The influx of technology in the lives of the current “iGeneration” presents a unique set of learning characteristics and challenges for educators.

Effective uses of ICT in HPE

**Video Analysis**

Using videos provides many opportunities for enhancing student learning. 65% of all learning in Physical Education is through visualization. The advent of digital video cameras and personal handheld devices has simplified the collection of data. Videos can be used in multimedia presentations or as immediate delayed replay to provide students with a better understanding of the importance of breaking skills into components and the technique of performing a skill.

**How can you incorporate ICT in your classroom?**

But where do you even begin? How does it all work? You have always taught PE the same way, the old fashion way, and now you want to include some technology in your classroom?

Let’s all take a step back and review the different ways ICT can be incorporated into the HPE classroom.

**One quick rule to remember,** teachers in effective ICT programs “select, master, and integrate” one technology at a time! Teachers should select a technology, plan for the acquisition of the technology, become comfortable with it, and then integrate it into their classroom. Students are more engaged and motivated when such ICT program is executed effectively.

**Monthly iApps**

**Week 1**

**RunTracker**

A fitness app that can transform the iPod / iPhone into a makeshift state of the art GPS device.

**Week 2**

**iYoga+**

Thanks to @ashleamills this app is perfect for wet weather PE lesson. Just hook up your iPad with an Apple TV,

**Week 3**

**Typesetter**

An easy to use app which allows you to add awesome looking text to photos. Great for students to present their idea without adding too much text!

**Week 4**

**aTypo Picture**

Another presentation / Creation app, you need to try this out for yourself, way cool!! Possibility endless...
Video technology can help teachers monitor student progress toward motor skill development, provide opportunities to give more precise feedback and create ideal situations for assessment of student learning. It also creates highly motivated students and increases the pace of learning. Video analysis improves student learning in two ways: firstly in reviewing a video replay, students are able to see and analyse their own action or technique, as opposed to getting feedback from the teacher. Secondly, the concept of open space in a game scenario could also be taught using video analysis. The use of video replay in a game helps student locate open space by identifying where the opponents and teammates are. The iPad, when used in a dance class, allows mobile on-the-spot demonstration using videos. It also has the ability to finely control video playback and display it for small groups of students.

It is suggested that carefully structured lessons are required when using video technology in order to minimise reduction in the actual physical activity in lessons. It is also the teacher’s responsibility to understand issues involved in using images and videos in PE, which could include: permissions, access and security of clips and optimum filming settings.

Apple App Store

By 2012, half of the U.S. population will be using smartphones. In the Apple App Store, there are over 30,000 educational apps, many of which are free. The use of smartphone apps can promote health and physical activity in and out of the classroom.

One example of how apps could be effectively integrated into PE is through the Sport Education in Physical Education Program (SEPEP). SEPEP program are interactive and follows a student focussed learning approach. It teaches students about the numerous roles and benefits of different sports in both a practical and theoretical sense. This program is designed around being inclusive of everyone, but at the same time developing student learning. In an app integrated SEPEP program, the Warm-up leader uses ‘Fitness Class’ or ‘StretchingE’ app for suggested activities; The Scorer / Draws Organise uses ‘PocketScore Board’ or ‘iTournament Lite’ to keep track of the unit; The Umpire uses ‘Whistle!’, Film Crew uses ‘Camera’, and the Publicity Officer uses ‘Twitter’ to broadcast scores and updates.

It is important to ensure that apps used are relevant and can enhance student learning. There are a variety of ways in the evaluation of educational apps. The app's ability to customize content or settings and how the app encourages the use of higher order thinking skills are essential. It is also important to ensure the app is appropriate to the purpose and students’ needs, and that the teacher can use it in multiple lessons.

Monitoring Devices

Monitoring devices are valuable tools for enhancing instruction and providing objective physical activity measurement in PE. These devices have been found to increase activity based upon their implementation and can provide a motivation for students during exercise sessions. A study by McManus found using heart-rate monitors in children resulted in a 24% increase in physical activity. These devices are generally not expensive and can help students learn about the relationship between bodily functions, movement patters, exercise, and success in physical activities. With the advancement of smartphones, many alternatives of the devices (timing, positioning, measuring, and heart rate monitoring) can be found in the form of an App on a smartphone.
**Video Games**

In average American household, 88% of children have a video game console. It has been identified as one of the causes of decreased physical activity and increased sedentary behaviour. A modern form of technology, active gaming, has emerged that allows participants to engage in gaming but also requires them to be physically active. This new genre of physical activity has been created by the development in gaming technologies such as the Nintendo Wii, and Xbox Connect. It is implied that active gaming motivates children to be more active because the activities are fun and enjoyable. The American Heart Association has also announced their support in stating “active gaming has the potential to positively benefit participants.”

A common problem when dealing with the use of video games in PE is the teacher having only one gaming console and students must wait in line to play. For example, in Dance Dance Revolution, students can learn dance movements from the game, however only two dance pads could be connected to a single console at a time. An education-friendly version allow up to 42 dance pads to be connected but the cost is immense. A possible solution could be for teachers to use practice pads and rotate students between playing the game and practicing on the practice pads. Another possible solution is to use a station & circuit format where the technology is one station of the circuit. This allows all students to utilise the technology without reducing activity levels or having a large amount of wait time.

**Blog / Wiki**

Blogs and Wikis can be used in Physical Education, where the subject is not heavily based on written discourse, as a mean for students to reflect on and showcase their performances. Studies have found participation in educational blogging activities have a positive impact on students’ course grades.

Their acquisition of knowledge was higher and their self-efficacy in ICT also improved. The usage of these Web 2.0 technologies enable the creation of web content by the user as well as the ability for content sharing, collaboration, and reflection amongst users. Peers and the teacher could also post comments. Students were found to be positive towards the use of such technologies and felt they receive a higher quality learning experience when ICT was integrated in their class.

**Educational Software**

Educational software is designed to help teachers handle every day tasks more efficiently and professionally. It includes data entry, assessment recording, creating presentation, and lesson planning. Teachers can use Prezi (http://prezi.com/) to create presentations; the ‘Easy Attendance’ app to record attendance and progress of students; and creating an Edmodo (http://www.edmodo.com/) page to socially connect the class, share content, and access work.

It is important when using technology for administrative tasks, teachers spend time preparing tools in advance rather than setting up a format to record data as students wait. By using technology, the amount of time spends processing data is greatly reduced.

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References


