank you goes to Sarah-Leigh Hampton, the classroom teacher, for opening up her classroom and for her collegial support.

I would like to thank the 2008 E-Fellows (Michael, Nick, Toni and Mark) for the collaborative, challenging and enjoyable time we had together – you are all a talented and inspirational group of friends.

I thank Dr Michael Winter, Dr Vince Ham, Sandra Leadley and the CORE Education Team for providing challenging / supportive professional development and keeping me focused. Thank you to Mel Stopford from ‘Engaging Learners’, for your faith and drive in challenging me to do something different.

Thank you to my research partner Sport & Recreation New Zealand (SPARC), in particular Deb Hurdle for your ‘can do’ attitude. Thank you to ‘Whitebait TV’ Productions for your enthusiasm and encouragement.

To Rosina, Olivia and Sam thank you for your continual support. I am very fortunate to have such a wonderful family.

Matt Tippen
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December 2008
**Introduction**

**My Background**
In 2007 I was the Deputy Principal of Isleworth Primary School, a decile 7 School in Christchurch. When we were in our final year on the ICTPD contract, I was completing a paper on teaching and learning and was wondering how I could improve the effectiveness of learning by using computers and movement – ‘Energisers’ developed from this. I have always had a passion for Physical Education (my Bachelor of Education major is in Physical Education) and the link between movement and to learning.

**‘Energisers’ Defined**
An ‘Energiser’ is defined in this research as a 2-3 minute movement exercise, made for students by students using ICT. The students may ask to carry out an ‘Energiser’ when they are feeling ‘flat’ (disengaged); or the classroom teacher may decide to carry out an ‘Energiser’ when he/she sees the students becoming disengaged.

It is suggested that teachers use ‘Energisers’ at any time throughout the day to re-energize, refocus students and give an energetic micro-break. The purpose of ‘Energisers’ is to enable students to become physically/mentally ready to take on the demands of schoolwork in all curriculum areas. There is no set time to carry out an ‘Energiser’ as students will become disengaged at different times of the day – so it is up to teacher discretion and experience to decide when to implement an ‘Energiser’.

As a teacher, how often have you seen your class go from a level of arousal to a state of boredom? How often on a rainy day have you heard comments from teachers that the students’ need to get outside? How many times have you heard excuses from teachers to explain why they do not take their class out for exercise?
With the many disruptions (timetabling, sports/cultural days, disruptive behaviour) in a school, it is at times quite difficult for quality learning to take place. When students become ‘flat’, when energy levels are low in class, an ‘Energiser’ could be used to refocus these students. ‘Energisers’ are designed to use time effectively. That is, limited teacher commands and equipment are required, allowing more time for learning to take place.

I believed there was a need for something that would improve learning, and aid in improving the management of time. I wanted ‘Energisers’

• not to take too long to complete…
• to involve quality movement not quantity…
• to use less teacher commands…
• for students not to have to:
  ◦ line up outside…
  ◦ put their chairs in…
  ◦ close their books…
  ◦ walk to hall/courts…
• for teachers not to:
  ◦ see students running around the school courts and have stragglers…
  ◦ coming in from the courts at different times…
  ◦ to deal with someone cheating as they cut court corners…
  ◦ to hear moans and groans about doing exercise…
  ◦ to cope with someone falling over and others walking…
  ◦ to address the challenges from sprinters being in before the last student is out and the cross country champions loving running around courts, while the other students hate it …
  ◦ have to get the equipment out and set up…
  ◦ wait until it was their allocated time to use the hall…

I wanted something that
• could be used by students at their desks, or where they were working at the time…
• required less teacher commands…
• needed limited equipment…
• did not involve students leaving the class…
• any teacher could use …
• get students moving and re-charged (especially the boys)…

I wanted the students to embrace the technology so that they would move away from the technology and above all I wanted students to own the ‘Energisers’, and hoped that as a result they would use them.

**Why is this research is important? (A New Zealand context)**

On the 21 September 2006 the Rt Hon Helen Clark said in a Media Statement that, “An epidemic of obesity threatens to undo the significant progress made in improving our health and quality of life. Unless something changes, the current generation of young New Zealanders may be very well be the first to die at a younger age than their parents.” (as cited in SPARC, 2006).

On the same day, the Hon Steve Maharey said in another Media Statement that, “As Kiwis, we often portray ourselves as sports-loving and active. It’s a huge concern that New Zealand children are following a global trend in declining levels of physical activity and increasing obesity from a very young age.” (as cited in SPARC, 2006).

‘Energisers’ are designed to get students moving (to contribute to a healthier lifestyle for New Zealand children) and more importantly to give them an energetic micro-break so that they are better prepared to learn and take on new challenges because they feel good about themselves.

Boys' education is currently a topical concern. In particular there is a significant amount of research indicating that boys need exercise in their school day. The present research will explore the need for exercise in the context of ‘Energisers’.
The New Zealand 2007 Curriculum Document

The research particularly focused on the key competencies as well as touching on learning objectives within the New Zealand 2007 Curriculum document. The five key competencies were expressed during students creating and applying ‘Energisers’ and the impact on learning afterwards. The key competencies are:

- thinking
- using language, symbols, and texts
- managing self
- relating to others
- participating and contributing

The New Zealand Curriculum, (2007) states that, “Students need to be challenged and supported to develop the competencies in contexts that are increasingly wide-ranging and complex,” p.12. ‘Energisers’ offer a suitable context for this process.
Literature Review

“Movement is the door to learning.”
Denniston (as cited in Hannaford, 1995, p.78).

Dywer, et al, (1996) cite many benefits of exercise on the physical, emotional and mental state of students. However, when students are tired and feeling lethargic the last thing many students feel like doing is schoolwork, let alone exercise. All teachers have had days when many of the students in their classes are not engaged, but are disengaged.

The literature review will explore student motivation, engagement, flow, the benefits of exercise, boys' education and ‘spaced learning’.

Motivation

Students have varying experiences outside the classroom, such as parental breakup, no breakfast, not completed homework, being bullied. These can affect their motivation to learn and the teacher must adapt to meet the needs of all students – often not an easy task.

Roediger, et al, (1991) describe motivation can be explained as “A theoretical construct that is used to explain initiation, direction, vigor, and persistence of behaviour” (G.12).

Similarly, Weinberg and Gould (2003) describe motivation as “the direction and intensity of effort” (p.52).

Motivation can be broken down further into intrinsic and extrinsic motivation.

Intrinsic Motivation is based on “internal factors such as self-determination, curiosity, challenge, and effort”, whereas Extrinsic Motivation involves “external incentives such as rewards and punishments” (Rowland, 2005, p.440).
The Virtual Psychology Classroom (2003) characterises intrinsic and extrinsic motivation in a similar manner:

Intrinsic Motivation – “The motivation or desire to do something based on the enjoyment of the behaviour itself rather than relying on or requiring external reinforcement.”

Extrinsic Motivation – “The desire or push to perform a certain behaviour based on the potential external rewards that may be received as a result.”

The literature of motivation is important to this research. It was hoped that students might become more intrinsically motivated, by taking on a new challenge and by learning new skills in the creation of ‘Energisers’. It was also hoped that students would take a stake in the learning process involved in creating the ‘Energisers’ and become more self-directed learners.

Researchers have found that “giving children some choice and providing opportunities for personal responsibility increases their internal motivation and intrinsic interest in school tasks” (Rowland, 2005, p.440).

Clarke, et al (2003) support this finding, and comment that, “Children become more motivated and task-orientated if they know the learning intention” (p.25).

Extrinsic motivation is seen when the students carry out the ‘Energiser’ and are rewarded with the benefits of being potentially re-energised and re-engaged in their learning.

**Engagement**

Engagement is described by the Oxford English Dictionary (2002) as to, “involve oneself in a place from which withdrawal is difficult…enter upon or occupy oneself in an activity, interest…attract and hold fast (a person’s attention, interest).”

To have students more motivated in what they are doing, students need to be engaged in the subject matter. When students are engaged in the subject
matter they will be focused and on task. Learning needs to be authentic and meaningful for all students. Kearsley and Shneiderman (1999) discuss the importance of an ‘Engagement Theory’. “The fundamental idea underlying engagement theory is that students must be meaningfully engaged in learning activities through interaction with others and worthwhile tasks” (para. 1). Engagement can occur with or without technology. However Engagement Theory is “intended to be a conceptual framework for technology-based learning and teaching” (para. 1).

Kearsley and Shneiderman describe three principles of engagement theory:
1. Relating - Occuring in a group context (i.e., collaborative teams)
2. Creating – work is project-based
3. Donating - Having an outside (authentic) focus, a useful contribution

With the above three categories this research yields findings that conform to Engagement Theory.

Relating - ‘Energisers’ are made through collaboration of learners in small groups predetermined by the students themselves. This conforms with the New Zealand Key Competencies (relating to others, participating and contributing) (NZ Curriculum, 2007).

Creating – Students discussed what happened when they felt tired and lethargic in class. They also considered what made them feel refreshed; and the role of exercise in the school day. The students were continually a part of the learning process and therefore had greater ownership in their learning. ICTs provided an avenue for the creation of the ‘Energisers’, and gave the students a new experience that they otherwise would not have had.

Donate – ‘Energisers’ fulfill an authentic and meaningful need in the classroom. They provide teachers with a useful tool to re-engage students, and give fellow students the opportunity to refocus. An ‘Energiser’ DVD was given to each teacher in the school in the hope that other teachers/students would benefit in using the ‘Energisers’ produced. In this way the students
were contributing (donating) back to the school community.

**Arousal Theory**

Arousal can be defined as “the intensity dimension of behaviour, the general state of activation or excitement that ranges on a continuum from deep sleep to extreme excitement. Arousal, per se, is neither positive nor negative; arousal increases when we are looking forward to an exciting event as well as when we are in a threatening situation or worried about mistakes” (Gill, 1986, p.113).

Students within the classroom can go through many emotional states throughout the day. The students can be showing extreme energy levels – being highly aroused by subject matter - one minute; and later can show signs of low energy levels (low arousal).

Yerkes and Dodson, (1908) (as cited in Gill, 1986) believe that the degree of arousal can be shown using an inverted-U diagram. (Figure 1)

![Figure 1 Yerkes and Dobson’s (1908) Inverted-U Model. From Psychological Dynamics of Sport, (Gill, 1986, p.119).](image)

As the student moves along the Inverted-U continuum, (depending on the difficulty of the task) with an increase in performance there will be an increase in arousal (and vice-versa). When the student reaches the apex of the curve, he/she has optimum arousal needed to meet the challenge. Low energy levels (low arousal) can impede performance of a task, because the subject is too
mellow/carefree and not focused on the task. If the individual demonstrates extreme energy levels this too can impede performance because the subject is over anxious and may not be focused enough on what he/she is doing. No matter what the task, trying to keep a state of equilibrium/optimum arousal is not easy. However students that are engaged may not be at equilibrium at all times. Equilibrium is described here by the Oxford Dictionary (2002) as “a well-balanced state of mind or feeling.” It must be noted that students can fluctuate either side of the equilibrium and still be engaged. Performance will be at the highest level when students are at the apex of the curve. It will be most impeded at the extremes of the inverted U diagram.

**Flow**

“Flow is the way people describe their state of mind when consciousness is harmoniously ordered, and they want to pursue whatever they are doing for its own sake” Csikszentmihalyi, 1990, p.6).

A simpler definition by Csikszentmihalyi (1975) is “the conditions under which participants experience fun and enjoyment” (as cited in Gill, 1986, p.147).

The flow state occurs at a maximum state of intrinsic motivation, where the subject is fully immersed in what he or she is doing. (This is often described as being ‘in the zone’ or ‘in the groove’). Flow will occur when one is so completely engaged on a task that s/he loses all sense of time, and becomes 'one with' the activity.

![Flow Diagram](image)

Figure 2. Flow: The Psychology of Optimal Experience, (Csikszentmihalyi 1990,
Figure 2 illustrates a situation of ‘flow’. If the tasks are greater than the students abilities the student will become anxious. However if the task is too simple then there is no challenge, the student will face boredom and become off task. A new skill combined with a new challenge (A1) will have the student initially in a state of flow. When the skill is mastered, boredom (A2) will set in, or if the challenge is increased and the skill level stays the same (A3) the student will become anxious. When the new challenge requires a new skill level the student will again go into a state of flow at a higher level (A4). It must be noted that A4 is not where the student will stay as new challenges and wanting to improve skill level will drive the student forward. “It is this dynamic feature that explains why flow activities lead to growth and discovery. One cannot enjoy doing the same thing at the same level for long” Csikszentmihalyi, 1990, p.75).

Kimiecik and Stein (1992), believe when the skills are equal to the challenge, students will experience flow. A person that is in a state of flow will be “…completely involved in an activity for its own sake. The ego falls away. Time flies. Every action, movement, and thought follows inevitably from the previous one, like playing jazz. Your whole being is involved, and you’re using your skills to the utmost” (as cited in 37 Signals, 1999, para. 1).

Csikszentmihalyi (1975) concluded that the flow experience has the following characteristics:

a) total involvement in and concentration on the task  
b) loss of self consciousness 
c) clear and unambiguous task demands and feedback  
d) a feeling of being in control  
e) the absence of extrinsic goals and rewards  

(as cited in Gill, 1986, p.148)

Flow is important to this research as students have the potential to reach a
state of flow in creating their ‘Energisers’ as this is a new skill and challenge for them. Flow may not occur so easily when students perform ‘Energisers’, as they have a short time span and students may not have time to progress through their initial unfamiliarity with the task. As student skills and fitness levels improve, it is important for the teacher and students to be aware of this and adjust the skill and level of challenge accordingly to continue to give the students the potential to be in a state of flow.

**Attention Span**

Attention is defined by Roediger, et al (1991) as, “In perception, the active selection of and focus upon one object or component of a complex experience. The organism thereby responds to a more narrow range of stimuli” (p.163).

Span as defined by the Oxford Dictionary (2002) as “(A thing encompassing) a short distance, space, or time.”

It has been long debated what the average attention span is for an individual. The attention span would inevitably depend on the individual and how intrinsically/extrinsically motivated he/she is by the activity. The teacher would be wise to take the average attention span of the students, and the optimum duration of learning experiences into account when planning, the range of activities to be used and with the class.

Literature sources differ in their opinions of people's attention spans, therefore may be an area for further research. Thus:

“We know that students in lectures learn most in the first 8 minutes, only recall three things at most after one hour, and that if the content does not shake their prior beliefs they file away the fascinating facts in the deepest recesses of their brain, if at all” (Hattie, 1999, p.1).

A study at Simon Fraser University found that “for literate humans, the average continuous attention span was 8 seconds, with a maximum of 30
seconds. In addition, it was determined that the average general attention span was from 10-12 minutes” (as cited in George, 2008, para. 6)

Burns, R., (1985) study on adult learners found that they were able to recall the most information of the first 5 minutes of the lecture.

A study by Johnstone and Percival (1976) observed the breaks and lapses in attention over 90 lectures. They found that students took 3-5 minutes of getting themselves ready and settling down. The next break in attention occurred 10-18 minutes later.

Wankat and Oreovicz (2006) state that “Since attention span of almost all students is between 10 and 20 minutes, you can expect to lose most of your students if you lecture for 50 minutes straight” (para. 5).

Middendorf and Kalish (1996) discuss the importance of attention span and the need to think about the way that lessons are delivered: “Given that students have an attention span of around 15 to 20 minutes and that university classes are scheduled for around 50 or 75 minutes, instructors must do something to control their students’ attention” (para. 7).

Having reviewed the literature, I have come to the conclusion that peoples' attention spans lie within a 10-20 minute range, and that the first 5 minutes is the critical time to engage the students. Therefore teachers need to think critically about what they are teaching, when they are teaching and how they are teaching to create maximum results and benefits for their students.

Breaks are necessary for students. However school breaks do not always happen at the time when students most need them. Hence the idea that student made ‘Energisers’ may provide effective breaks to refocus learners.

In conclusion, we know that deliberate breaks/activities are important for student motivation, engagement and for keeping students aroused.
**The Importance of Exercise**

There are three energy systems that the body will use when exercising. Each system is predominately active during different stages of exercise, but does not work in isolation;

**Anaerobic alactacid (alactic) system – Immediate system (ATP-CP)**
- This system provides energy for explosive power or strength events lasting less than 10 seconds
- It does not require oxygen and does not produce enough lactic acid to cause a decrease in performance

**Anaerobic lactacid (lactic) system – Short-term System (Glycolysis)**
- This system provides energy for short, high-intensity efforts lasting 10 seconds up to about 2 minutes
- It does not require oxygen, uses carbohydrates only, and can produce significant amounts of lactic acid which will cause performance to decrease

**Aerobic system – Long-Term System**
- This system provides energy for long-term exercise lasting longer than 2 minutes at intensities that vary from very easy up to very hard (but not maximal)
- It requires oxygen to metabolize the carbohydrates and fats, but does not produce lactic acid

Figure 3 compares the three energy systems. The energy system that students predominately use will depend on the duration of the ‘Energiser’ as well as the intensity with which the student exerts him/herself. The student that exerts him/herself to a maximum level will be using the immediate system, and will not be able to sustain this over a long period. The student that starts a little slower reaching maximum level of exertion somewhat later, and slows down will be able to perform slightly longer (Short term system). The student that gradually works up to a maximum exertion will be able to sustain the longest duration (long term system).

In summary, whether students are participating in an aerobic or anaerobic state will be determined by both the duration of the ‘Energiser’ and the intensity that the students’ effort.

When a part of the body is moved, “your Central Nervous System (CNS) transmits information out to various parts of your body through the motor, or efferent, division of your peripheral nervous system. Once your CNS has processed the information it receives from the sensory division, it decides how your body should respond to that input. From your brain and spinal cord, intricate networks of neurons go out to all parts of your body, providing detailed instructions to the target areas – for our purposes, muscles” (Wilmore & Costill, 1999, p.69).
McCall and Craft, (2000) believe that exercise is imperative to keep the body functionally efficiently but that is also vital for lifelong brain development. "Medical and scientific research has revealed that the brain is like a muscle that can be exercised and strengthened at any age. As a result of exercise the brain forms new cells and new connections, in turn, it can become stronger in the way it performs and functions. A fit brain can develop better memory, focus, concentration, faster reaction times and solve problems more efficiently" (Costello, 2008, p.2).

Jensen, (1988), comments that the brain processes movement and learning in the same area. Exercising will inevitably “Strengthen the basal ganglia, cerebellum, and corpus callosum – all key areas of the brain…exercise fuels the brain with oxygen, but it also feeds it neurotropins (high-nutrient chemical packages) to increase the number of connections between neuron …exercise is known to increase the baseline of new neuron growth…increased cognition, better memory and reduced likelihood of depression” (p.85)

Another key function of exercise is that it improves the oxygen and blood flow around the body, hence more oxygenated blood will reach the brain. Hershey-Mason, (2005) comments that exercise is one reliable way of increasing the blood and oxygen flow to the brain. Students only exchange about “10% of their oxygen during sedentary periods, meaning that 90% of the oxygen in their body and brain is stale until they engage in physical activity and begin to breathe more deeply. A lack of fresh oxygen to the brain results in confusion, fatigue, poor concentration, and memory problems; however, bodily movement facilitates the replacement of stale oxygen and gives the brain the nutrients it needs for optimal functioning” (p. 1).

Blaydes, (2004), believes that when a person sits for 20 minutes or longer the blood (due to gravity) in the body cumulates within the hamstrings. This is therefore taking blood that carries oxygen and nutrients away from the brain. The student then has more potential to become disengaged, warranting the need to move.
Krock and Hartung, (1992), point out that even by “standing can raise heart rate (hence blood flow) by as much as 5 to 8 percent in just seconds” (as cited in Jensen, 1988).

Cocke (2002) states that, “Youth receiving additional physical activity tend to show improved attributes such as increased brain function and nourishment, higher energy/concentration levels, changes in body build affecting self esteem, increased self-esteem and better behavior which may all support cognitive learning” (para. 4)

We all know that exercise is good for us but probably few people realise the positive benefits for our brain development. Exercise can often be the first thing that individuals forgo when they are tired or stressed and really should be the last. As Hillman, (2007) concludes "People have been slow to grasp that exercise can really affect cognition, just as it affects muscles" (cited in Carmichael, 2007).

Students and Exercise
How do the above findings apply to children? Over a 12-hour period Bailey et al (1995), observed a group of 6-10 year old children and not a single duration of intense exercise lasted for more than 10 minutes. In fact 95% of all intense activity was shorter than 15 seconds.

Baileys, et al, (1995) findings are important to this research. He states that students are biologically unable to sustain exercise for longer than 10 minutes, commenting that, “These results indicate that children engage in very short bursts of intense physical activity interspersed with vary intervals of activity, of low and moderate intensity” (p.1033).

As short burst activity is how children play/interact therefore tailoring ‘Energisers’ this way has the potential to help with participation and success. ‘Energisers’ in this research are a moderate form of exercise, and are designed to be 2-3 minutes in duration. However it is up to the students what intensity level they perform at.


**Boys and Exercise**

During the present research, the focus was to study whether there are any benefits of exercise on boys’ education. Biddulph (2008) says that exercise benefits both girls and boys but for different reasons. Generally girls need to exercise to become fit, whereas boys need exercise to release energy so that they are better able to learn. The present research will use student made 'Energisers to investigate this claim for boys' learning.

Irwin, (2008), also believes that boys and girls need exercise for different reasons. “Girls would also benefit if schools were to adopt the practice of building in mini-exercise routines, but biology and socialisation meant that boys generally have a greater need for regular physical activity.” (as cited in the Massey News, 2008)

Biddulph, (1998), has seen that “Many schools are having 15-minute exercise sessions to start the day, and find that boys behave better and learn more easily.” (para. 8)

Irwin, (2008) sees exercise more than only being at the start of the day, as he says “Short, regular doses of exercise between lessons helps boys concentrate and learn more in class” (as cited in Mulrooney, 2008). He believes boys doing more exercise throughout the day results in benefits in muscle control, ability to adapt to challenges, in competition and socially. He also claims benefits in the classroom where learning is more focused, as the boys are more ready to learn. He believes that five to 10-minute bursts of vigorous activity, such as skipping or running, several times a day will help boys settle.

Donevan and Andrew, (1986) found that “students who are engaged in daily physical education programs consistently show not just superior motor fitness, but better academic performance and a better attitude toward school than their students who do not participate in daily P.E.” (as cited in Jensen, 1988).
This is endorsed by Dwyer, Sallis, Blizzard, Lazarus, and Dean, (2001), who also state that “exercise improves classroom behaviour and academic performance” (p.236).

Irvine, (2008), believes that, “Because of the testosterone surge in young boys, they tend to need space, room to run, exercise, energy outlets but they also need to learn the rules on self control.” (as cited in 9am Ten)

The New Zealand Ministry of Education report, Boys' Achievement, (2007), comments that, “In order to fully understand these gender differences it is important to draw on the literature on early childhood, biological and cognitive differences, cultural differences, pedagogical approaches, assessment methods and socio-economic factors such as family income or parental education”

In my opinion schools and their school community need to come together in dialogue and introduce measures that will address the issues that are adversely affecting boys’ education. As the former NZ Education Minister Steve Maharey, (2006), (cited in Fox, 2008), said, “quality teaching would make the biggest difference in efforts to lift boys’ achievement.”

Another Perspective – ‘Spaced Learning’

Monkseaton School in England have introduced 8-minute lessons throughout the day in an endeavour to increase student long-term memory. They base this 'spaced learning' approach on neuroscientific principles, and claim that “Spaced Learning is a method specifically aimed at creating long term memories rapidly” (Bradley and Kelley, 2008, para. 1).

The researchers at Monkseaton School work along-side neuroscientists in creating better outcomes for students. Bradley and Kelley (2008) comment that, “The biological basis of a memory is a pathway of cells linked together within the brain.” Douglas Fields of the National Institute for Child Health and Development found that the cells linked together could not be constantly
stimulated (learn and process information) and therefore they needed breaks in order to improve student learning.

The ‘Spaced Learning’ process involves three stimulations broken up by having two ten-minute breaks as listed below. These breaks consisted of physical fitness activities.

- Teacher input of key facts/explanations (and therefore pathway stimulation)
- 10 minute ‘break’ from the input
- Teacher Input of key facts/explanations
- 10 minute ‘break’ from the input
- Teacher input of key facts / explanations

Researchers have found benefits in that students were not only able to retain more information but also improved their achievement results.

The present research does not use 8-minute lessons but recognises the importance of an exercise breaks within the school day to improve student learning.
RESEARCH QUESTIONS

The overarching research question was, “What effect/impact does creation and use of ICT based energisers have on student engagement?” The research was broken up into three stages with the following sub questions:

Creation/Process
What impact does creating energisers have on student engagement?

Doing/Use (Application)
a. What impact does the energiser have on the creators of the energiser?
b. What impact does the energiser have on engagement of participants doing the activity?

Impact on Learning
What impact does the energiser have on subsequent engagement in learning?
METHODOLOGY

What is an ‘Energiser’?
An ‘Energiser’ is defined in this research as a 2-3 minute movement exercise, that students carry out whenever their energy levels are low. ‘Energisers’ are designed to re-energise students so they are able to complete their work more effectively, by getting them moving, increasing blood flow around the body. ‘Energisers’ are made for students by students using ICT (iMovie). ‘Energisers’ are played through the teacher’s laptop via a data projector and onto a whiteboard. Each ‘Energiser’ has a theme created by students that would appeal to their peers. Accompanying music also supports this theme. A ‘freestyle’ component is included in each ‘Energiser’ where participants have the ability to create their own moves.

After initial modeling and scaffolding of what an ‘Energiser’ would look like, students brainstormed ‘Energiser’ themes that would appeal to the students of similar year levels to themselves (Year 6). They then designed a set of movement exercises that warmed students up (slow movements), challenged the students physically, increasing heart rate/blood flow (fast, quick movements) and gave the opportunity for students to warm down (slow movements). This process was discussed in length with the students as necessary components of the ‘Energiser’. A special emphasis was placed on the warm down and the importance of being in a physical and mental state to begin work again. The students created their ‘Energiser’ in front of a blue screen; and through the use of iMovie and iLife software were able to change the background to match their theme. Students imported music to their iMovie using iTunes. They were initially exposed to a wide range of music (from Opera to Heavy Metal) before making their decision. Student’s themes often dictated what music would be best suitable to get their peers moving.

When the students were designing the ideal ‘Energiser’, they carried out a PMC (Plus, Minus and Challenges/Changes) on fitness activities they have used in the past. They decided they wanted to make their ‘Energisers’ more
engaging for the audience by giving the audience some degree of ownership within the ‘Energiser’. Therefore each ‘Energiser’ had a ‘freestyle’ component built into their ‘Energiser’. This provided an opportunity for the participants to create their own movements at a time when no actions are being displayed on the screen, without having to be told what to do by other students or teachers. The ‘freestyle’ section usually conformed to the theme of the ‘Energiser’.

**Anytime ‘Energisers’**
The classroom teacher could use ‘Energisers’ any time throughout the school day when she noticed the students were becoming flat (low energy levels / lack of enthusiasm) or felt that they generally needed a break. The teacher used her laptop to play an ‘Energiser’ through the classroom data projector, onto the whiteboard.

**Equipment and software used in creating and viewing ‘Energisers’**
The ‘Energisers’ were made using:
- A MacBook computer loaded with
  - iMovie HD
  - Garage Band
  - iTunes
  - iLife Software
- Blue Screen
- Digital Video and Still Cameras
- 500W Halogen Lights and Diffusion Gel

Note: All ‘Energisers’ were filmed in front of a blue screen. Using chroma key, (from iLife Software) and iMovie the students were able to change the backdrop according to their ‘Energiser’ theme – this made each ‘Energiser’ unique.

The students chose to work in their own groups. They worked on their own themes, acting as the writers, directors, wardrobe designers, actors, editors and critics.

‘Energisers’ were viewed in the students' classroom using a standard data
projector and a 400w speaker system (The speakers gave each ‘Energiser’ a higher clarity and volume that a laptop on its own could not provide).

In brief the seven ‘Energisers’ created were:

1. WWE (World Wrestling Energiser) – Students appeared to be actually in a wrestling ring with their model wrestling characters
2. Summer's Out - A serious message about being Sunsmart
3. The Robbery – where participants were the central characters in a simulated robbery that took place at the school
4. The All Black Dream – Students used their school peers to be part of their dream of becoming an All Black
5. The V8 Super Cars – Students arranged their own visit to a Holden car dealer to feel what it was like to be behind the wheel of a Holden car
6. Late for School – A mad rush and panic to get to school - but all in vain; it was only a dream!
7. Kung Fu Fighting – Karate type moves set in front of close up photos of
Data Collection Methods
Data sources included:

- Teacher interviews
- Student interviews
- Student work samples
- Student / Teacher created rubrics
- Student questionnaires
- Observations
- Overtly collected video footage

Information was obtained from the classroom teacher, from students and through the researcher’s observations. This triangulation of data increased the validity of the research information. Data from these sources were analysed qualitatively, and coded for quantitative analysis. Due to different school environments and personalities the results may differ if another set of students/teacher/researcher tried to replicate this research.

Teacher Interview
Four teachers from the senior team (Year 4-6) were interviewed at the start of the research. They ranged in teaching experience from two to sixteen years. Teachers identified indicators based on what they could see and hear when students were engaged or disengaged in their classrooms.

The classroom teacher whose students were taking part in the research was a
female who had been teaching for 5 years. She leads the school on the AtoL contract and in school-wide sports. She was interviewed both formally and informally throughout the research.

The researcher led the class in creating ‘Energisers’. The classroom teacher used the student ‘Energisers’ with the class, and noted the impact. This took place during the normal school hours.

**Students**
The class was a Year 6 class made up of 22 students – and comprised 8 boys and 14 girls. The whole class created ‘Energisers’ and data was gathered as described elsewhere in this section. In order to preserve anonymity students were identified by code letters from A-V. The comments coded A-V are direct verbatim quotes from the students.

**Observation Group**
This consisted of six boys who habitually exhibited different levels of engagement. The boys all chose to work in their own groups. The classroom teacher was asked to highlight three groups of boys for observation. One group were ‘generally disengaged’, another was ‘generally engaged’ throughout the day, and the third was ‘usually engaged’. These groups were ranked in order from ‘generally disengaged’ being the lowest level of engagement to ‘usually engaged’ being the highest. These groups were observed to find out to what extent using ‘Energisers’ aided their learning. The groups were also cross-referenced with initial video footage taken before the start of the intervention, so that comparisons could be made between the conclusions of teacher and researcher. The comments of the boys in the observation group were interviewed at various times during the research. They can be identified by the following codes:

DB1 and DB2 – ‘generally disengaged’ Boy 1 and 2
GB1 and GB2 – ‘generally engaged’ Boy 1 and 2
EB1 and EB2 – ‘usually engaged’ Boy 1 and 2

(Note: Groups of girls were also identified to compare with the boys however one girl left the school, and one was absent from the class for an extended
period. For these reasons, and because of the current interest in boys' achievement, I decided to focus on the effect of ‘Energisers’ on boys’ learning).

**Questionnaires**
All 22 students in the class were given an initial questionnaire before any teaching was carried out. A similar questionnaire was used at the end of the intervention to see what difference ‘Energisers’ had made to engagement during the creation and use of the ‘Energisers’; and their impact on student subsequent learning.

**Interviews**
Interviews were carried out with the students but in more depth with the six boys in the observation group throughout the research.

**Student work samples and rubrics**
Students work samples and rubrics were collected regularly to check not only their progress but also to inform the researcher to what extent the students were engaged at various stages in the process.

**Video Observation**
Video was used at each stage of the research. In the first stages of the research, video was used throughout the school day to help identify indicators of engagement and disengagement. It was also used to identify the times of day when students were more engaged or disengaged.

Video footage was used to collect data on engagement levels when students were using the computer to create their ‘Energiser’. It also revealed information on body and oral language used by students when engaged.

Video taken of students directly before, during and immediately after an ‘Energiser’ was used and gave evidence of the effect (if any) of ‘Energisers’ on engagement and learning.

Video was also used to record student interviews (especially of the observation group of boys) as well as to monitor student activity throughout
the research.

**Consents**
A letter was distributed to parents outlining the research, together with parental and student consent forms. The letter included contact details of the researcher for parents to use if they needed further information. Informed consent to participate in the research was obtained by all students.

During initial discussions, the classroom teacher was also given an information letter and consent form to complete.

Letters were also sent to teachers, Principal and Board of Trustees regarding the research; and later a newsletter was also issued.

The existing school policy was adopted regarding consent to use the student’s photos.

A variety of pieces of music was used in creating the ‘Energisers’. Advice was sought on the copyright implications of using this music. The advice was that copyright should not be a problem if the ‘Energisers’ were used for educational purposes only, and not sold for profit. At the conclusion of the research, students were given a copy of the ‘Energisers’ on DVD. They were made aware of the restrictions on their use.

**Engagement / Disengagement**
A definition of Engagement was co-created with the researcher and students by using classroom dictionaries. The definition for this research by the students was “*In Room One we think engagement is something you really like getting into, you can’t stop because you are concentrating and excited.*”

Engagement and disengagement indicators were obtained from video footage, student questionnaires and interviews with classroom teachers. The indicators, obtained from these three sources summarised what an observer would see and hear of students in the classroom, as shown in Table 1.
Table 1 Engagement Indicators that was observed and heard

<table>
<thead>
<tr>
<th>What can you see?</th>
<th>What can you hear?</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Eye contact</td>
<td>• Gives verbal cues</td>
</tr>
<tr>
<td>• Gives non-verbal cues</td>
<td>• Responds to verbal cues</td>
</tr>
<tr>
<td>- raises eyebrows</td>
<td>• Asks questions to teacher / individual / group / class</td>
</tr>
<tr>
<td>- nods</td>
<td>• Raised voice</td>
</tr>
<tr>
<td>- smiles</td>
<td>• Often speak faster</td>
</tr>
<tr>
<td>- expression through hand gestures</td>
<td>• Voice is animated</td>
</tr>
<tr>
<td>- laughs</td>
<td>• Multiple voices at once</td>
</tr>
<tr>
<td>• Sits and waits for instructions</td>
<td>• On task comments</td>
</tr>
<tr>
<td>• On task</td>
<td>• Dialogue</td>
</tr>
<tr>
<td>- frowns</td>
<td>• Discussion</td>
</tr>
<tr>
<td>- smiles</td>
<td>• Asks for clarification or more information</td>
</tr>
<tr>
<td>- looks away</td>
<td>• Adds comment / statement</td>
</tr>
<tr>
<td>- looks at work</td>
<td>• Asking others to be quiet</td>
</tr>
<tr>
<td>- reads</td>
<td>• Whispering on task comments</td>
</tr>
<tr>
<td>- writes</td>
<td>• Uses students name</td>
</tr>
<tr>
<td>- draws</td>
<td></td>
</tr>
<tr>
<td>- pen in mouth</td>
<td></td>
</tr>
<tr>
<td>- taps pen</td>
<td></td>
</tr>
<tr>
<td>- taps foot</td>
<td></td>
</tr>
<tr>
<td>• Looks at written commands on board or in book</td>
<td></td>
</tr>
<tr>
<td>• Acts out instructions by teacher</td>
<td></td>
</tr>
<tr>
<td>• Looks at teacher / student</td>
<td></td>
</tr>
<tr>
<td>• Carries out task</td>
<td></td>
</tr>
<tr>
<td>• Head in hands</td>
<td></td>
</tr>
<tr>
<td>• Stops writing, looks at work or away for short time and continues to work</td>
<td></td>
</tr>
<tr>
<td>• Reading / writing / drawing</td>
<td></td>
</tr>
<tr>
<td>• Puts up hand</td>
<td></td>
</tr>
<tr>
<td>• Breathing changes (faster, slower)</td>
<td></td>
</tr>
<tr>
<td>• Shows work to friends</td>
<td></td>
</tr>
<tr>
<td>• Works quietly</td>
<td></td>
</tr>
<tr>
<td>• Focus on task</td>
<td></td>
</tr>
<tr>
<td>• Shows friends what they are doing</td>
<td></td>
</tr>
<tr>
<td>• Focus on text or screen</td>
<td></td>
</tr>
<tr>
<td>• Looks away time to time</td>
<td></td>
</tr>
</tbody>
</table>
FINDINGS
The main research question guiding the research is, ‘What effect/impact does creation and use of ICT based energisers have on student engagement?’ Initially, data was gathered to identify indicators of engagement and disengagement, and to establish baseline levels of engagement. Subsidiary research questions were used to guide the research into the effects of the intervention. The research findings fall into four main sections as described earlier.

1. Gathering Baseline Evidence

Whole Class
This section explores the gathering of baseline data of the whole class before any intervention took place.

![The Classroom layout](image)

The teacher and students decided on the classroom layout. Students sat in groups at tables. There was a communal set of pens, pencils, scissors, glue sticks on each table. The students were encouraged to work collaboratively. Computers were at the back of the room facing inward. This arrangement maximised the use of space, and allowed the teacher to monitor students working on the computers.

An initial questionnaire was given to all 22 students that related to their engagement levels at different times in their school day. This was to obtain baseline data about the students. (See Appendix 1)
The Isleworth School timetable is divided into 4 teaching sessions with three breaks for the students.

Table 2 The School Timetable

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
</tr>
</thead>
<tbody>
<tr>
<td>9am</td>
<td>Session 1</td>
</tr>
<tr>
<td>10:30 – 10:50</td>
<td>Morning Break</td>
</tr>
<tr>
<td>10:50 – 12</td>
<td>Session 2</td>
</tr>
<tr>
<td>12 – 12:30</td>
<td>Lunch</td>
</tr>
<tr>
<td>12:30 – 1:30</td>
<td>Session 3</td>
</tr>
<tr>
<td>1:30 – 2</td>
<td>Afternoon Break</td>
</tr>
<tr>
<td>2 – 3</td>
<td>Session 4</td>
</tr>
</tbody>
</table>

Students were asked to indicate whether they felt low, medium or high levels of engagement in each teaching session. Results are shown in Figure 7. Before the questionnaire the students co-constructed their own definition of what they thought ‘Engagement’ was by use of dictionaries. (Also refer to the methodology).

Figure 7 Whole Class Engagement Levels throughout the school day
There were generally lower levels of engagement during the early morning and afternoon slots. During the middle teaching slots there were higher levels of engagement.

The video footage confirmed that during session 4 (the last quarter of the day) the students showed the most disengagement. This was also confirmed by the comments of the classroom teacher. During the morning session, the video footage revealed lower levels of disengagement than was reported by students on interview. This may be due to the room being quiet and students apparently doing as asked.

*Classroom Teacher:* “The students are generally less engaged in the last quarter of the day…I usually send the children out for a jog around the playground…it is bit of a problem when it is wet…and with hats when it is sunny…”

Students noted many reasons why they felt engaged or disengaged during different teaching sessions. Summary of student comments are given in Table 3.

<table>
<thead>
<tr>
<th>Engaged</th>
<th>Disengaged</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. I can see my friends and I’m not</td>
<td>K. I’m still asleep – GB2</td>
</tr>
<tr>
<td>9-10:30</td>
<td></td>
</tr>
<tr>
<td>Time</td>
<td>Activity Description</td>
</tr>
<tr>
<td>--------</td>
<td>--------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>10:50-12</td>
<td>U. It is when everybody starts to get into the day</td>
</tr>
<tr>
<td></td>
<td>A. Do lots of work</td>
</tr>
<tr>
<td></td>
<td>R. Don’t know</td>
</tr>
<tr>
<td></td>
<td>B. No reason given</td>
</tr>
<tr>
<td></td>
<td>L. Of fitness</td>
</tr>
<tr>
<td></td>
<td>T. It is writing time</td>
</tr>
<tr>
<td></td>
<td>N. I just want to go out and play</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity Description</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>G. Time goes fast for me then – DB2</td>
</tr>
<tr>
<td></td>
<td>H. It is the time I concentrate well</td>
</tr>
<tr>
<td></td>
<td>O. We get to play with our friends – EB1</td>
</tr>
<tr>
<td></td>
<td>D. Get to read books and get fun activities</td>
</tr>
<tr>
<td></td>
<td>B. That is when all the fun stuff</td>
</tr>
<tr>
<td></td>
<td>S. It is when we do reading and I like reading</td>
</tr>
<tr>
<td></td>
<td>T. It is reading time</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity Description</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A. Get to do fun stuff</td>
</tr>
<tr>
<td></td>
<td>K. I am more awake</td>
</tr>
<tr>
<td></td>
<td>C. Its very close to home</td>
</tr>
<tr>
<td></td>
<td>F. We do PE</td>
</tr>
<tr>
<td></td>
<td>L. Nearly home time and sometimes we do gymnastics</td>
</tr>
<tr>
<td></td>
<td>P. It is nearly home time</td>
</tr>
<tr>
<td></td>
<td>N. We do PE</td>
</tr>
<tr>
<td></td>
<td>J - GB 1 made no comment</td>
</tr>
<tr>
<td></td>
<td>V - EB2 made no comment</td>
</tr>
</tbody>
</table>

Students were asked to rank their engagement levels in seven subjects chosen by themselves and their teacher.
From this data we can see that a greater proportion of students had low or medium levels of engagement in reading, writing, numeracy and inquiry. When it came to engagement levels outside the core subjects (PE, Music and Art) there was a much larger proportion of students feeling highly engaged. These subjects were generally taken in afternoon slots.

When we compare this with the results from the time slots for learning, the students are engaged in subject content. (The class discussed that engaged in this research means the same as enjoyment) However they found that the timeslot is not a great time for learning. A summary of student comments are given in Table 4.

Table 4 Student comments on their engagement levels in school subjects

<table>
<thead>
<tr>
<th>Subject</th>
<th>Least Favourite Subject</th>
<th>Favourite Subject</th>
</tr>
</thead>
</table>

Figure 8 Whole class level of engagement in subjects at school
| Reading       | A. DEAR (Drop everything and read) – you have to read for ages and it gets boring  
|              | N. DEAR – sometimes someone takes my book  
|              | J. I don’t know that much – GB1  
|              | G. I don’t understand what I read – DB2  
|              | K. I’m not into reading – GB2  
|              | I. There is no good books to read – DB1  
|              | Q. I get bored and all we do is look at words  
| Writing      | U. I cant write neatly  
|              | T. I lose concentration  
| Numeracy     | S. I don’t know much about counting  
|              | F. We have to do heaps of work  
|              | P. You have to work out hard maths questions  
|              | O. I’m not that good at maths – EB1  
|              | B. It is boring  
| Inquiry      | L. It’s boring  
|              | C. It is confusing  
|              | D. I’m not concentrating  
|              | H. I’m not good at it  
| PE           | Q. I like doing gymnastics and jumping  
|              | G. You get fit and miss out on school work – DB2  
|              | F. We get to do gymnastics  
|              | O. You get to exercise – EB1  
|              | K. I love to keep healthy – GB2  
|              | I. It gets me moving – DB1  
|              | N. I like dancing with my friends  
| Music        | B. I like Kapa Haka and doing the actions  
| Art          | L. I like painting and drawing  
|              | P. I love to draw  

It was interesting to note that four out of the six boys in the observation group did not enjoy reading, but that the same four boys enjoyed PE the most. This
finding is considered reliable since the boys completed the questionnaire away from each other and in silence. The classroom teacher noticed the comments regarding Inquiry and she had this to say;

**Classroom Teacher:** “At the start of the year we trialed a new way of doing our Inquiry...splitting the students across the syndicate into groups in their areas of interest...in the second Major Inquiry Unit immersion was carried out across the syndicate and then students stayed in their own class and created groups...through our regular class meeting slot I found that the students attitude had changed in Inquiry and many noted how it had been a term highlight.”

Information was gathered to find out what physical indicators were displayed when students were engaged or disengaged in a subject. By analysing video footage it was apparent that students would look out the window at times. It was necessary to ask students what they were thinking as they gazed out of the window in order to discover whether they were engaged or not. Combining video footage with interviews with teachers and students added richness and texture to the data. Table 5 summarises students' comments on engagement.

**Table 5 Student comments on engagement while at school**

<p>| If the students were not interested in a subject they said they would: |</p>
<table>
<thead>
<tr>
<th>Activity</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Look out the window</td>
<td></td>
</tr>
<tr>
<td>Draw</td>
<td></td>
</tr>
<tr>
<td>Just leave it</td>
<td></td>
</tr>
<tr>
<td>Click my pen</td>
<td></td>
</tr>
<tr>
<td>Try to do it or I just don’t do it</td>
<td></td>
</tr>
<tr>
<td>Sit there bored</td>
<td></td>
</tr>
<tr>
<td>Day dream</td>
<td></td>
</tr>
<tr>
<td>Start to think about it and listen very hard what the person says</td>
<td></td>
</tr>
<tr>
<td>Talk</td>
<td></td>
</tr>
<tr>
<td>Try and get interested</td>
<td></td>
</tr>
<tr>
<td>Do only half of it</td>
<td></td>
</tr>
</tbody>
</table>

If they something difficult or do not know how to do it students will:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ask the teacher</td>
<td></td>
</tr>
<tr>
<td>Keep trying</td>
<td></td>
</tr>
<tr>
<td>Ask for help</td>
<td></td>
</tr>
<tr>
<td>Think harder</td>
<td></td>
</tr>
</tbody>
</table>

When students are engaged they said they would:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Respond to questions</td>
<td></td>
</tr>
<tr>
<td>Not stop because they are concentrating and excited</td>
<td></td>
</tr>
<tr>
<td>Tap stuff with hands or feet</td>
<td></td>
</tr>
<tr>
<td>Hum</td>
<td></td>
</tr>
<tr>
<td>Bite their lip</td>
<td></td>
</tr>
<tr>
<td>Bite their nails</td>
<td></td>
</tr>
<tr>
<td>I play with their pen</td>
<td></td>
</tr>
<tr>
<td>Move about</td>
<td></td>
</tr>
</tbody>
</table>

If the students were pretending to be engaged they said they would:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pretend to write</td>
<td></td>
</tr>
<tr>
<td>Pretend to think</td>
<td></td>
</tr>
<tr>
<td>Pretend to read</td>
<td></td>
</tr>
<tr>
<td>Look at their work</td>
<td></td>
</tr>
<tr>
<td>Grab their pen</td>
<td></td>
</tr>
<tr>
<td>Work on what they are supposed to</td>
<td></td>
</tr>
<tr>
<td>Look around the room for ideas</td>
<td></td>
</tr>
<tr>
<td>Put their head down</td>
<td></td>
</tr>
</tbody>
</table>

Teachers can keep students engaged if they:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stop talking</td>
<td></td>
</tr>
<tr>
<td>Do More fun things</td>
<td></td>
</tr>
<tr>
<td>Make work fun</td>
<td></td>
</tr>
<tr>
<td>Put music on</td>
<td></td>
</tr>
<tr>
<td>Have a quiet class</td>
<td></td>
</tr>
<tr>
<td>Do art</td>
<td></td>
</tr>
<tr>
<td>Have free time</td>
<td></td>
</tr>
</tbody>
</table>
2. Creation/Process

Whole Class
This section discusses findings during the process of creating the ‘Energisers’. We shall first discuss findings for the whole class, and then focus on the Observation Group. During this phase, the researcher acted as teacher.

The teacher/researcher introduced the concept of 'Energisers' by using fitness videos and websites. As a result, the students came up with a list of ideas on what would make a great ‘Energiser’. They then co-constructed a learning rubric with the teacher. I considered it important for ‘Energisers’ to be well structured with a warm up, the main ‘Energiser’, and warm down. As the list was created, I asked the students to include a good structure, and asked them to include two of their own ideas as learning intentions. Including two of their own ideas helped keep ownership with the students. Three learning intentions were considered sufficient, and avoided creating a checklist. I then modeled with the students how to create success criteria for the 'good structure' learning intention. They were then asked to create their own success criteria for the other two. Thus the students were the creators of their own learning intentions and assessment. (See Appendix 2 for Learning Rubric)
Figure 9 shows a learning rubric with learning intentions and success criteria that was co-constructed with the students. I created this rubric two years ago for writing. It is used by a number of teachers across the school, and was adapted for use in this research. The teachers came up with the ‘getting there’, ‘made it’ and ‘wow’ levels of achievement. This is ‘kids speak’ for basic, proficient, advanced (based on the asTTle assessment). These criteria also reveal students working at a level below, at, or above their chronological age.

After creating their ‘Energisers’ student’s reflections from their rubrics included:

• A. We didn’t have to do much school work
• B. The blue screen was really cool because it was a good experience
• C. I really enjoyed making the energizer because it was way cool and fun
• D. It was awesome because I got to learn more things about computers
• E. It was awesome because we got out of heaps of school work
• G. It was good because we learnt heaps of stuff – DB2
• H. It was a good experience because we got to use the Apple laptop
• I. I thought it was really fun because when we were doing our energizer we didn’t feel like school work - DB1
• J. We used wrestling moves and were able to wear WWE t-shirts and being with Mr T – GB1
• K. I thought it was brilliant because we got to use wrestling moves and be with Mr Tippen – we also liked using the Mac – GB2
• L. It was fun because I got to work with my friends
• M. I got to work with my friends and also we did the moves by ourselves and got it done on time and we worked with Mr T
• N. I think that I did well and was so much better than school work
• P. It was fun because we didn’t have to do any school work
• X. I think we had fun because we got to do not school work and I enjoyed it
• R. It was wicked because we got to use the laptop
• S. It was fun because we didn’t have to do much school work
• T. It was fun because we didn’t do school and its really, really, really cool
• U. I think that it was really fun because we got to do something better than school work
• V. It was cool because we missed some work out – EB2

(Full comments see Appendix 3)
From the student comments 55% of students commented that creating ‘Energisers’ did not feel like doing school work. Other students mentioned that ‘Energisers’ were fun/cool. This was related to students being with their friends, the use of the laptop or the fact that they liked the teacher.

It was interesting to note that, students were heard numerous times to say that they could not believe the lesson was over - time had flown past so quickly. This is consistent with them being highly engaged in the task. The Classroom Teacher commented that:

“Using the blue screen was great because you can put images on the back (referring to behind the student) that relate to the music or theme otherwise it would be pretty boring.”

She also observed that she would,

“Definitely think about making movies with the students it was really neat seeing them do it all themselves.”

Figure 10 Demonstration of an ‘Energiser’ action

Each group had to discuss another group's ‘Energiser’ and make a comment about their learning intentions and the ‘Energiser’. Students' comments about their peers' ‘Energisers’ included:

- I liked it because it was energetic and (the) back drop and the music fit the theme
- I really liked your energizer because you had lots of good pics and a good story
- I liked it because it was energetic and the backdrop and the music fit the theme. I also liked it because David got to use (take photos while in) Mr Tippen’s car
• Really liked the way how you did your backdrop (*wrestling back drop*)
• I liked the way you did heaps of running. It got my blood pumping
• I liked how they did the right music
• Good because it stands out
• We think you had a very good story line
• It was cool because the song and action fit the theme
• The song match there actions and also it fits the theme
• Your photography was great and your photos fit the theme

As part of the formative assessment approach the students came up with their own ideas for ‘Next Step Learning’ which included:

• Try to remember to get photos
• Different theme/music and getting our clips and time right and it the music with moves
• Do a different theme and better organize and take photos
• Continue to take the photos ourselves and not use the internet
• Have things ready on time like our moves and clothes and song
• To have things ready on time like our moves and our song
• To have things ready in time like our moves and our clothes and our song
• To have all my moves organised
• To be more organised in my photos
• To have moves before we use the screen
• To have moves before we publish and be ready with our equipment
• To get more organised because I forgot my costume
• To be more organised with the actions

Observation Group
The two boys that were ‘generally disengaged’ were very energetic and enthusiastic, and had a lot of ideas. However, they often would rush their work and not give their work the depth that other boys were giving. It must be noted that these two boys who usually couldn’t wait to get outside often wanted to stay on and use the computer to work on their ‘Energiser’. Whilst using the computer, the boys took turns, used slang to relay their thoughts to each other and would often play or fidget with any nearby object. One of the boys in particular would look away, fidget and play with anything near to him but remained engaged the whole time. He was able to respond to what the other boy was doing on the computer, as well as stop fidgeting and interrupt him to show him how to use the software.

The two boys who were ‘generally engaged’ excelled. They enjoyed using the
computer, were very imaginative and took control of their own learning. The difference between these boys and the boys that were usually engaged was that they were much more confident and assertive in what they were doing. They were well planned and brought in their props quickly.

The two boys that were ‘usually engaged’ got on with their work without fuss and solved problems quickly. They were motivated enough to be the only group that organised their own field trip, completed their own safety action plan, wrote letters to their parents and took their photos for their backdrop off site. This is significant as no other group (including the girls) managed to take photos off the school site. However, at times they lacked creativity as there was a lot more teacher prompting that had to take place compared to other groups.

Classroom Teacher: “I am pleasantly surprised to see the two boys (referring to the two disengaged boys) in carrying on with their work during their break.”
3. Application / Doing / Use

This section of the findings is divided into two and looks at using the ‘Energisers’ in the classroom. The sub questions to be discussed are:

a. What impact does the energiser have on the creators?
b. What impact does the energiser have on engagement of participants?

Whole Class

a. What impact does the energiser have on the creators?

Students were asked by a post questionnaire, How do you feel when you see yourself on screen during an ‘Energiser’?

The majority of creators felt indifferent about seeing themselves demonstrating an ‘Energiser’. There were 6 students that initially became embarrassed seeing themselves. The classroom teacher noted that…

Classroom Teacher: “Some children get embarrassed watching themselves up there on the screen doing it…but that is slowly wearing off…”
Figure 12 summarises how students felt about others using their 'Energiser.'

When interviewed to summarise how they felt when their peers performed their 'Energiser', students responded:

A. It gets embarrassing
B. We can show off
C. It's quite embarrassing seeing yourself on screen
D. Can get active
E. Its awesome
F. You want to do my one
G. Everyone laughs - DB2
H. It is cool
I. They are having fun – DB1
J. Doesn't bother me – GB1
K. I get embarrassed – GB2
L. Sometimes it can be embarrassing
M. Because they like it
N. They like it
O. They are all friendly – EB1
Q. Its funny
S. It doesn't really matter what one they are doing
T. Its funny
U. Is sometimes embarrassing
V. It is good for us to do others energizers – EB2

(Full comments see Appendix 4)

Figure 13 Whole class responses about whether they like doing their own Energiser

Figure 13 indicates that most students enjoyed doing their own ‘Energiser’. Video footage showed that students gave a large groan when it was time to choose an ‘Energiser’ and their own ‘Energiser’ was not chosen. I asked a number of students why there was such a response, and they replied that 'it wasn’t their ‘Energiser’, and that 'they enjoyed some ‘Energisers’ more than others'.

A summary of student comments on how they felt performing their own ‘Energiser’ included:
A. Its embarrassing
B. Its fun
C. I know how to do the moves
D. Its fun and exciting
E. Its fun to do
F. We get energised
G. We got to do your own moves – DB2
I. It is cool – DB1
J. Doesn’t bother me – GB1  
K. I want to do others and because I know the moves – GB2  
L. I know I made it with my friends – GB2  
P. Its fun  
Q. If is fun to do  
R. I look goofy  
S. I made it  
T. Its fun and I enjoy it  
U. Its really fun  
V. They are fun – EB2  

(Full comments see Appendix 5)  

Figure 14 summarises student feelings about doing others’ ‘Energisers’.  

![Bar chart showing student responses to doing someone else’s ‘Energiser’](image)  

Figure 14 Whole class responses on whether they like doing someone else’s ‘Energiser’  

A summary of student comments on doing their peers ‘Energisers’ included:  

A. It’s fun and a bit better than mine  
B. You can do all different ones  
C. Its fun to see others up on screen  
D. When you do someone else’s energizer it’s really exciting  
E. Everyone put a lot of effort into them  
F. We get energised
H. I am proud of them
I. My one is better – DB1
J. Doesn’t bother me – GB1
K. They’re groovy – GB2
M. Because some energizers I don’t like
N. They are cool as well
O. They are all cool – EB1
P. They have cool moves and songs
Q. They look cool
R. They all have great moves and the songs are great
S. Some of them have cool moves
T. They are fun
U. It’s really fun
V. It is good do see what others did with there ‘Energisers’ – EB2

(Full comments see Appendix 6)

Figure 15 Whole class responses on whether they enjoyed showing their ‘Energisers’ on National TV, to the school assembly and to their parents

Students shared their ‘Energisers’ with parents, with their peers in assembly, and on national TV during the visit of ‘What Now’. Almost all students enjoyed showing off their ‘Energisers’. 41% ‘Loved’ having ‘What Now’ visit.

b. What impact does the energiser have on engagement of
When students were given the questionnaire it was discussed that, ‘Are you aware you need an ‘Energiser’?’, also meant a break in their learning. The majority responded that they knew they needed an ‘Energiser’ / break in their learning (Figure 16).

Figure 16 Students responses at being able to recognise if they are aware they need an ‘Energiser’ / break.

‘Never’ meant that they were never aware they needed a break / an ‘Energiser’ and always meant that they were always able to tell when they felt like a break / an ‘Energiser’. 91% of the students knew that they sometimes could or ‘always’ knew they needed an ‘Energiser’ / break. This was difficult to obtain accurate data as it was difficult to know if the comments from the students were spontaneous or if prior discussion or the question primed the students to think this way.

When asked when is the best time to complete an ‘Energiser’, classroom teacher and students all agreed that the best time was whenever one was needed. On examining the baseline data, the classroom teacher and
researcher initially concluded that the best time to do an ‘Energiser’ was probably in the last session of the day, as this appeared to be the time the students were disengaged the most. However after completing ‘Energisers’ for 8 weeks the teacher concluded that she was wrong and the best time for this class was actually to break the first session of the school timetable up:

Classroom teacher: “I use ‘Energisers’ throughout the day but I thought the best time for an ‘Energiser’ was the last quarter of the day as the students seem to be at their most disengaged. However I have now been using ‘Energisers’ particularly in the first hour and half of the day to break this up…usually about quarter to 10. They have been working for 45 minutes…it is the best time of the day for this class. But again depending on the class mood I may use an ‘Energiser’ later in the day.”

Part of the ‘Energisers’ success was due to the freestyle component. This was when there was a timed section in each ‘Energiser’, where the participants were able to be creative and complete their own moves. All except one of the students felt that having a timed section to create their own moves was a good idea. The majority of the students enjoyed the flexibility of being able to create and change their move from day to day. Even though they may not be performing the ‘Energiser’ they liked doing best, they knew they could do their own move at least once during the ‘Energiser’. This success is revealed in Figure 17:
Figure 17 Whole class responses to whether they like creating own moves during the ‘freestyle’ component of the ‘Energiser’

The student who did not like doing the freestyle was questioned, she mentioned that they found it hard to think of something to do and would rather be told what to do.

*Classroom Teacher:* “…the students really, like the idea that they can do free moves which is great…but you can get a few behaviour things like children jumping on each other and that sort of thing…the kids love the opportunity to do their own moves but it is a matter of managing that…”

Figure 18 An image of the ‘freestyle’ component where there is no actions
demonstrated

The classroom teacher mentioned that the freestyle component was an excellent idea, as the students were able to be creative, explore new ways of moving and learn from other students. However she mentioned that there had been an issue where some of the boys designed moves that started to involve other boys in ‘play fighting’. The researcher and classroom teacher decided to discuss the purpose of the ‘Energiser’ with students, and asked them if a visitor came into the class what the students would expect them to see. – Students were asked to reflect on how ‘Energisers’ embodied the values that are adopted throughout the school (Respect, Caring, Honesty and Responsibility). Y-charts (What would you see, feel and hear?) were also created with the class to define what would be their expectation – again handing over the ownership back to the students. Here the teacher acted as more of a facilitator. With the school values as a touchstone, students were able to take responsibility for their own actions. Once the norms were established the ‘play fighting’ issue was resolved.

Observation Group
The two ‘generally disengaged’ boys enjoyed pushing their boundaries during the ‘freestyle’ moves. In particular if one of them carried out the ‘Energiser’ the other one would follow suit.

The two ‘generally engaged’ boys completed the ‘Energisers’ to a high standard. However the majority of comments throughout the research made by GB1 did not give any indication of how he was feeling. He was very wary of opening up. On reviewing the video footage, it appears that GB1 is very conscious of other boys watching him, and watches what other boys are doing – especially the ‘generally disengaged’ boys.

The two ‘usually engaged’ boys were not generally as athletic as the other boys and at times found it hard to complete freestyle moves.
3. Impact of ‘Energisers’

In this section of the findings we explore the ‘Impact on Learning’ phase of the intervention. The majority of the data in this section refers to the impact on the whole class. Students were asked within a final questionnaire (See Appendix 7) a series of scales and questions relating to ‘What impact does ‘Energisers’ have on them?

Whole Class
One of the first questions was “When was the best time to complete an ‘Energiser’?”

36% of students thought ‘Energisers’ were best completed in the morning, 23% believed best in the afternoon and 41% of students thought anytime they felt like they needed one. This endorses what the classroom teacher believes is the best time (morning) and supports ‘Energisers’ being used when the need arises. However it must be noted that the findings are from the post-questionnaire, that was carried out after 8 weeks of using ‘Energisers’ with the majority of the time in the morning session.

(For comments in full see Appendix 8)

Figure 19 shows findings from students filling out the post-questionnaire after 8 weeks of completing ‘Energisers’, ‘What impact does the ‘Energiser have on subsequent engagement in learning?’
What impact does the energiser have on subsequent engagement in learning?

In the three core subject areas and inquiry, the number of students displaying medium and high engagement levels were greater than those exhibiting low engagement levels. When this is compared with baseline data students now felt that they were less disengaged in the above subject areas. The subject areas of ‘Writing’ and ‘Inquiry’ showed the most improvement in students’ engagement. This indicated that use of ‘Energisers’ helped students be more energised and engaged in core subject areas.

However one student (a generally disengaged boy from observation group) made the very interesting point, that even though he felt tired before an ‘Energiser’, felt great doing an ‘Energiser’ and was full of energy after an ‘Energiser’ he was still no more engaged in the subject. I questioned him further about this and he said he was more prepared to do school work after

Figure 19 Whole class responses to the level of engagement in subjects after an ‘Energiser’
an 'Energiser'. However the session focused on reading, and he had to read about ‘cats’. He doesn’t like ‘cats’ and this dislike will never change. He then mentioned that he had disliked reading from an early age, as he had to ‘read stuff’ that he had little or no interest in and he could not see the benefit of this. When this was discussed with the classroom teacher she mentioned that he was a very able reader, and she could confirm to me that his attitude to reading was unfortunately poor. She mentioned that many students come to her Year 6 class with poor attitudes in some subjects (not only reading) and if she did not reflect on teaching practice how to engage this child, he would continue to be disengaged. We discussed how ‘Energisers’ were a valuable tool to re-energise students and make them more prepared to engage with classroom activities. However, what the teacher does after an ‘Energiser’ is critical. This is especially true within the first five minutes, as the teacher could lose the students, resulting in their easily becoming disengaged and developing a low self-esteem in that subject or activity, and consequently distracting others from their learning.

*Classroom Teacher: “I find ‘Energisers set a learning environment up but it is up to the teacher to make lessons engaging.”*

Students that were engaged at the time of the ‘Energiser’ mentioned that even though they did not need a break, they were still more than happy to carry out an ‘Energiser’. They said they felt better for doing an ‘Energiser’ than not, and it gave them time to think about what they were engaged in.

Students were asked whether doing an ‘Energiser’ helped them to be more engaged in their least favourite subject. Responses included:

B. Its made me more focused
C. Because after doing something fun and energizing its good to sit down and relax and do something boring
D. When I'm doing maths I can think more
E. It gets my brain working
F. We get pumped up
G. It helps do my work because I’m energised – DB2
H. I am really energized to do everything
I. No I am not because I still don’t like the subject – DB1
J. I am happier – GB1
K. My blood gets pumped about doing anything including reading – GB2
L. I am less tired and I feel better
M. No because I don’t like inquiry
N. After a energizer I feel happy and ready to work
O. I feel like working after an energizer – EB1
P. I just want to finish the boring work
Q. After doing energizer I just would like to sit down and read
R. Your blood moves your body
S. It’s like getting fresh air and calming you down
T. I write
U. Writing because I’ve let all my steam out
V. No it does not last for the whole day – EB2

(For comments in full see Appendix 10)

It is interesting to see that after doing ‘Energisers’, GB2 recognised that he has a better attitude to reading.

When asked if doing an ‘Energiser’ helped them to be more engaged in their favourite subject, students replied:

A. Because my blood starts to pump more
B. Because you enjoy even more
C. Because it keeps me from getting bored because we had just done something really fun
D. No comment
E. You go into something fun after another fun thing
F. We get real energizer
G. It helps me to do my work – DB2
H. I am really energised to do everything
I. Yes - It is my favourite subject – DB1
J. I am happier – GB1
L. Not really because I am already motivated because I like it better
M. Because I like reading
N. It makes me get good ideas because I’m not asleep
O. I feel like working after an ‘Energiser’ – EB1
P. I want to do it more
Q. I am ready for maths after ‘Energisers’
R. Your blood moves around your body
T. I like it more and learn more
U. I have a good feeling and that makes me do more work
V. Yes because you are sitting down when you have done the ‘Energiser’ – EB2

(For comments in full see Appendix 11)

The next three figures indicate how the students felt before, during and after an ‘Energiser’.
Students were able to recognize that their energy levels were low and that they felt tired. The student who said he/she was ‘Full of Energy’ said, “I was not disengaged at the time and I felt great.” This highlights the fact that not all students are disengaged at the same time. One student mentioned that even the thought of completing an ‘Energiser’ made her heart begin to race and she started to feel ‘picked up’.

A summary of students comments in the morning before completing an ‘Energiser’ were;
C. Tired – because I had basically just woken up
D. I’ve been sitting down and feel tired
E. There was nothing to give you a boost
F. We get pumped up
G. We have been sitting down to much – DB2
H. I am tired
I. No comment – DB1
J. Tired because I got up early – GB1
K. I don’t move around as much – GB2
L. No comment
M. Because I am bored
N. Done too much work
O. I’m not that tired when I wake up – EB1
Q. I feel all engaged
S. It’s a bit mucky inside classroom
T. Bored
U. Tired
V. I had a late night – EB2

(For comments in full see Appendix 12)

What was surprising to the researcher was the amount of students who mentioned being tired before or soon after school had started.

![Engagement Levels during an 'Energiser' chart](image)

Figure 21 Whole class responses to their energy levels during an ‘Energiser’

Figure 21 highlights that there was a significant increase in the overall class's energy levels.
One student said that she felt tired afterwards. When I enquired why, she said that she felt unfit and that the ‘Energisers’ made her do more exercise than normal. The two students who were slightly tired said that they did the movements as fast as they can and therefore felt tired. The majority of students felt full of energy after an ‘Energiser’. This posed the question:

If the students are full of energy, are they then able to begin their work straight away?

Figure 22 Whole class responses to energy levels after an ‘Energiser’
Figure 23 Whole class responses to whether they are able to start their work straight away after an 'Energiser'.

Classroom Teacher: “…some students go up into a high and it takes them a few minutes to get back down from that high…and then back into their work…it is starting to wear off a bit now that the newness is gone…you know the novelty of it all has worn off…now they engage back into their learning quicker than at the start.”

Figure 23 highlights that the students within the class generally started work straight away after an ‘Energiser’. The video footage endorses this. The teacher had a very good routine so that the students knew what was expected from them and could settle back quickly. However the teacher said this was not always the case. When ‘Energisers’ were first introduced they were a novelty and students were very excited afterwards and found it difficult to settle. This finding agrees with the work of Yerkson and Dodson, (1908) who believe that if a person is in a state of high arousal it could result in a decrease in performance. Once the novelty of 'Energisers' wore off, play-fighting within the ‘freestyle’ component was addressed and with the aid of co-creation of behavioural norms (during and after an ‘Energiser’), the students were able to be re-energised and then settle back into their work more effectively.
Figure 24 Whole class responses whether they believed they are more engaged in learning by completing an ‘Energiser’

All of the students reported believed they were sometimes or definitely engaged after completing an ‘Energiser’.

Video after an ‘Energiser’ confirmed that the students appeared to be more engaged as they re-applied themselves to the task in hand.

A summary of student comments as follows:

- A. I feel more focused
- B. We had just done something real fun and its good to relax with some work
- C. You can learn more about the thing that you are doing
- D. No comment
- E. You are all pumped up
- F. No comment
- G. I got moving – DB2
- H. No comment
- I. I am full of energy – DB1
- J. No comment – GB1
- K. Depends if you are still tired or full of energy – GB2
- L. Much easier because we are not tired
- M. I’m energised
- N. You just did a 2 min workout
Students were asked whether Energisers helped their learning. Questionnaire responses are summarised in Figure 25.

Figure 25 Whole class responses showing whether ‘Energisers’ help in their learning

A summary of student comments as follows:
- A. Your heart starts pumping
- B. It makes you focused
- C. They can improve your concentration and you can get higher levels
- D. After an energizer you feel full of energy and it helps you think more
- E. Were energized to get into work
- F. We think more
- G. We don’t get tired – DB2
- H. It is good health
- I. I’m not tired – DB1
Students were asked about the physical effects of ‘Energisers’.

- J. It gets your heart pumping – GB1
- K. So your not tired and bored when you do work – GB2
- L. You get energized
- M. Your full of energy
- N. I don’t feel so bored after an energizer
- O. Your more into learning – EB1
- P. When you finish you just want to work after it
- Q. Blood moves around your body
- R. Before an energizer you might be a bit tired so an energizer might get you moving
- S. They give you a break
- T. It helps your learning
- U. No comment
- V. No comment – EB2

(For comments in full see Appendix 14)

Students were also asked about the physical effects of ‘Energisers’.

![Bar Chart](image)

**Figure 26** Whole class responses on whether ‘Energisers’ make their heart beat faster
All students reported that their heart beat faster when completing an ‘Energiser’. However it must be noted that even though the majority of students were keen and enthusiastic about completing an ‘Energiser’, video footage indicated that not all students were giving 100% for the whole ‘Energiser’.

The video also revealed that the majority of the class would start straight away doing the moves to a high standard. However some students would start slowly, but by the end of the ‘Energiser’ they would at least match their peers in doing the moves. These students commented that:

- They felt tired before they started
- I have just been sitting for a long time
- It was not the ‘Energiser’ they wanted to do
- It takes me time to warm up and get moving

Classroom Teacher: “The kids are definitely moving and getting the blood flowing…I actually do them myself and it gets my blood moving…”

“I see a small number of students doing the moves at the start not
well…but by the end of the ‘Energiser’ they are all fully involved…going from a state of disengaged to engaged.”

This indicates that the students require time and space to get going in their own time because they have been sitting in a state of rest. Without a warm up they cannot be expected to give 100% straight away. The reader is reminded that students designed ‘Energisers’ to have slow movements (warm up) in the introduction, to include faster movements in the middle section and include slower movements at the conclusion. (warm down).

Students generally agree that ‘Energisers’ are a good work out. The classroom teacher views ‘Energisers’ as being another tool to use in the classroom. This endorses the students' comments. The teacher also acts as a role model to the students and completes ‘Energisers’ alongside them.

Classroom Teacher: “I think ‘Energisers’ are a good workout as I even complete them with the students.”

When I asked the Classroom teacher about the management of carrying out an ‘Energiser’ she commented;

Classroom Teacher: “It is something that you can easily fit into your day…it’s only 3 minutes and I would be giving them a break anyway…it is just a matter of pressing a button…getting them to stand up out of their seats…all the equipment you need is speakers, laptop and data projector.”

In view of the current interest in young people, obesity and exercise levels, it was of interest to determine whether taking part in 'Energisers' changed students' attitudes to exercise. Figure 28 summarises student answers to the question, ‘Do ‘Energisers’ make you want to exercise more?’
Figure 28 Whole class responses showing whether ‘Energisers’ make you want to exercise more

There was a very positive response to exercise after creating and completing ‘Energisers’. Figure 28 shows that all the students said they were more interested in keeping fit and exercising more regularly. Unfortunately the results do not show if this was the case and if there was an actual increase in participation in exercise in their daily life or in physical education activities at school.

Observation Group
The two ‘generally disengaged’ boys often found it hard to settle to work immediately after an ‘Energiser’. The teacher mentioned that the amount of effort they would put into doing an ‘Energiser’. Student DB1’s dislike for reading (as mentioned earlier) did not change, even though his reading level improved throughout the year. The teacher mentioned how at the time the DB1 disliked everything at school.

The two ‘generally engaged’ boys. GB1 had a different experience from DB1 in that his attitude after doing ‘Energisers’ did change in his least favourite subject (Reading). Even though his reading level stayed (reading above his
chronological age) stayed the same from the beginning of the year his attitude to reading changed. The teacher recognised that he was more prepared to take chances and read than before.

One of the ‘usually engaged’ boys, EB1 mentioned how the ‘Energiser’ did not sustain his energy levels for the whole day. He mentioned how ‘Energisers’ made him more re-energised but this did not last. He felt that ‘Energisers’ could be completed more than once a day.

A learning Opportunity
After the students had just finished performing their peers’ ‘Energisers’ for the first time, the whole class sat on the mat. I picked up the video camera and we started discussing the students’ opinions of the ‘Energisers’. Their feedback astonished me; and the teacher sitting some distance from the students could not believe what she heard. The students all wanted to take turns to say what they thought of the ‘Energisers’. They were animated, passionate, and were all very engaged in what they were saying. At times it was difficult to keep up with the comments using the camera, especially when I sat back and the class engaged in dialogue with each other – with little or no input from the teacher.

Students' thoughts captured on video included:

- It is really active for us to get going and then start to do your work again
- Fun way to get energized
- Good way to keep fit
- You can have fun with mates
- You get more energy
- You get pumped up
- You can do your work
- Better since you have let out steam
- Once you have done that you get back into your work
- More active
- You don’t have to do fitness outside
- You get really puffed but you can easily do your work afterwards
- If it is raining you can’t go outside you don’t have to run around the court you can stay inside and do an energizer
- Easy to make
- Better than running around the court three times
• You can do it instead of doing jump jam 
• It's more fun than normal fitness 
• We get to take pictures by ourselves 
• We get active 
• It's not the same moves over and over again and different songs 
• It's got a place where you can do your own moves 
• We got active 
• We saw how much hard work people put into it 
• We got to edit, if we didn’t want that part in it 
• You have the choice half way through you can do your own moves 
• The moves on the Energiser everybody likes them 
• Sometimes it takes away stress 
• The moves are specially designed by kids 
• Blow off some steam 
• There are freestyle bits 
• Got to see everyone’s energiser 
• Lots of songs used 
• Your blood pumps around your body 
• Songs are really cool 
• Awesome because we got to come up with our own moves 
• Making it was fun 
• Got to choose our backdrop 
• Some of the songs people know 
• Didn’t get told off for doing our own moves 
• Some people got to go to different places 

I left the classroom soon after this and the classroom teacher took over. She mentioned to me later how she had used the ‘Energiser’ feedback for report writing rescheduling her timetable to accommodate this activity. The students were able to write sequential and pertinent comments describing why the class carried out ‘Energisers’. The students were the experts in ‘Energisers’, ‘intrinsic motivation’ was high because they were all part of the learning process and each one of them had ownership of what they were doing.

Classroom Teacher: “They carried out report writing about energizers…well it was when you had just finished completing an ‘Energiser’ and afterwards when you were talking to them about the ‘Energizers’, you were getting all that feedback…it all came pouring in. I thought there is a persuasive argument here…it was great as we were doing reports at the time…so I said come on and write one about this…I initiated it because they showed a strong interest…a learning opportunity…the way they said it to you and the strong opinion came through in their persuasive argument…”
**Discussion**

This research indicates that 'Energisers' may help teachers and students create a positive learning environment that supports holistic student learning. Motivation, Engagement and Arousal levels can vary between students before even coming into the classroom and therefore the teacher needs to be sensitive to each individual student's needs. Disengagement from learning and socially from others is often no fault of the student or teacher. Such disengagement can be frustrating for the teacher who has to spend time dealing with issues, rather than spending quality time on improving student achievement.

Students display engagement in a variety of ways and not all students will be disengaged at the same time. Many students appear to be disengaged (looking out the window or fidgeting) but it is not until you ask them that you know if they are engaged or not. ‘Energisers’ work on the principle that they are to be used when the majority of students are disengaged or lack motivation or have low energy levels. Students and the teacher recognised that ‘Energisers’ could be used at any time throughout the day when the need arises. Another popular time was the first half of the school day as this session was at the longest in the day. (90 minutes before morning break, other sessions were no longer than 70 minutes).

The research indicates that ‘Energisers’ have the potential to increase student engagement within the classroom. ‘Energisers’ appear to re-energise students and teacher, helping them to be ready mentally and physically for learning and teaching. ‘Energisers’ may increase blood flow around the body and (more importantly to the brain) as students claim to breathe more deeply and that their hearts beat faster. This is based on the students’ subjective reports as there is no physiological data to support this. Baileys (1995) observations do support ‘Energisers’ since, being a moderate form of exercise, as they keep students active for a longer duration. (However again this will depend on the exertion each student applies to the exercise).
‘Energisers’ appeared to encourage students to think more carefully about their learning. Students created their own learning intentions and success criteria and were able to self, peer assess as well as create next step learning (Evident in their rubrics). Students were motivated in what they were doing as they stayed behind during their breaks to continue to work on their ‘Energiser’. The classroom teacher noticed an increase in self-esteem in a number of students, as many students would talk about the creation and application of the ‘Energisers’ with an authority, that they normally would not have. This was evident also in their speech writing.

In the creation phase, new skills had to be learned. Hence creating an ‘Energiser’ was challenging. A number of students may have entered a state of flow as they mentioned that they could not believe the lesson had ended so soon – a feeling of a loss of time. Csikszentmihalyi, (1990) mentions that such an unawareness of time is characteristic of the flow state.

Teachers need to acknowledge that student attention spans are short and that their energy levels can be low (low arousal). They can then allow for these factors by incorporating ‘Energisers’ into their planning of lessons. Knowing the students, and providing a range of activities other than constantly sitting at a desk is critical. The researcher was very fortunate to have worked in a classroom where the teacher constantly reflects on her practice. She is very aware of the attention spans of her students in her class. She generally creates 15 – 20 minute activities to keep students engaged. This is particularly evident in her literacy and numeracy program. When it comes to large time slots such as ‘Inquiry’ the classroom teacher says she has used breaks in the past, but now will often use an “Energiser’. The first 5 minutes after the ‘Energiser’ is crucial in capturing the attention of your students and reconnecting them to back to their learning.

In the present research, students chose the themes for their own ‘Energisers’ to meet learning outcomes that were agreed with the teacher. The themes were relevant to 10-11 year olds, and were not imposed by the teacher. The
findings of the research indicate that students were highly engaged and committed to creating and performing the 'Energisers'.

Initially when the students started completing ‘Energisers’ (and especially during the ‘freestyle’ section) a small number of students became over excited and found it difficult to resume work, which impeded future learning. This finding was in line with the conclusions of Yerkes and Dobson (1908). The ‘freestyle’ moves needed to be carefully monitored, so that play fighting (especially between the boys) was eliminated. The researcher and classroom teacher recognised this and created a set of norms with the students that related back to the school values. Students used this as a touchstone to refer back to and resume work more quickly after the 'Energisers'.

‘Energisers’ offer the chance of a physical micro-break without the inconvenience of moving too far, whilst limited teacher commands, and using limited equipment. This means that valuable learning and teaching time was not wasted on student management procedures.

Five significant findings arose from the observation group.
1. ‘Energisers’ were a valuable workout and made students feel energised and motivated to learn.
2. One student disliked the subject following an ‘Energisers’, (even though he enjoyed doing the ‘Energiser’ and felt great afterwards) the act of doing the ‘Energiser’ did not remove his dislike. This is where quality teacher practice is important to provide learning that is re-engaging and that meets the needs of the student.
3. However another student experienced the opposite. He had disliked a subject before ‘Energisers’ but after completing an ‘Energiser’ his attitude changed towards the subject. He was more positive and motivated to learn.
4. One boy was very conscious of the other boys watching him. He did not always give his best, as he did not want to stand out in front of his peers.
5. Lastly a student mentioned how the effectiveness of the ‘Energisers’ were short lived. He mentioned how he felt re-energised after them but this state did not last throughout the school day. This confirms the need for teachers to
look at the way they structure activities, not expecting students to stay at their desks for long durations, but to keep them moving.

‘Energisers’ have the potential to prepare the student to learn. However, they are only one component of a positive learning environment. ‘Energisers’ themselves will not keep students constantly engaged throughout the school day. What happens after the 'Energiser' is utmost importance. It is imperative that teachers use their skills to keep the students energised, engaged and wanting to learn. Thus teachers needed to be aware of best practice to ensure all their students learning needs were being met. This conclusion agrees with that of Hattie (2003) p12 who states that, “It is teachers that make the difference, but only teachers who teach in certain ways.” Having an environment where students are potentially more ready to learn is futile if the teacher does not employ best practice that continually engages students. This is done by catering for the students' learning styles and needs, and by having meaningful contexts where students are part of the learning process.

The first 5 minutes after an ‘Energiser’ seems to be crucial in recapturing students' attention. Simple clear instructions and being enthusiastic about what is taught is vital.

The findings of this research indicate that ‘Energisers’ have the ability to re-capture students that are becoming or are disengaged. Many students had sufficient self awareness to know when they feel disengaged or becoming flat. Even though not all students are disengaged at the same time, an experienced teacher can sense the appropriate time to use an ‘Energiser’.
**Limitations of Research**
There were a number of limitations to this research:

- There was a large teaching component by the researcher, who had to take the time to build a rapport with the students. The students had to accustom themselves to two different teaching styles.
- The school used PC computers, and the researcher had a single Mac computer to be used by the students. Even though the students saw using the Mac as engaging, lack of hardware limited the amount of time each group was able to spend on the computer.
- The participant range is small. Research was carried out only with Year 6 students, from one class and from one school. It would be worth further research to see the effect of ‘Energisers’ in differing decile schools and year levels. (See appendix 15.)
- During the creating phase the researcher was the teacher. His passion and enthusiasm for ‘Energisers’ may influence student answers to the questionnaires.

**Next Steps**
Even though ‘Energisers’ can be very successful in giving students micro-breaks, there are a number of recommendations for future study.

1) ‘Energisers’ have the ability not only to get students moving but with careful planning and incorporation of educational aims into the ‘Energisers’, students may be able to learn while participating. Items they could learn could include multiplication tables, phonic sounds or even the alphabet. Further research may support this extension of the 'Energiser' concept, especially by incorporating song and movement.

2) A further extension may be to make 'Energisers' more interactive for the audience. This could be done not only by expecting the audience to complete actions but also to respond orally to audio/visual cues, for example by repeating phonic sounds.

3) Using appropriate technology, 'Energisers' could not only capture the
students interest via movie, music and blue screen, but could also incorporate 3D effects. Objects could towards students, who must move to avoid them. For example, students could pretend to raft down a river – missing overhanging branches.

4) Use digital footage for the background. All student ‘Energisers’ were made with still images inserted in the background. This was done to keep ‘Energisers’ simple for the pilot project. The researcher did however try to introduce footage of the ocean moving in the background of an ‘Energiser’ made by his 4 year old daughter. It would be interesting to investigate whether a moving background makes an 'Energiser' too 'busy' for the audience to follow.

5) Further research would be useful to see if the effects of ‘Energisers’ were sustained over time. It would also be interesting to determine if the students could recognise when they were disengaged by allowing them to complete an ‘Energiser’ by themselves before returning to their learning. This could be appropriate during an Inquiry class where, the individual student or the group needed a break. A secure environment could be provided, in the sight of the teacher, where individual students or small groups could use a computer to play an 'Energiser' rather than the data projector.

6) During the research a number of students tried to create their own music through ‘Garage Band’. Unfortunately this original music was not used due to time constraints they were unable to finish their music in time to coincide with the launch of the ‘Energisers’. It would be interesting in the future however to investigate if the students' music was as engaging for the participant as more familiar commercial music.
Conclusions

1. Students using ICTs as part of the learning process in the creation of ‘Energisers’ showed increased levels of engagement and motivation.

2. The findings indicate that ‘Energisers’ can be incorporated into the daily school routine, with limited equipment and teacher commands, to maximise learning time.

3. ‘Energisers’ had the capacity to re-engage learners who felt they had low energy levels. They helped to create a positive environment in which students were able to learn after participating in an ‘Energiser’, by being mentally and physically prepared.

4. Although ‘Energisers’ have the potential to prepare the students to learn more effectively, it is ultimately quality teacher practice after an ‘Energiser’ that is of paramount importance to making the greatest improvement to student learning.

5. ‘Energisers’ provided a physically active micro-break from learning, and can improve the attention span, motivation and engagement of the students and teacher.
References


Wilmore, JH & Costill DL (1999) *Physiology of Sport & Exercise* *(2nd Ed.)*. Human Kinetics Champaign

Appendices

Appendix 1 Pre-Questionnaire

Energising Education Student Pre-Questionnaire

Class Level: Year 6

Student Name: _______________________________

In Room One we think engagement is:

___________________________________________________________

Section One: Structure of the school day

1. What are your engagement levels throughout the day? (Please tick)

<table>
<thead>
<tr>
<th>Times of Day</th>
<th>Low</th>
<th>Medium</th>
<th>High</th>
</tr>
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<tbody>
<tr>
<td>9-10:30</td>
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<td></td>
</tr>
<tr>
<td>10:50-12</td>
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<td></td>
</tr>
<tr>
<td>12:30-1:30</td>
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<td>2-3</td>
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</tbody>
</table>

2. What is your favourite part of the day? ______________________
   Why?

3. What is your least favourite part of the day?_____________________
   Why?

4. What are your engagement levels in different subjects? (Please tick)

<table>
<thead>
<tr>
<th>Subjects</th>
<th>Low</th>
<th>Medium</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reading</td>
<td></td>
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<td></td>
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<tr>
<td>Writing</td>
<td></td>
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<tr>
<td>Numeracy</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inquiry (Topic)</td>
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<td></td>
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<tr>
<td>PE</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Music</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Art</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

5. What is your favourite subject? ______________________________
   Why?
6. What is your least favourite subject?  ______________________________

Why?

7. What do you do when you are not interested in a subject?

8. What do you do when you find something difficult or do not know how to do it?

9. What happens when you are engaged and interested in something?
   (Please tick)

<table>
<thead>
<tr>
<th></th>
<th>Never</th>
<th>Sometimes</th>
<th>Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I lose track of time</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. I smile</td>
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<td></td>
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<tr>
<td>3. I frown with concentration</td>
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</tr>
<tr>
<td>4. My breathing changes</td>
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</tr>
<tr>
<td>5. I show my friends what I am doing</td>
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<tr>
<td>6. I talk excitedly</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>7. I am quiet</td>
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<td></td>
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<tr>
<td>8. If I am reading or using the computer, I focus on the screen or text</td>
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<tr>
<td>9. I look away from time to time and think</td>
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<td></td>
</tr>
<tr>
<td>10. I feel happy</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>11. I feel challenged</td>
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<td></td>
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</tr>
<tr>
<td>12. I like to talk</td>
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<tr>
<td>13. I ask questions</td>
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<tr>
<td>14. I am not aware who is around me</td>
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<tr>
<td>15. I like to talk in a group</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16. I like to read aloud</td>
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<tr>
<td>17. My voice gets louder</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>18. I have idea after idea</td>
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<td></td>
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</tr>
<tr>
<td>19. I don’t listen to others</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>20. I have to get all my ideas out</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>21. I speak faster</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>22. I get louder</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>23. I have to speak</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>24. I have to finish my sentence / work</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
10. What else do you do when you are engaged?

11. What do you do when you are pretending to be engaged but aren’t?

12. What could a teacher do to keep you interested in your school work?

13. Do you like using computers?  
   Yes  No  
   Why?

14. Do you have a computer at home?  
   Yes  No

15. If you have computer at home is it set up for the Internet?  
   Yes  No

16. Are you allowed to use the internet by yourself?  
   Yes  No

17. Do you have a cell phone?  
   Yes  No

18. Do you have a playstation? X-box?  
   Yes  No

19. What do you use the computer at home for?

20. Do you like Physical Education?  
   Yes  No  
   Why?

21. Do you play a sport for the school?  
   Yes  No  
   Why?

22. What sports (if any) do you participate in? (Include out of school)

23. What do you do during your spare time?

24. What do you like about fitness?

25. What do you not like about fitness?

26. Please rate the school fitness activities
<table>
<thead>
<tr>
<th></th>
<th>Don’t enjoy</th>
<th>Okay</th>
<th>I enjoy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relays</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cross Country</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Circuits</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jump Jam</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

27. What activities would you like to do for fitness?

28. Do you think fitness is important? Why or Why not?

Thank you for completing the questionnaire
# Appendix 2 Learning Rubric

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Getting There</th>
<th>Made it</th>
<th>Wow!</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student: Blue</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teacher: Green</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Teacher: Mr Tigger**

My reflection:

Peer Assessment:

My next learning step:
Appendix 3 Student Rubric Self Reflections

After creating their ‘Energisers’ student’s reflections included:

A. We didn’t have to do much school work
B. The blue screen was really cool because it was a good experience
C. I really enjoyed making the energizer because it was way cool and fun
D. It was awesome because I got to learn more things about computers
E. It was awesome because we got out of heaps of school work
F. No comment
G. It was good because we learnt heaps of stuff – DB2
H. It was a good experience because we got to use the Apple laptop
I. I thought it was really fun because when we were doing our energizer we didn’t feel like school work - DB1
J. We used wrestling moves and were able to wear wwe t-shirts and being with Mr T – GB1
K. I thought it was brilliant because we got to use wrestling moves and be with Mr Tippen – we also liked using the Mac – GB2
L. It was fun because I got to work with my friends
M. I got to work with my friends and also we did the moves by ourselves and got it done on time and we worked with Mr T
N. I think that I did well and was so much better than school work
O. It was great – because we had no school work – EB1
P. It was fun because we didn’t have to do any school work
Q. I think we had fun because we got to do not school work and I enjoyed it
R. It was wicked because we got to use the laptop
S. It was fun because we didn’t have to do much school work
T. It was fun because we didn’t do school and its really, really, really cool
U. I think that it was really fun because we got to do something better than school work
V. It was cool because we missed some work out – EB2
Appendix 4 When interviewed about how they felt when students performed their ‘Energiser’, students responded:

A. It gets embarrassing
B. Because we can show off
C. Because it’s quite embarrassing seeing yourself on screen
D. They can get active
E. Its awesome
F. You want to do my one
G. Because everyone laughs - DB2
H. It is cool
I. Yes because they are having fun – DB1
J. Doesn't bother me – GB1
K. I get embarrassed – GB2
L. A bit because sometimes it can be embarrassing
M. Because they like it
N. They like it
O. They are all friendly – EB1
P. No comment
Q. Its funny
R. They don’t relay why
S. It doesn’t really matter what one they are doing
T. It funny
U. Is sometimes embarrassing
V. It is good for us to do others energizers – EB2
Appendix 5 Do you like students doing your ‘Energiser’?

A. Its embarrassing
B. Its fun
C. I know how to do the moves
D. Its fun and exciting
E. Its fun to do
F. We'll get energised
G. We got to do your own moves – DB2
H. No comment
I. It is cool – DB1
J. Doesn’t bother me – GB1
K. I want to do others and because I know the moves – GB2
L. I know I made it with my friends
M. No comment
N. I think I done well with the girls
O. I like V8 supercars – EB1
P. Its fun
Q. If is fun to do
R. I look goofy
S. I made it
T. Its fun and I enjoy it
U. Its really fun
V. They are fun – EB2
Appendix 6 A summary of Student comments on others' 'Energisers' included:

A. It's fun and a bit better than mine
B. You can do all different ones
C. It's fun to see others up on screen
D. When you do someone else's energizer it's really exciting
E. Everyone put a lot of effort into them
F. We get energised
G. We can see other people's – DB2
H. I am proud of them
I. My one is better – DB1
J. Doesn't bother me – GB1
K. They're groovy – GB2
L. No comment
M. Because some energizers I don't like
N. They are cool as well
O. They are all cool – EB1
P. They have cool moves and songs
Q. They look cool
R. They all have great moves and the songs are great
S. Some of them have cool moves
T. They are fun
U. It's really fun
V. It is good do see what others did with there 'Energisers' – EB2
Appendix 7 Student Post-Questionnaire

Energising Education – Student Post-Questionnaire

Class Level: Year 6

Student Name: ______________________________

When is the best time of the day to do an Energiser?

_____________________________________________________________________________________

After an Energiser what are your engagement/motivation levels in different subjects?

<table>
<thead>
<tr>
<th>Subjects</th>
<th>Low</th>
<th>Medium</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reading</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Writing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Numeracy</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inquiry (Topic)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Has doing an Energiser helped you to be more engaged/motivated in your least favourite subject? Yes No

Why?

Has doing an Energiser helped you to be more engaged/motivated in your favourite subject? Yes No

Why?

Because we do Energisers in class I now… (tick the box)

<table>
<thead>
<tr>
<th>Do I…</th>
<th>Never</th>
<th>Sometimes</th>
<th>Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>Raise my hand?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Participate in small groups?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ask questions when I don't understand?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Like coming to school?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Think about school work when not in school?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Get my work completed on time?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Like to discuss topics?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Find school easy?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Give up when I find school work difficult?</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
BEFORE AN ENERGISER

How do you feel before completing an Energiser?

Tired

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
</table>

Full of Energy

Why?

Are you aware when you need to do an energisers?

Never

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
</table>

Always

DURING AN ENERGISER

How do you feel during an Energiser?

Tired

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
</table>

Full of Energy

How do you feel when you see yourself on screen during an Energiser?

Embarrassed

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
</table>

Excited

Do you like students doing your Energiser?

No

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
</table>

Definitely

Why?

Do you like doing your Energiser?

No

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
</table>

Definitely

Why?

Do you like doing someone else's Energser?

No

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
</table>

Definitely

Why?
Do you feel your heart beating faster during an energiser?

<table>
<thead>
<tr>
<th>No</th>
<th>Definitely</th>
</tr>
</thead>
<tbody>
<tr>
<td>1  2 3 4 5</td>
<td></td>
</tr>
</tbody>
</table>

Are Energisers a good workout?

<table>
<thead>
<tr>
<th>No</th>
<th>Definitely</th>
</tr>
</thead>
<tbody>
<tr>
<td>1  2 3 4 5</td>
<td></td>
</tr>
</tbody>
</table>

Do you like creating your own moves?

<table>
<thead>
<tr>
<th>No</th>
<th>Definitely</th>
</tr>
</thead>
<tbody>
<tr>
<td>1  2 3 4 5</td>
<td></td>
</tr>
</tbody>
</table>

When you do an energiser do you start straight away or does it take time to get moving?

<table>
<thead>
<tr>
<th>Takes Time</th>
<th>Start Straight Away</th>
</tr>
</thead>
<tbody>
<tr>
<td>1  2 3 4 5</td>
<td></td>
</tr>
</tbody>
</table>

AFTER AN ENERGISER

How do you feel after an Energiser?

<table>
<thead>
<tr>
<th>Tired</th>
<th>Full of Energy</th>
</tr>
</thead>
<tbody>
<tr>
<td>1  2 3 4 5</td>
<td></td>
</tr>
</tbody>
</table>

Do you think Energisers help in your learning?

<table>
<thead>
<tr>
<th>No</th>
<th>Definitely</th>
</tr>
</thead>
<tbody>
<tr>
<td>1  2 3 4 5</td>
<td></td>
</tr>
</tbody>
</table>

Why?

Would you make Energisers again?

<table>
<thead>
<tr>
<th>No</th>
<th>Definitely</th>
</tr>
</thead>
<tbody>
<tr>
<td>1  2 3 4 5</td>
<td></td>
</tr>
</tbody>
</table>

Do Energisers make you think about your body more?

<table>
<thead>
<tr>
<th>No</th>
<th>Definitely</th>
</tr>
</thead>
<tbody>
<tr>
<td>1  2 3 4 5</td>
<td></td>
</tr>
</tbody>
</table>

Why?

Do Energisers make you want to exercise more?
Do you feel more engaged/motivated in learning after an Energiser?

| No | 1 | 2 | 3 | 4 | Definitely | 5 |

Why?

Do you find it easy to settle to work after an Energiser?

| No | 1 | 2 | 3 | 4 | Definitely | 5 |

CELEBRATION OF LEARNING

How did you feel being on TV?

Didn't like it | Loved it
| 1 | 2 | 3 | 4 | 5 |

How did you feel when the Energisers were used in Assembly?

Didn't like it | Loved it
| 1 | 2 | 3 | 4 | 5 |

How did you feel when you showed your Energisers to the parents?

Didn't like it | Loved it
| 1 | 2 | 3 | 4 | 5 |

GENERAL

Did you like making music with Garage Band? Yes No

Do you think it would be better to have your own music playing or known artist music?

| Own Music | Known Artist |

Why?

Do you think the blue screen was needed to create an Energiser? Yes No

Why?
Appendix 8  Student comments on when was the best time to complete an ‘Energiser’?

- Just after lunch
- In the mornings
- After you have been working for a long period time
- Middle of the day - cameron
- Just before breaks – DB2
- In the morning
- In the afternoon when we are all tired – DB1
- Not time when we sleepy – GB1
- Morning – GB2
- After reading because you get tired when you read
- When we do a boring subject
- When you feel asleep
- After writing – EB1
- After we have done lots of work
- In the morning
- When you have just done some work
- In the morning
- There isn’t
- After lunch because at lunch you get all reved up and afterwards an energizer get more motivate to do work
- When you are tired – EB2
- After lunchtime
- Start of the day
Appendix 9 Do you like doing someone else’s ‘Energiser’?

Student comments on others' 'Energisers included:

A. Its fun and a bit better than mine
B. You can do all different ones
C. Its fun to see others up on screen
D. When you do someone elses energizer its really exciting
E. everyone put a lot of effort into them
F. We get energised
G. We can see other people's – DB2
H. I am proud of them
I. My one is better – DB1
J. Doesn't bother me – GB1
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N. There are cool as well
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Q. They look cool
R. They all have great moves and the songs are great
S. Some of them have cool moves
T. They are fun
U. Its really fun
V. It is good do see what others did with there energisers – EB2
Appendix 10 Do ‘Energiser’s help to be more engaged in your least favourite subject?

A. Because my blood starts to pump more
B. Its made me more focused
C. Because after doing something fun and energizing its good to sit down and relax and do something boring
D. When I'm doing maths I can think more
E. It gets my brain working
F. We get pumped up
G. It helps do my work because I’m energised – DB2
H. I am really energized to do everything
I. No I am not because I still don’t like the subject – DB1
J. I am happier – GB1
K. My blood gets pumped about doing anything including reading – GB2
L. I am less tired and I feel better
M. No because I don’t like inquiry
N. After a energizer I feel happy and ready to work
O. I feel like working after an energizer – EB1
P. I just want to finish the boring work
Q. After doing energizer I just would like to sit down and read
R. Your blood moves your body
S. It’s like getting fresh air and calming you down
T. I write
U. Writing because I’ve let all my steam out
V. No it does not last for the whole day – EB2
Appendix 11 Do ‘Energiser’s help you to be more engaged in your favourite subject?

A. Because my blood starts to pump more  
B. Because you enjoy even more  
C. Because it keeps me from getting bored because we had just done something really fun  
D. No comment  
E. You go into something fun after another fun thing  
F. We get real energizer  
G. It helps me to do my work – DB2  
H. I am really energised to do everything  
I. Yes - It is my favourite subject – DB1  
J. I am happier – GB1  
K. I get the answers right – GB2  
L. Not really because I am already motivated because I like it better  
M. Because I like reading  
N. It makes me get good ideas because I’m not asleep  
O. I feel like working after an energiser – EB1  
P. I want to do it more  
Q. I am ready for maths after energisers  
R. Your blood moves around your body  
S. No comment  
T. I like it more and learn more  
U. I have a good feeling and that makes me do more work  
V. Yes because you are sitting down when you have done the energiser – EB2
Appendix 12 Students comments before completing an ‘Energiser’

Students comments were…
A. No comment
B. No comment
C. Tired – because I had basically just woken up
D. I’ve been sitting down and feel tired
E. There was nothing to give you a boost
F. We get pumped up
G. We have been sitting down to much – DB2
H. I am tired
I. No comment – DB1
J. Tired because I got up early – GB1
K. I don’t move around as much – GB2
L. No comment
M. Because I am bored
N. Done too much work
O. I’m not that tired when I wake up – EB1
P. No comment
Q. I feel all engaged
R. No comment
S. It’s a bit mucky inside classroom
T. Bored
U. Tired
V. I had a late night – EB2
Appendix 13 Engaged in learning after an ‘Energiser’

Student commented as follows:

- A. I feel more focused
- B. We had just done something real fun and its good to relax with some work
- C. You can learn more about the thing that you are doing
- D. No comment
- E. You are all pumped up
- F. No comment
- G. I got moving – DB2
- H. No comment
- I. I am full of energy – DB1
- J. No comment – GB1
- K. Depends if you are still tired or full of energy – GB2
- L. Much easier because we are not tired
- M. I’m energised
- N. You just did a 2 min workout
- O. Because of the happy energy – EB1
- P. I feel tired and I just want to work
- Q. No comment
- R. Your blood just moves around
- S. It I bit like getting fresh air
- T. It makes you happy
- U. They let my steam out
- V. It makes me want more work – EB2
Appendix 14 Help in Learning

Student Comments

- A. Your heart starts pumping
- B. It makes you focused
- C. They can improve your concentration and you can get higher levels
- D. After an energizer you feel full of energy and it helps you think more
- E. Were energized to get into work
- F. We think more
- G. We don’t get tired – DB2
- H. It is good health
- I. I’m not tired – DB1
- J. It gets your heart pumping – GB1
- K. So your not tired and bored when you do work – GB2
- L. You get energized
- M. Your full of energy
- N. I don’t feel so bored after an energizer
- O. Your more into learning – EB1
- P. When you finish you just want to work after it
- Q. Blood moves around your body
- R. Before an energizer you might be a bit tired so an energizer might get you moving
- S. They give you a break
- T. It helps your learning
- U. No comment
- V. No comment – EB2
Appendix 15 Dissemination of research at Ulearn Conference

One of the requirements of the eFellowship was to take a workshop on the research at the 2008 uLearn conference in Christchurch. This was the first workshop I had taken on ‘Energisers’. One of the activities was to find out from the group, what did they think exercise was good for. Their responses are summarised in the following ‘Wordle’ picture.

![Wordle](image)

This clearly indicates that fitness, getting fit, staying healthy, feeling great and energising were main themes mentioned by the teachers. It was pleasing to see the words ‘energising’ and ‘feel great’ featuring highly because these are the purposes of ‘Energisers’.

Ulearn was at the beginning of October 2008. In December I received a phone call from one of the teachers at the workshop, who informed me that his class had just very successfully finished creating their own ‘Energisers’. This was a wonderful boost for me as it meant that other teachers had decided to experiment with them. His comments are recorded below;

- The whole unit was motivating and engaging for all the children as they all had an active role in the ‘Energisers’
- The ‘Energiser’ unit incorporated many curriculum areas such as, English –visual language/ viewing and presenting, Art – Drama/movement and dance, PE –movement and exercise
• ICT- used Ulead 10 movie making software and other ICT tools and strategies
• The unit enabled our class to create a P.E resource that could be used by our class and others throughout the School

I encourage this teacher and others to continue experimenting with ‘Energisers’ to get students moving and engaging. I will be looking at his students ‘Energisers’ with interest.