

# Chapter 24

## Physical Education 2.0

**Rolf Kretschmann**  
*University of Stuttgart, Germany*

### ABSTRACT

*Thinking of subjects at school and integrating digital media and technology, one might not think of looking at physical education first. But the pedagogical potentials of digital media integrated in physical education can easily be outlined. Therefore, the concept of Physical Education 2.0 is developed that posits a framework for designing pedagogical scenarios after informing about the old-fashioned Physical Education 1.0, technical devices, software and internet offers, and categorizing pedagogical scenarios by literature review. The imagination of future pedagogical scenarios leads to a deeper awareness of possible physical education developments. Moreover, implementation premises for Physical Education 2.0 in different areas are displayed. Furthermore, future research directions in this special research field with almost tabula rasa character are given. Shortly, the aim of the paper is to give an introduction and overview of the wide scope of digital media within physical education.*

### INTRODUCTION

Scanning through subjects at school, while searching for fruitful and sensible application and implementation of digital media, one might not turn to look at physical education at first pick. Physical education is usually understood as a school subject that contains exercise content and takes place in the gymnasium, instructed by a former athlete

or trainer from the field of sports, the so called physical education teacher. Students have to improve their fitness skills and learn various techniques of certain sports. The learning process is connected with sweat in the truest sense of the word. Due to this common connotation associated with human movement and physical activity, and actually doing sports and exercise, the notion of a pedagogical benefit of digital media (or media at all) comes not into mind at first sight. Hence, the human body is seen as main media in physical education. Media

DOI: 10.4018/978-1-61520-678-0.ch024

and informational technologies are not connected with physical education in the common sense. Two strands of argumentation can be identified to be the reason of the missing interlinking.

Media and informational technologies appear as a threat to children and adolescents in mass media. “Fat, stupid and lazy” kids were proclaimed as the most probable product of media consumption. Several surveys back up this discussion in the mass media (e.g. Common Sense Media, 2008; Marshall, Biddle, Gorely, Cameron, & Murdey, 2004; Mössle, Kleimann, & Rehbein, 2007, 2009). Therefore, media and technology in general are not connected to a healthy life style and a huge amount of physical activity either. Physical education seems to serve as an opposite construct against media consumption, wherein students can compensate their lack of physical activity of their daily life (Morgan, Beighle, & Pangrazi, 2007). Though media is seen to somehow block the intention of bringing students back to physical activity, physical education should focus on exercise and movement itself, being the subject in school predestined for this intention. In this argument, media within physical education is held as a foreign object, which is contrary to the physical activity tasks and attitude. This is the first reason.

The second reason lies in the perceived importance of physical education in comparison to other school subjects. Physical education is not a major subject (Lai & Wong, 2006). Throughout the big international comparative studies concerning educational outcomes, physical education is not considered. Neither the well known and famous PISA (Program for International Student Assessment) (Organisation for Economic Co-Operation and Development: OECD, 2006a, 2006b) nor PIRLS (Progress in International Reading Literacy Study) (Mullis, Martin, Kennedy, & Foy, 2007) and TIMSS (Trends in Mathematics and Science Study) (Mullis, Martin, Gonzales, & Chrostowski, 2004a; Mullis et al., 2004b) put physical education into focus. Similar to art or

music, physical education belongs to the minor subjects at school (Lai & Wong, 2006). In addition, media studies in the field of school research have not taken any interest in physical education at all. For instance, the international study SITES (Second Informational Technology in Education Study) (Law, Pelgrum, & Plomp, 2008) is more concerned with school subjects from the domain of natural sciences, mathematics, and language acquisition. Due to the missing presence in the research field of ICT (Information and Communication Technology), and therefore not being subject of research in important international studies, physical education consequently lacks of importance and reputation, when it comes to terms of media use and implementation.

Nonetheless, physical education immanently offers a lot of possibilities for the use of digital media, just as well as other school subjects do. Physical education has the task to develop 21st century skills like media and computer literacy (Buckingham, 2003; Mohnsen, 1999), as each school subject intends. Though integrating technology into schools is important for the development of those skills, technology has to be integrated into physical education as well (Mitchell, McKethan, & Mohnsen, 2004). Thus, the great question arises, how technology can be embedded into physical education. The forthcoming answer may hopefully produce a notion of a sensible pedagogical connection between the two worlds of sports and technology usage within school.

For the revealing of the pedagogical potentials of the use of digital media in physical education, the first step is to describe old-fashioned and obsolete physical education, which may be called Physical Education 1.0. The second step is to enlighten the concept of Physical Education 2.0 by giving a brief overview of useful technical devices, software and internet offers, which can easily be embedded in pedagogically sensible scenarios by the physical educator. Therefore, exemplary and categorical examples of these pedagogical scenarios are posited, including a framework for a didactical

21 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage:

[www.igi-global.com/chapter/physical-education/40747](http://www.igi-global.com/chapter/physical-education/40747)

## Related Content

---

### Exploring Future Seamless Learning Research Strands for Massive Open Online Courses

Inge de Waard, Nilgun Ozdamar Keskin and Apostolos Koutropoulos (2014). *Handbook of Research on Emerging Priorities and Trends in Distance Education: Communication, Pedagogy, and Technology* (pp. 201-216).

[www.irma-international.org/chapter/exploring-future-seamless-learning-research-strands-for-massive-open-online-courses/103602](http://www.irma-international.org/chapter/exploring-future-seamless-learning-research-strands-for-massive-open-online-courses/103602)

### Student Retention in Online Education

Mac Adkins and Wanda B. Nitsch (2005). *Encyclopedia of Distance Learning* (pp. 1680-1686).

[www.irma-international.org/chapter/student-retention-online-education/12333](http://www.irma-international.org/chapter/student-retention-online-education/12333)

### System Conversion: Teaching vs. Reality.

Efrem G. Mallach (2008). *Online and Distance Learning: Concepts, Methodologies, Tools, and Applications* (pp. 329-337).

[www.irma-international.org/chapter/system-conversion-teaching-reality/27396](http://www.irma-international.org/chapter/system-conversion-teaching-reality/27396)

### A Brief History of Networked Classrooms: Effects, Cases, Pedagogy, and Implications

Louis Abrahamson (2008). *Online and Distance Learning: Concepts, Methodologies, Tools, and Applications* (pp. 78-100).

[www.irma-international.org/chapter/brief-history-networked-classrooms/27374](http://www.irma-international.org/chapter/brief-history-networked-classrooms/27374)

### Developing a 3D Game Design Authoring Package to Assist Students' Visualization Process in Design Thinking

Ming-Shiou Kuo and Tsung-Yen Chuang (2013). *International Journal of Distance Education Technologies* (pp. 1-16).

[www.irma-international.org/article/developing-a-3d-game-design-authoring-package-to-assist-students-visualization-process-in-design-thinking/102812](http://www.irma-international.org/article/developing-a-3d-game-design-authoring-package-to-assist-students-visualization-process-in-design-thinking/102812)