

# Chapter 6

## Fitness Revisited: Mobile Learning in Physical Education

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### ABSTRACT

*Technology can be seen everywhere in sports. From the shoes that students wear to the sports equipment used for physical activity. Sports organizations nowadays spend thousands in promoting latest technologies to enhance sports performance. Technology is changing the way that athletes train: they now have the chance to improve their technique and their skills by using mobile applications and gadgets that help them boost their fitness levels and take one's workout to the next level. This chapter describes ways that students in the ACS Athens i<sup>2</sup>Flex fitness class explore physical activity by using the power of new and emerging technologies, and mobile learning, while at the same time eliminating concerns about giving up activity time for some kind of online alternative.*

### INTRODUCTION

Technology is everywhere. If one considers himself/herself as being an “old fashioned” physical education teacher and still teaches in the way it was taught in one's high school and university years, then she is most probably facing a huge challenge: handling 21<sup>st</sup> century students who are considered *digital natives* (Prensky, 2001) since they have been interacting with technology for their entire lives.

When the idea came up of working on an Action Research proposal for an i<sup>2</sup>Flex fitness class to be implemented for 11<sup>th</sup> and 12<sup>th</sup> grade students at ACS Athens, at first, there was some hesitation on my behalf to create such a course. The reason was obvious: there is a strong belief that much of the decline in students' physical activity is due to the extensive use of technology that is replacing old-fashioned teaching in physical education and as a result, there is an increased sedentary lifestyle. Many times the discussion about what technologies can be used in physical education, was usually followed by a concern about giving up activity time for some kind of online alternative.

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Therefore, a challenging task was at hand: to create a program in which students would use current technologies to improve the quality of their physical education classes and with proper guidance, explore physical activity options by using the power of technologies, without giving up activity time.

The i<sup>2</sup>Flex methodology would be initially implemented in a so-called “advanced” Physical Education class for 11<sup>th</sup> and 12<sup>th</sup> graders, which would be directed by three essential goals for each student:

1. To attain an individualized personal fitness level;
2. To use technology to design and implement a personal fitness program based on scientific principles;
3. To develop proficiency in selected motor skill activities for personal satisfaction and continued activity commitment

In the search for finding the appropriate types of technology to be used in the classes, I did extensive research and evaluation of the existing technological innovations and applications on the market in order to maximize student participation and minimize, if not completely eliminate, the amount of time spent on administrative work. This shift from traditional (old fashioned) physical education methodology to a more up-to-date and diverse way of delivering this subject, with user-generated contents and social networking, would also require a complete shift in the teaching mindset: from teacher-centered to student-centered teaching and individualized learning, which goes “hand in hand” with our school’s motto “*Empowering individuals to transform the world as architects of their own learning*” (ACS Athens Website, 2015).

This chapter will address the following questions:

- Why use technology in physical education?
- What are the benefits for students?
- What technology is needed?
- How do students value the new physical education experience?
- What are the outcomes of the Action Research/i<sup>2</sup>Flex intervention?

## **DIGITAL TECHNOLOGIES IN PHYSICAL EDUCATION**

During the past 10 years in the international educational professional scene there have been limited professional development opportunities specifically for the use of technology in physical education. Only recently have conferences taken place that provided some innovative approaches using technology for physical activity and the teaching of physical education. It is because of these limitations that my research on different technologies began, in addition to the implementation of the innovative i<sup>2</sup>Flex teaching model developed and applied school-wide at ACS Athens (Avgerinou, Gialamas, & Tsoukia, 2014).

According to the standards set by the National Association for Sport and Physical Education (NASPE/Shape America, 2014) there are certain technology elements of support for physical education programs at all schools that are aligned with the NASPE K-12 standards which should be used on a regular and continuing basis of technology integration in Physical Education settings. NASPE has compiled a list of technological devices for use within Physical Education and Sport. For high schools, these include handheld and desktop computers, video/digital cameras, VCR/DVD players, sound systems, heart rate monitors, pedometers, body composition analyzers and global positioning devices, software (Fitness Gram and Activity Gram) and web application which provide new opportunities for PE teachers and

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