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**Introduction**

Occasionally, I get asked by teachers why anyone would bother introducing technology into Physical Education. This usually turns into quite an interesting discussion about what exactly do they mean by ‘technology’, which is then typically followed up with concern over the replacement of Physical Activity for some sort of online alternative.

In this situation, I respond with the following:

1. “Technology is all around us, it involves every aspect of Physical Education, from the shoes the students wear to the sports equipment used during the game. So I assume you are talking about digital technologies?”

2. “The introduction or emerging of digital technologies in Physical Education does not seek to replace physical activity; it aims to help explore physical activity. Technology becomes like any other tool in the PE teachers toolkit, useful for whenever the situation demands it, never just for the sake of it”.

I would also indicate within my response that elite sports organisations take advantage of the latest technology to enhance sports performance. This is the same thing we try to achieve in Physical Education, albeit with students rather than sports stars.

A typical semester in my physical education classes would most likely involve 90% physical activity that included absolutely no involvement of emerging technologies. It’s during the 10% of a semester that we spend exploring the powers of technology to improve our understanding of human activity.

So I urge you to read along as I take you through hundreds of ways you can utilise emerging technologies in your PE classroom for the better.
**Physical Education & Technology?**

When I was asked to present at the 2009 ACHPER annual conference I couldn’t pass up the opportunity. The main reason for my motivation was that as a Physical Education & Outdoor Education teacher I had always been disappointed with the professional development I had received around the use of Information and Communications Technology (ICT) within my classroom. I found this to be a common ingredient when discussing training sessions with fellow PE teachers. While I support the provision of professional development within the area, it was never promising to complete a session ran by a highly experienced user of ICT who had no knowledge of how it could be used within a PE classrooms.

With this in mind, I set out to prepare a presentation that would hopefully offer practical advice on how to utilise a variety of emerging technologies.

1) **Flip Video Camera** – The first and most essential tool for a Physical Education teacher. No other camera is as simple to record video footage, making it a snap to film and analyse sporting techniques and game play.

2) **MP3 Player/Recorder** – With the abundance of MP3 players today you can be sure to be able to buy an excellent player full of features for a small price. For as little as $20 you can purchase a player with the ability to play and record mp3 files and connect to the radio. One of the ways I utilised it within my classroom has been to create podcasts or recordings of my own teaching that can be loaded onto the MP3 player for review at a later stage. This also allowed us to complete theoretical course content during a casual walk or ride around the lake. This really assisted the kinaesthetic learners who enjoyed the ability to move while they learned. Buy a class set of 10 and rotate them through the group.

3) **Mobile Phones** – Regardless of people’s perceptions of mobile phones being timewasters, they are without a doubt the single most must-have item of today and why shouldn’t they be? Today’s mobiles are like the Swiss army knives of the 1800’s, with every modern piece of equipment you could ever need. It is now impossible to find a phone that is simply “just a phone”.

   a. **Calendar** – Have your students use the phone’s calendar as a diary for recording important dates and information. Never again will you hear the excuse that they didn’t realise an assessment was due.

   b. **Clock/Stopwatch** – Use the inbuilt stopwatch and alarm to help organise and time training sessions. In this example, students move from passive
participants within a session to the role of trainers, as they are forced to organise the session.

c. **SMS** – Use this feature and a service such as [www.smsexpress.com.au](http://www.smsexpress.com.au) to send bulk messages to more than one phone from your laptop. Easily allows for instant communication with a large group or class. Makes last-minute changes to the sports draw of outdoor education camp easy to communicate. Use it as an alternative to paper and pen during a sports session or camp and have students answer questions based on their participation.

d. **Camera/Video Camera** – Use them within all practical sessions as a way to film and analyse performance instantly. Most phones even come with video editing software, that allows students to edit their own footage.

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4) **TubeChop.com** – With the absolute plethora of videos on YouTube, it is a must for Physical Education teachers. The great thing about TubeChop is that it allows teachers to select a certain section from a YouTube video and share only that section. Great way to filter the nonsense on YouTube.

5) **YouTube.com or Vimeo.com** – Have your students teach a sport or physical skill and film it with a Flip Video camera for uploading to YouTube. Sit back and watch as people from around the world watch and comment on the video.

6) **Google Docs** – Spreadsheet – Share a Google Docs spreadsheet to all your students, with simple formulas to work out and graph averages. Have each member of your class have a copy of the spreadsheet loaded on their computer screen. Complete a step test, and record heart rates pre, post and every minute after, for 5 minutes. Results are collated instantly from all computers within the room and displayed in one graph. This gives students a way to visualise their changes in heart rate activity in comparison with their peers. (Instructions here [http://mrrobbo.wordpress.com/2009/05/23/watching-my-classes-heart-beat/](http://mrrobbo.wordpress.com/2009/05/23/watching-my-classes-heart-beat/))

7) **Skype** – Without a doubt, my number one tool within a Physical Education classroom. Use Skype to make free phone and video calls to other Skype members all around the world. Connect your students to the textbook author in order to engage in a face-to-face chat worlds apart. How about having your students teach a game to another group of students from across the world? All it takes is an internet connection and a webcam and you can be linked up in no time. My students have recently used Skype to interview a sports nutritionist
within the Australian Institute of Sport, who talked about the foods Australian Athletes would be eating in the lead-up to a major competition.

8) **Posterous.com** – Simplest way to make an online digital portfolio of your sporting performance that can be reviewed and analysed over time. Simply film or record the desired skill and send the video file within an email to post@posterous.com. This will turn your email into its very own unique website where the video can be watched online. Have a new video or document you would like to include? Simply send a new email to post@posterous.com. By far the easiest, no fuss way to put anything you like online.

9) **Nintendo Wii** – With the influx of video games now requiring physical movement to play, why not introduce them into the curriculum. Have your students wear heart rate monitors while participating within a simulation sport game on the Nintendo Wii, then compare and contrast this to the “real” sport for excellent discussion about how intensity affects heart rate.

10) **Nintendo Wii Remote Control** – Attach a single Nintendo Wii remote control to your computer via Bluetooth (Instructions here [http://tinyurl.com/css1wy](http://tinyurl.com/css1wy)). This will allow you to utilise the inbuilt accelerometer within the control in order to track the movements and forces applied to the control as it is manipulated in space. Take it one step further and place it inside a dodge ball to record the forces applied to a throw within a game. All forces are displayed in a real time graph on your laptop for on-the-fly analysis. These graphs can then be utilised to prompt excellent discussion about acceleration around an axis.

11) **iPod Nike Sensor** – Have students bring their iPods to class or buy a class set. Students then attach a Nike Sensor to their shoe which communicates and records their physical activity. Student’s records are then sent to their own website, where they can view and track their training progress and compete against others from all over the world.

12) **Geocaching** – Geo**caching** is the free high-tech treasure hunt where you use your GPS receiver to find caches hidden by other players. It’s a great way to be outdoors, enjoy the environment and the revel in the thrill of the hunt! Simply logon to [www.geocaching.com](http://www.geocaching.com) and search for a cache within your area (you’re bound to find hundreds) and begin your hunt with the GPS. The hidden cache may require more smarts than meets the eye and reward you with a special prize, it really depends on the cache. Why not have your students make a virtual tour of their town as a series of hidden geocaches.
13) **iPhone** –

a. **RunKeeper** – Have your school purchase an iPhone and utilise the free application called RunKeeper, which keeps track of your physical activity via the GPS. Simply return to your computer to view the path/average distance/speed/elevation and calories exerted throughout the journey.

b. **100 Pushups** – Have your iPhone work as a coach to motivate and work you towards a training goal of 100 pushups. The application adjusts its training depending on how you feel and the results you achieve.

All of the tools and activities above have been utilised within my classes and I can say that they have been greeted with an enthusiasm unlike any I have experienced within my career. Students have leapt at the opportunities to utilise the technologies they use in their personal lives within the classroom. My recommendation would be to trial one or two of the ideas within your school and see for yourself how technology and sport can be used hand in hand.

If you need any information, feel free to drop by my personal blog where I discuss the many applications of technology within a Physical Education classroom. You can find it at [www.mrrobbo.wordpress.com](http://www.mrrobbo.wordpress.com)
Video Games in Physical Education

It was Christmas morning in 1992 and my brother and I were busily unwrapping our presents. We got to the last one and to our surprise we opened it to see a Nintendo. Initially we had no idea what this device did, but it wasn’t long before we were the most popular kids on the block with our friends. Flash forward to 2008 and my first year teaching, I noticed that students still shared the same excitement over video games as I did during my younger days. With this in mind, I decided I would be foolish to not at least consider the possibilities of integrating video games into my classroom.

The first thing I considered where the types of video game systems that were available. This led me to try:

**Dance Dance Revolution for Playstation 2** – I initially tried this with a small group of year 7 students from my Physical Education class at lunchtime. The idea of the game is simple, players stand on a dance platform or mat and hit colour arrows laid out in a cross with their feet to musical and visual cues. Players are judged by how well they time their dance to the patterns presented to them. Overall the game is extremely difficult to master and helped develop complex movement patterns within the group of students in a relatively short time. Not only were students working hard physically to complete the dances but they were also required to work mentally to decipher the visual information at a rapid pace. The positives of improvements within this game also seemed to extend beyond the game itself, with students showing improvements within our practical classes. The Dance Dance Revolution game has now found its way onto the Nintendo Wii and can be purchased at most retail game stores.

During 2009, I was lucky enough to receive funding from the Knowledge Bank – Next Generation program to trial the use of video games within a Physical Education classroom. With the funding I purchased two Nintendo Wii consoles and the game Wii fit. Basically, it is an exercise game consisting of activities using a balance board peripheral. The balance board allows players to have their entire bodies’ movements interpreted and used as the basis for control within the game. This means that players physically move their entire bodies to control the onscreen characters in a variety of activities such as yoga, skiing, running and muscle strengthening. At Boort Secondary College our junior classes have approximately two periods of theory and two periods of practice a week. The aim of the program that I developed and introduced was to make the theoretical time much more practical by employing the game “Wii fit” to teach a variety of theoretical concepts. The program was revolved around VELS level 5 from the Health and Physical Education Domain, which focused on teaching students to “explore views about fitness and
suggest what fitness might mean to various groups in society”. It also focused on them “developing their understanding of the physical, mental, social and emotional benefits of participation in physical activity”. With this learning focus in mind, I set out to develop the”How Fit Are Wii” program.

**How Fit Are Wii** – Using a Wiki website at [http://howfitarewii.wetpaint.com](http://howfitarewii.wetpaint.com), students began to record their physical activity within an online exercise journal. The journal would include exercise completed both within our practical classes and within the Nintendo Wii game. Each week, students would complete a new worksheet or activity while they were playing the game. This worksheet would then focus their learning for the remainder of the week. As a result of this, students would engage in great discussion and analysis of each of the Wii fit games.

With exercise intensity being a major focus with the National Physical Activity Guidelines, I set out to teach this concept within the games. Students began to compare their actual physical activity with the simulated versions to determine whether or not the Wii fit is an accurate simulation of the sport. This would then help us to determine whether or not playing the video game would be enough to fulfil the National Physical Activity Guidelines of 1 hour of moderate physical activity a day. As you can imagine, this debate type format where students were actively involved in collecting information and data from their own activity became a rich learning experience. One of the most accurate ways to determine this was through utilising heart rate monitors. Within one of the activities, students were required to play the tennis Wii sports mini game, while wearing a heart rate monitor. They then recorded their results and compared them with an actual game of tennis during our practical session for the week. Students were then able to determine that the video game simulation was nowhere near enough to meet the guidelines. The students then began to compare and contrast the rest of the mini games that we could replicate in real life, with excellent discussion resulting around how intensity affects heart rate. As a culmination of the program, students then filmed their own videos demonstrating the knowledge they had all gained throughout the program. Within this video students had to develop their own version of a game simulation that met the requirements of the National Physical Activity Guidelines. Feel free to download the worksheets and view the lessons from the How Fit Are Wii website at [http://howfitarewii.wetpaint.com](http://howfitarewii.wetpaint.com).

**Mario & Sonic at the Olympics** – The next game I utilised within a theoretical class was the game Mario and Sonic at the Olympics on the Nintendo Wii. The game allows players to assume the role of Olympians and compete within a variety of Olympic sports. Players use
the Wii remote to mimic the actions performed in real life sports such as swimming and table tennis. Within the game there is quite an emphasis on replicating the real life sports accurately, getting some major features of the sports correct, such as the angle of release and speed. With this in mind, I set out to explore some of these concepts within my VCE Physical Education Class.

The first activity we did during a theoretical lesson was to teach the types of skill classifications. Students had to move through the games and classify the sports into the types of skills that were evident. By using the Nintendo Wii game as a stimulus, students got to explore and discuss sports that they would rarely be exposed to, such as trampolining. It also allowed us to move through and classify 24 examples in about 30 minutes. Later on in the semester we used it again within the same class to teach some basic biomechanics concepts. In the first lesson, students learnt about how angle and speed of release affect the overall distance of a thrown object. In order to do this, students played the simulation versions of discus and shot put and recorded the distance they were able to throw after modifying the angle and speed of release. Although it was only a 15-minute activity, it firmly cemented the idea of concept within their understanding and this was then applied to a practical real-life experiment in the second lesson.

One other use I have found for the Nintendo Wii has been within the controller itself. As you will be aware, the Wii mote controller contains a series of highly powerful accelerometers, which basically allow the unit to sense the movements that you apply to it. So with the help of a few programs and a laptop you can harness the accelerometers within the controller (no Nintendo Wii console needed, just the controller) by connecting it to your personal laptop. This then means that as you manipulate the controller the information of the forces being applied to the controller are being sent to the laptop and graphed in real time. As a result, you can then begin to explore major biomechanics concepts. One example of this is to insert the Wii mote into a foam dodge ball and have students throw the ball around to each other. The movements and forces will be mapped and provide excellent discussion for topics such as force summation. For a simple step-by-step video on how to set up the Wii mote with your computer, you can read the blog post at http://tinyurl.com/csslwy

So as some of you are left scratching your head wondering of the validity of using video games within a Physical Education class, I urge you to at least consider the possibility from a purely experimental viewpoint. As I have told my students all along, simulation sports are by no means a replacement for actual physical activity, but they sure do provide valuable insight and discussion into the multitude of reasons they are not. With good activities and teaching surrounding the game play, students can come away with an excellent understanding of the major concepts, by replacing completely static theory lessons with a more active and explorative approach.
Cell Phones in Physical Education

As a member of Generation Y, my mobile phone is indeed one of my most used and valuable personal tools. Today’s mobile phones provide much more than phone calls, with even the most basic models containing a bundle of fancy extras. In 2003, I received my first ever mobile phone as a present for finishing year 12, flash forward to 2010 and today’s students could benefit immensely by utilising their phones within their study.

So, before I got carried away and started exploring all of the potential ways in which they could be used in a Phys Ed classroom, I decided to survey my students. The reason being is that I didn’t want to introduce a new technology to have it fall on its face because students simply did not have a mobile phone. As you are probably aware, the results showed that almost 95% of students in years 9 or above have a personal mobile phone. There was about 50% access to mobile phones in the younger years, making it at least worth considering.

The question now is what ways can you assist those students who do not have access to a device? Well the first way was to develop a class set of used mobile phones. I simply put the call out to teachers and friends to donate an old mobile phone that they knew was never going to be used again. Not surprisingly, most of the donated phones we received had a few features including cameras which could even be used without a SIM card.

The second way to ensure all have access is to design activities or tasks that have students working in groups that only require one mobile phone. This means that students who do not have access will naturally pair up with those who do. The best thing about this approach is that once you are aware of the students who have and don’t have access you can even start make the groups yourself.

After sorting out some of the issues relating to access, the next step was to inform parents that students would be able to use their mobile phones under the direct supervision of teachers within my classes. This letter was to stop students exploiting the new possibilities by communicating the facts about where and when they could be utilised. It also provided an opportunity to explain that parents do not need to go and purchase a mobile phone specifically for the class, as a class set was available for use.

So with most of the organisation and planning complete it was now time to use them in my Phys Ed classes and here’s how....
Photo and Video Camera Analysis

As most of us work in schools that have limited funds, it is almost impossible to gain access to enough video cameras, so students are working at a 1:1 ratio. This is the very problem I was facing at my school and then the idea occurred that all of my students had a mobile phone sitting secretly within their pockets. So after asking the principal whether it would be ok to use them within class, I had my students bring them out of their pockets during a practical year 11 Phys Ed class.

The practical session was centred on teaching a variety of Biomechanical Concepts and as such each student was required to choose a sporting activity and piece of equipment and demonstrate the principles. The students then used their understanding of the Biomechanical principles to improve their peer’s techniques. It proved to be a highly engaging and interesting lesson with all of the students actively involved in exploring concepts and correcting techniques. There was no opportunity for students to take a back seat, because they had to wait for equipment as everyone became a director, cameraman and actor within the videos.

MP3 Players

As most modern mobile phones have the ability to play MP3’s and record sounds, it was a logical next step to utilise this capability. Students in my Year 10 Phys Ed class recorded a series of podcasts covering different theoretical concepts. These podcasts were then loaded onto their mobile phones, so that they could listen to the information and revise for a test as they were completing a casual walk or ride around the lake. This approach was successful in that the students were actually learning about the National Physical Activity Guidelines as they were being physically active. It proved to be a much nicer environment to learn the material as compared to a static classroom.

Stop Watches

As almost all phones have a stop watch with all sorts of other time related functions, it was a must that we used these within our Year 9 Phys Ed class. The students were given the role of personal trainer and required to time and run a fitness circuit using the inbuilt stopwatch. The benefit here is that each student had a more active involvement within the class. It also meant that the school wasn’t forced to buy new stopwatches or repair ones that got broken by students, as each had their own and were guaranteed to not break it.
QR Codes

Basically a QR Code is a 21st century version of the barcode. The nifty thing about them is that they can contain much more information than the traditional barcode. Users with a camera phone equipped with the correct reader software can scan the image of the QR Code causing the phone’s browser to launch and redirect to the programmed website. They are an excellent way to link the physical world with the digital world, to create real time learning in an outdoor environment. QR Codes storing addresses and URLs may appear in magazines, on signs, buses, business cards or just about any object that users need information from. For all the information you need about setting up QR codes on your mobile phone, consult a presentation I made for teachers [http://prezi.com/nxocvfz79hhp/qr-codes/](http://prezi.com/nxocvfz79hhp/qr-codes/).

After having my students install QR Code reader software on their phones or activating the already existing software (on most Telstra Next G Handset) on their phones it was time to use them within the class.

- **QR Code Treasure Hunts** – The first thing we completed was an orienteering activity, which utilised QR Codes in the place of the markers. Students had to move around the town locating the QR Codes, then scan with a phone to log that they had reached that marker. The decoded message also revealed the next set of directions. For a more detailed explanation of the activity, check out the blog post at [http://tinyurl.com/bceg2b](http://tinyurl.com/bceg2b).

- **Learning the Skeleton with QR Codes** – As Phys Ed teachers one of the most traditional things we teach are the human body systems and their role within sports. So with this in mind, I decided to create a 21st century version of the Skeleton model at our school. To put it simply, each bone had a QR Code affixed to it, which not only revealed the name of the bone, but linked to YouTube videos explaining further about that particular bone they had just scanned. For a more detailed explanation of the activity, check out the blog post at [http://tinyurl.com/cbeazl](http://tinyurl.com/cbeazl).

- **Digital Task Cards** – The next step was to create a QR Code version of task cards for particular sporting skills. As students moved around to each task card, they simply scanned the code to reveal a video of how to complete the skill correctly. This put the students in the driver’s seat as they were responsible for replicating a highly skilled performer.

Sure QR Codes sound complicated, but I can assure that they couldn’t be easier to create and use. Simply go to [http://qrcode.kaywa.com/](http://qrcode.kaywa.com/) and enter the information/URL that you want to link to and hit generate. You will have a QR code that you can print off and scan with your mobile phone to reveal the content. QR Codes have also been mentioned as an “Emerging
Technology” that will contribute to the changes in the way we seek information in the future.

As you have probably noticed throughout the article, there has been no mention of the iPhone and the wonderful things it can do within a Physical Education class. This is because at the present iPhone saturation among students is very small. The features mentioned within the article are all within the capabilities of today’s standard mobiles.

The final word I’ll leave you with is from Professor Stephen Heppell who says that if we had known in 1970 that we would eventually have a device that would fit in the palm of your hand, be able to connect with anyone in the world, be able to take videos and pictures... you would have said we were crazy. Well we have all that now and schools are doing what? They’re confiscating them as students enter the school. Hmmm...
GPS in Physical Education

As an outdoor enthusiast I have always enjoyed the challenge of getting outside and exploring the natural environment. This enjoyment is what made me seek a career within the Physical and Outdoor Education fields. Flash forward to today’s students and there is sadly an ever-growing mix of kids who simply do not leave their house during the course of the day.

Technology is often mentioned as one of the biggest distractions when it comes to today’s kids and their ability to get active. However, technology can and should be used in a way that not only brings new possibilities but actively encourages kids to get off the couch and into the outdoors. Here are a few tools and activities that utilise Global Positioning Systems (GPS) that seek to do exactly that.

Geocaching

Geocaching, which is actually pronounced geo-cashing, is a worldwide game of hiding and seeking treasure. A geocacher can place a geocache anywhere in the world, pinpoint its location using GPS technology and then share the geocache’s existence and location online. Anyone with a GPS device can then try to locate the geocache.

A typical cache is a small waterproof container containing a logbook. Larger containers such as plastic storage containers (Tupperware or similar) or ammo boxes can also contain items for trading, usually toys or trinkets of little value.

Geocaches are currently placed in over 100 countries around the world and on all seven continents, including Antarctica. After 10 years of activity, there are over 1.1 million active geocaches published on various websites devoted to the activity, such as [www.geocaching.com](http://www.geocaching.com).

How to use in your Physical Education/Outdoor Ed classroom?

1. Have your students race to find a series of Geocaches around your town that require them to work as a team to solve puzzles in order to receive the next geocache co-ordinate.

2. Complete an active revision session for an exam by hiding questions at geocaches around your school. Students then have to track them down and answer to move to the next cache. This is a really engaging and active way to revise, that gets your
students out of the classroom. (For more information, see my blog post at http://tinyurl.com/c8nac1)

3. Use Geocaching as a way to explore interesting natural environments in your local area. Simply set up geocaches at a point of interest and include a series of questions or discussion prompts for the location. This forces students to think that little bit deeper about the place they are visiting.

4. Use a series of geocaches on the school oval or local park to teach anatomical concepts. Basically, each geocache would represent a piece of the human anatomy and students would walk around discovering the caches in a sequential order. For example, a teacher could set up a chain of caches that took students through a simulation of how the blood or oxygen flows through the body. This would allow kinaesthetic learning minded students the opportunity to cement their understanding.

To get started with Geocaching, head over to www.geocaching.com and purchase a GPS handheld (examples on http://tinyurl.com/5tr9ep). Or for a very clear explanation of how Geocaching actually works, check out Chris Betcher’s video http://tinyurl.com/275qpn.

**RunKeeper**

The next addition to my senior VCE classroom was the exceptional RunKeeper application designed for the iPhone. RunKeeper uses the GPS technology found in the iPhone to track your fitness activity, giving you comparable results to an expensive GPS watch at a fraction of the cost. The intuitive and easy-to-use interface of the app makes it easy to track how far you went, how long it took, what your pace/speed was, how many calories you burned, and the path you travelled on a map.

Once your activity is completed, the data is synced to the RunKeeper website (www.runkeeper.com), where you can view a history of all of your activities, and cumulative totals of all of your vital stats.

Although the saturation levels of iPhones amongst our students are very low, it wasn’t a barrier to introducing this activity into my classes. To counter this, I simply allowed the students to use my personal iPhone attached to an exercise arm band and had two other students utilise their own phones.
How to use in your Physical Education/Outdoor Ed classroom?

1. Use the RunKeeper app during the Cooper 12-minute run fitness test, to share distance, speed and intensity and allow for discussion of the interplay of energy systems during exercise.

2. Use the RunKeeper app to record an individual’s movement patterns within a team sport to provide valuable insight into tactics and game strategies.

3. Use RunKeeper to record a virtual learning tour, which records your journey in the outdoors. Use the application to take pictures, record videos and post comments which are geotagged or linked to a Google map that you can review at a later stage. This then allows users to review exactly where they were the moment they took the picture. This was used during an Outdoor and Environmental studies camp in the Grampians National Park where I recorded a virtual tour, full of geotagged pictures of different human impacts. (For more information, see my blog post at http://tinyurl.com/2vgpuhl)

Nike +

Although not typically a GPS based technology, it allows for some of the same features by using an inbuilt accelerometer to measure the distance the device is moved. To put it simply, the Nike+iPod Sports Kit is a device which measures and records the distance and pace of a walk or run. The Nike+iPod consists of a small accelerometer attached to or embedded in a shoe, which communicates with either the Nike+ Sportband, a receiver plugged into an iPod nano, or directly with a 2nd or 3rd Generation iPod Touch, iPhone 3GS and iPhone 4. After your run, you are then able to view a detailed analysis of your run and catalogue your activity on the Nike+ website at http://tinyurl.com/lcwunr.

As the vast majority of students already have their own iPods, it is quite cost effective and easy to introduce the Nike + system into a school environment, allowing for students to compete to accumulate the most kilometres. For a really detailed overview of the equipment needed and the way in which it can be used within a school, I urge you to check out how Epsom Primary School managed to do so at http://tinyurl.com/352nzut.

Seek and Spell

Although I haven’t used this with my students, it is something that would be a great addition to any English or remedial class, to encourage students to improve their spelling in a practical sense. The Seek ‘n Spell application uses your iPhone GPS to create a new type of game. The object is to gather virtual letters and create words. Seek ‘n Spell
is played in parks and open, outdoor spaces and is a really strenuous physical and mental challenge to create as many words as you can within the designated time. Add a friend to the equation and your physical spelling contest becomes all the more interesting.

With GPS capabilities appearing within most devices, it is quite reasonable to think that within the next couple of years all of the above mentioned applications and activities would be 100% accessible to our students. This opens up the door to educators to use technology in a way that adds to the physical activity dimension and allows for the less engaged students to actively seek involvement in a less traditional physical education setting.

With countless research showing that heading outside can greatly enhance your memory and concentration as well as provide your brain with fresh oxygen, it is therefore an absolute necessity that we ensure this happens every day. If these tools allow for even more time to be spent outside, as opposed to working within a standard classroom setting, then they are absolutely worth all teachers considering their potential power.

So, keep it moving and get active with GPS.
**Digital Video in Physical Education**

One of my favourite memories from my junior sporting years is a video of me running a 400m at the Victorian Championships. To this very day I still find myself watching it when I feel like taking a trip down memory lane. However, the purpose of filming the race all those years ago wasn’t based on fuelling any future nostalgia, but giving me an avenue to see my race in a completely different light. Back then my understanding of technique and tactics was only limited, but the one thing that was certain was the incredibly motivating effect video has on sporting performance.

With this positive experience in mind, it is an absolute must that I aim to incorporate the wonders of digital video within my Physical Education classes. For most sports coaches and educators, video is not a completely foreign tool. It has indeed been used and promoted for years by elite sporting teams and organisations like the Australian Institute of Sport. However, in recent years, the ability to mix digital video with other media and share it via the internet has opened up a whole new area of possibilities.

Filming and Sharing Digital Video

1) **YouTube.com** – The digital age has brought about a host of new video sharing options, with none of them easier than YouTube. As you would be aware, there is really no greater catalogue of sporting videos than those that can be found on YouTube. Are you teaching a new sport in one of your classes? Then why not mix in a clip from YouTube to help you demonstrate a sporting action. In today’s day, this is super simple to actually achieve. Simply access the video via a mobile phone or take a laptop and maybe even a projector to the sports hall and have people watch and re-watch videos over and over again to ensure they fully understand the sporting skill.

How about approaching it from the other side and rather than consuming content from YouTube, contribute content to the community by uploading your own videos? Have your students teach a sport or physical skill, upload it, then sit back and watch as people from around the world watch and comment on the video. You could even pair up with a school from overseas and seek to teach them some of the basic skills within one of our own Australian sports. If you are unable to access YouTube, then try some of the other alternatives [http://tinyurl.com/lpez4r](http://tinyurl.com/lpez4r).

2) **TubeChop.com** – With the absolute plethora of videos on YouTube, it is a must for Physical Education teachers. The great thing about TubeChop is that it allows
teachers to select a certain section from a YouTube video and share only that section. Great way to filter the nonsense on YouTube.

3) **Flip Video Camera** – The first and most essential tool for a Physical Education teacher. No other camera is as simple to record video footage, making it a snap to film and analyse sporting techniques and game play. With a few of these very low cost cameras in your classroom, you can easily review footage and begin to use it as a means of practical assessment.

4) **Posterous.com** – Want to store your digital video? Then try Posterous, the simplest way to make an online digital portfolio of your sporting performance that can be reviewed and analysed over time. Simply film or record the desired skill and send the video file within an email to post@posterous.com. This will turn your email into its very own unique website, where the video can be watched online. Have a new video or document you would like to include? Simply send a new email to post@posterous.com. By far the easiest, no fuss way to put anything you like online.

**Video Analysis and Assessment**

The next step in using Digital Video in your sports classes is to incorporate some form of video analysis. This can be done as easily as reviewing content you have recorded with a Flip Video camera on the spot or more extensively with software packages.

1) By using a step-by-step technique checklist, students can actively review their sporting performance to determine what elements of a technique are still yet noticeable. This can then be coupled with a peer or teacher evaluation as a valuable assessment piece.

2) This can be taken a step further by introducing some simple to use Video Analysis Software such as Time Warp 4. Using the software and a camcorder connected to a laptop, you are able to review your movement immediately after it has been performed. Once the required time delay is set, the operation is hands-free and provides instant visual feedback. As you can imagine, the ability to instantly review your action after a set period of time is an incredibly powerful tool within any Physical Education class.

I have tried this on a number of occasions with excellent results found across all sports and activities it has been used. More recently I connected the laptop to a
projector and had it running a 5-second delay within a Volleyball Match. The students were then able to glance over without leaving the court and observe any errors that were made. It also allowed for great discussion of team tactics and a variety of teachable moments that occurred throughout the session. One of the most pleasing aspects of the entire process has been the improved levels of student motivation as a result of the ability to review any aspect of their performance, especially the moments they are successful. This motivation carried into all forms and I am asked almost weekly when our next instant replay session will be. For a video demonstration of the activity, view the video at http://tinyurl.com/35aole8.

3) If you’re after a more advanced video analysis, then you can’t look past”The Zone” by Silicon Coach. The Zone allows teachers and sports coaches the ability to analyse videos in a completely online web-based/no software required environment. From your first experience, you will immediately be able to notice the benefits of being able to review your videos within”The Zone”. Coaches, referees, biomechanics, mentors and athletes all benefit from being in The Zone. The Zone’s key benefit is that it improves performance by providing a set of tools for sharing knowledge and expertise about skilled movement. It also features an extensive library of lesson material that can be used to teach anything from Biomechanics to the perfect golf swing.

In a recent classroom activity, a group of year 10 students recorded themselves completing a serve in badminton and then compared it to an elite performer to determine any gaps within their technique. The software, which was learnt within 5 minutes, allowed them to advance the video frame by frame. It also allowed them to draw on the video to determine their range of motion within the serve and also measure the angle of their elbow during contact.

One of the benefits of using online video analysis software such as The Zone is that you will always have the most current and up-to-date versions of the software, as there is nothing to download and install. It also means that you can use it wherever there is an active internet connection. Sounds good? Go ahead and try The Zone in the demo site at http://thezone.siliconcoach.com/TryAsGuest.htm.

Digital Video as Motivation

One of the simplest and most powerful ways you can use Digital Video within your classroom is to create a dedicated”VIDEO Team”. The job of the video team on a lesson by lesson rotation is to film and record physical activity within practical sessions. The video team are then responsible for editing and compiling the footage into a two-minute montage that can be played back in the following week. This simple idea has proven to be a real
winner with the younger groups, as they seek to produce something that everyone will be able to enjoy together. This footage can then be shared amongst the class as a way of remembering the fun that can be had within Physical Education classes.

Even though Video itself isn’t an entirely new concept in Physical Education, it has however taken a variety of new forms. Students are no longer bound to sharing their performances only within their own classroom, but can now also share them with the wider world. One thing is for sure, the use of video will motivate your students to want to improve and after all, isn’t that what it’s all about?
Apps to Get You Moving

Sitting on a train recently, I was blown away by the amount of people tinkering with their mobile phones. It was clear that people were using them for all sorts of things, such as reading the news, listening to music, playing games and even online banking. It’s hard as a Physical Education teacher not to worry about the overuse of these devices and the time they take away from our interactions with each other and the outside world.

However, some of you may not realise that these tiny little devices known as Smartphones can do a lot more than dial a pizza. So if you are considering making a Smartphone purchase in the near future, then here are a few “apps” to improve your health and wellbeing and get you moving.

Firstly, you may have heard the term “app” thrown around in recent times and wondered what exactly it is. Well, in simple terms an app is a small piece of software that is designed to be used on Smartphones such as Androids or iPhones. With hundreds of thousands of apps available, you are bound to find something you can use in your everyday life. The good thing about apps is they are not just bound for use on iPhones. Today they can be used on iPod Touchs and iPads opening up an even bigger market of potential users. Here is my top 12

1) **Couch to 5km** – This nifty little app will have even the hardiest couch potatoes active. Simply run the program and you will be guided through an interval training program that seeks to progress you to an eventual continuous 5km run. It even guides you through an appropriate warm up and cool down. Use it in your health classes to discuss the many approaches available today to promote physical activity amongst the community. You could then report on the strengths and weaknesses of methods such as these. Available here [http://tinyurl.com/35r7n46](http://tinyurl.com/35r7n46)

2) **RunKeeper** – This is one of my all time favourite applications. Simply go for a run/walk/ride/jog/ski while running the program and your activity will be recorded. As most modern phones include GPS, RunKeeper will present you with a plethora of statistics from the activity, including total distance, speed, elevation and even a Google map tracking your activity in real time. It also combines powerful voiceovers to provide you with current real-time feedback on your activity. Use the RunKeeper app during the Cooper 12-minute run fitness test, to share distance, speed and intensity and allow for discussion of the interplay of energy systems during exercise. Available here [http://tinyurl.com/33fyxun](http://tinyurl.com/33fyxun)
3) **Hundred Pushups** – The first in a series of apps designed to improve your core strength. Simply complete the initial test pushup maximum test and the application designs an appropriate training program to guide you to the ultimate goal of 100 pushups. Within a classroom environment use this application to explore fitness components and how they can be trained and developed to improve sports performance. Available here [http://tinyurl.com/2w58g66](http://tinyurl.com/2w58g66)

4) **Yoga Postures** – This unique application brings Yoga into your home. With a collection of basic, advanced and rare Yoga postures, you will be stretching out the corners of your body in ways you never thought possible. Given flexibility is often the ignored fitness component, this application makes it easy to monitor and develop. Available here [http://tinyurl.com/39snxa2](http://tinyurl.com/39snxa2)

5) **Gym Goal ABC** – Gym goal is an exercise database that seeks to allow you to keep track of all of your workouts. It also includes step by step how to animations on over 250 exercises. This application is the perfect tool in a classroom to teach students about exercise concepts such as progressive overload and specificity. Available here [http://tinyurl.com/37dnfht](http://tinyurl.com/37dnfht)

6) **Sleep Cycle Alarm Clock** – Although not specifically designed to get you moving, it is, however, designed to make you wake up feeling refreshed and ready for the day’s activities. The application has you set a wake-up time and then within a half an hour window before that time the application will measure your sleep patterns using the inbuilt motion sensor and wakes you up when you are in your lightest sleep phase. This ensures that you wake feeling alert, rested and relaxed. The theory behind the app is that during our deepest sleep phases we are motionless. Use this application in class as a means of discussing the importance of REM sleep for growth and repair. Available here [http://tinyurl.com/ykhssvs](http://tinyurl.com/ykhssvs)

7) **Pedometer** – Run, walk, or jog your way to better health! The Pedometer application will help you lose weight and stay healthy, as it tracks your steps, distance travelled, and calories burned – all conveniently from your iPhone or iPod touch. Pedometers can be used to measure the physical activity of your student cohort. Take it the next step and compare the results with staff members and you can have a rich discussion on the most active subjects and how occupations have differing physical demands. Available here [http://tinyurl.com/3xxwvds](http://tinyurl.com/3xxwvds)

8) **Beep Test** – You have all probably completed this classic aerobic fitness test in your time during school or sports training. Basically, the application allows you to complete your beep test and then records and plots your changes over time. A fantastic way to motivate yourself to work towards continual improvement. Use this in your classroom as a pre and post test. Students can then measure the change in
their V02 max levels and how training affects these. Available here http://tinyurl.com/34dsk7w

9) **Geocaching** – Geocaching, which is actually pronounced geo-cashing, is a worldwide game of hiding and seeking treasure. A geocacher can place a geocache anywhere in the world, pinpoint its location using GPS technology and then share the geocache’s existence and location online. Anyone with a GPS device can then try to locate the geocache. Using either an iPhone or an Android phone, you can search for and participate in the global treasure hunt. Geocaching will have you running around and exercising without realising it. There are currently over 1.1 million active caches in existence across 100 countries. Have your students race to find a series of geocaches around your town that require them to work as a team to solve puzzles in order to receive the next geocache co-ordinate. Available here http://tinyurl.com/2ueww2r

10) **Calorie Counter Pro** – Use this application to keep your food intake in check. The application contains a database of over 300,000 foods, making it possible to monitor everything you eat. Have your students use it to audit the school canteen and come up with a selection of healthy alternatives. Available here http://tinyurl.com/2uw8w3x

11) **MotionTraxx** – Use this groovy application to enhance your workout. MotionTraxx provides workout music inspired to boost your energy, add fun, and help pace your movements. The non-stop workout mixes are designed for running, cycling, cardio, power walking, and interval training. Could be easily used within discussions of extrinsic factors that assist in motivation for physical activity. Available here http://tinyurl.com/36k4m6e

12) **Golf GPS** – using this application you can easily keep track of the shots you play in golf. Simply take your shot and the GPS will inform you of the distance to the pin and just how far your last shot was. With most of Australians courses catalogued your game should improve. Available here http://tinyurl.com/3ysune8

If you’re considering purchasing an iPhone or similar Smartphone but are worried that it will get in the way of your exercise regime, then maybe you should make the jump and include some of the above within your workouts. With the growth of Smartphones reaching exponential figures, it is an absolute guarantee that all mobile phones in the next few years will be considered Smartphones. You can also bet that students of the future will be also able to utilise these applications within their learning. This opens up the door to an entirely new way of keeping physically active. However, even with the opportunities that they present, let’s just hope that we still have numerous times when we turn our devices off, leave them at home and enjoy nothing but the fresh air.
The SMS Mailing List

With summer fast approaching here in Australia, the UV index is rapidly advancing into the extreme zones. This means that students, now more than ever, need to ensure that they are properly hydrated and wear adequate sun protection. With this in mind, I recently had students from Boort Secondary College subscribe to a SMS mailing list. The purpose of the mailing list is to send a couple of SMS messages throughout the week, aimed at raising awareness towards some of the major preventable health issues.

This week, students received messages like the ones below.

To make this possible in your school, try one of the following excellent bulk message SMS services, such as [www.smsexpress.com.au](http://www.smsexpress.com.au) or [www.smsglobal.com](http://www.smsglobal.com)
Simple Surveys in Physical Education

This week in my senior Physical Education class, the students designed a survey that sought to gauge the reasons why adolescents participated within Physical Activity. The survey contained questions surrounding all aspects of being active. In order to make this all possible, the students designed their survey using www.obsurvey.com, and within minutes they had a survey that was ready for the web.

The most exciting aspect of Obsurvey was the ability to share to their personal Facebook accounts. With this in mind, the students were really keen to draw on the connections they have online to complete their surveys. From my point of view, the plus side of using this simple service was the fact that on return to class the students were able to look through an extensive series of responses that informed a major assessment piece.

Never underestimate the power of a simple survey for collecting responses from the wider world.

Other alternatives include

http://www.surveymonkey.com
http://www.surveygizmo.com/
http://www.google.com/docs
Graphing on the Go

In an activity similar to one I completed last year, my year 11 Physical Education students were completing a Laboratory activity that involved them recording their heart rates and blood pressure during varying exercise intensities. The very nature of this activity meant that we had to leave the standard classroom and venture into the school gymnasium.

With this in mind, I wanted to ensure that the data that was being sourced within the session would be instantly displayed for the students to analyse. To make this possible, I set up a Google Doc Spreadsheet on my computer the previous day and then accessed this spreadsheet via my iPhone while we were in the gymnasium. As students received information on their change in heart rates and blood pressure, I added this to the spreadsheet.

As this was happening, the data was also being displayed in a graph back in our classroom about 100m away. On completion of the laboratory, we returned to a beautifully presented graph that detailed all of the students’ changes in heart rate and blood pressure.

The instant analysis and discussion that followed was indeed highly valuable and deepened their overall understanding of the heart’s responses to exercise.
Two Essential iPhone Apps for Phys Ed Teachers

If you don’t already have an iPhone and you are a teacher, then these are nearly reason enough to go out and get one. Although they are relatively simple, they are two of the essential apps I use all the time during my classes.

The first is the Attendance App – This is essential in that as Phys Ed teacher I spend most of my time teaching outside or within the gymnasium. This means that the last thing I want to do is carry around a teacher’s chronicle to record student attendance. This app makes it super easy to record my students’ attendance quickly and easily, no matter where I am. The added bonus is the extensive reports that you can produce on overall or individual student attendance.

The second is the Gradepad App – This lets me assess student performance within sessions quickly and easily. What you do is add your students and then assign assessments to those students. The app lets you customise the assessment to suit your own needs. As I use it within my sports classes, I use it to assess things such as teamwork and other interpersonal skills. With the student and assessment selected you can simply adjust the sliding rubric to determine your overall result (see below). Simply a fantastic way to assess your students on the go.
QR Codes?

As my students are now very familiar with QR codes, I have decided to integrate a very simple addition to my worksheets. To put it simply, I have started inserting QR codes. Basically, the QR code can be scanned to reveal extra information about the worksheet. For example, a QR code could easily link to hidden text, a video on YouTube, an automated SMS message, audio, pictures or any website you deem relevant to the worksheet. The best thing about it is the process of creating QR codes is very very simple, making it all too easy to make your worksheets much more than a piece of paper. Here is how you do it.

When creating a worksheet, leave a spot for a QR Code.

Visit a QR code generating website such as http://qrcode.kaywa.com/.

Enter your desired information into the template and select “generate”.

The QR code will quickly be generated and you can then copy and paste the code onto your worksheets.

At this point, it is up to the students to scan the code, which will then link to the content you have entered into the QR code, which could indeed be anything you like. No matter what you decided to include within the QR code, this idea makes it all too easy for you to extend a worksheet far beyond what is nothing more than a boring piece of paper.
QR Codes? – Part 2

Remember those books where at the end of every page you had the choice to turn to say page 15 or page 35 depending on how you wanted the story to eventuate? Well, for a long time now, I’ve been thinking about how well this idea would work with QR codes in the place of page numbers. Here’s what I want to do.

Go to a QR code generator website such as http://zxing.appspot.com/generator/.

Select the “text” option to bring up the template to create a QR code that contains text and select the barcode size as “Large”.

Write a piece of your story or copy and paste from a document.

At the end of the section leave an option to “scan code 2 to …” or “scan code 3 to …”

Hit the “Generate” button to create a QR code that contains the text you entered in the template.

The reader then scans the CODE 1, to read the start of the story and then has the choice to scan different codes depending on how they would like the story to turn out. (See the example below.)

You hear a tapping on your door, and then your Aunt Petunia says in a shrill voice, “Up! Up! Get up! Right now!”

It’s morning. You are Harry Potter. You were left at the Dursley’s doorstep and Aunt Petunia is a Dursley. The Dursleys told you that your parents, Lily and James Potter, died in a car crash. Your bedroom is the cupboard under the stairs. The Dursleys hate you....

Scan Code 2 to Try to remember the dream you had.

Scan Code 3 to Get up

Once you have generated all of the codes you need you could then print them out and stick them onto an A4 piece of paper with the appropriate number written above. For example,
QR code 1 would be stuck onto a piece of paper marked with the number 1. You would then scatter the codes throughout the room or around the school and give kids a map that outlined the general location of all the codes.

They would then start scanning their codes, starting with code 1 reading the story and then “choosing their own adventure”, which would lead them to a new code and the next part of the story. This would continue until they complete the entire short story and return back to the original code.

Now I must admit an activity like this may take some time to set up, however the fact that it is very simple to create a QR code using the generator means students could easily write their own stories using this method. In my opinion, this would be well worth the effort and prove to be a highly engaging way to read and write a story. What do you think?
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