Online Physical Education Programs

Summary

The world of online physical education (OLPE) is a many splintered thing. There are many approaches to OLPE with regard to curriculum. Most OLPE programs concentrate on more of a health related fitness (HRF) model. OLPE programs have grown just as rapidly as distance learning itself. Online learning and hybrid or blended programs can be a viable alternative to face to face classes, especially in situations where it is needed.

In the annotated bibliographies below several themes about online learning aside from the fact it can be cost effective and convenient emerged. First, it seems that online learning or distance learning and traditional education do not differ with regard to student achievement outcomes. Second, the perceptions and attitudes from inservice teachers or physical education teacher educators about online physical education is generally very negative. Third, unlike teachers students seem to enjoy the freedom and flexibility that OLPE programs offer. Fourth, the psychomotor and affective domains are more difficult to incorporate into OLPE programs. Fifth, there seems to be a willingness to try the online programs by school districts and college/universities that I did not expect. Let’s face it change is difficult when it comes to education. Sixth, technology’s lowering cost has spurred renewed interest in technology based
programs. Last, the Florida Virtual School has become the dominant system/program in online learning at the K-12 level with no signs of slowing.

There are still some negative issues that need to be dealt with in OLPE programs such as; the low amount of student to student interaction, the lack of accountability, the poor social setting it provides, and the research base is not strong enough yet to make any significant changes based on said research. I foresee the online programs only expanding and plan to concentrate my research in the technology side of physical education to include online programs.

Annotated Bibliographies


The author presents an approach aimed at combating sedentary activity using computer games. The author proposes a new game design that leverages user engagement to generate out of game motivation to perform physical activity while playing. This is a similar concept as some of the popular exercise games seen on the major gaming consoles. The participants gain virtual game rewards in return for real physical activity performed. The authors use a game called Neverball which they adapted for use in the study. Findings from (n=180) participants show that the participants performed more physical activity, decreased the amount of sedentary playing time, and did not report a decrease in perceived enjoyment of playing the activity motivating version of Neverball.
The authors discussed practices in K-12 online learning that are supported by practitioner experience and by research over the past 15 years. Some of the issues addressed were the current landscape of K-12 online learning and how we know it is effective, what works in online elementary school classrooms, course design, language literacy learning, mathematics learning, social science learning, related arts learning, teaching exceptional learners, discussion, and professional development of teachers. The authors then discuss specific disciplines and how they are affected by online learning. Strategies for teaching physical education online are examined. The authors admit the difficulty in this discipline with both content and accountability. The authors' key concern is supporting and improving online teaching, learning policy, practice, and improving the quality of online teaching and learning for students online.

The purpose of this study was to determine if there is a difference between distance education and traditional education with regard to the effect they have on student academic achievement. Some of the benefits of distance education such as; increased access to education for students with a wide range of needs, flexibility in the speed and schedule of learning, and greater parental influence on education were discussed. The meta-analysis of 116 effect sizes from 14 web-delivered distance education programs studied between 1999 and 2004 shows that distance education can have the same effect on measures of student academic achievement when compared to traditional instruction. When testing the factors of academic content area, grade level of the students, role of the distance learning program, role of the instructor, length of the program, type of school, frequency of the distance learning experience, pacing of instruction, timing of instruction, instructor preparation and experience in distance education, and the setting of the students none were found to have a significant positive or negative effect.


The purpose of this study was to explore and describe the status of online physical education (OLPE) in the United States. Online learning is changing the educational landscape despite the limited empirical research and conflicting results about its effectiveness to produce student learning. The authors sent surveys to forty-five high school online physical education teachers and thirty-two were completed, producing a 71% response rate. As I would have
expected 75% of the OLPE teachers focused on a fitness curriculum. It was also found that the psychomotor and affective domains were not covered as much as the cognitive domain. Another big issue was that 75% of the OLPE courses did not meet the national guidelines for secondary schools, of 225 min of PE per week. Almost all of the courses offered physical activity only three days per week. Teachers expressed support, hesitation, and even opposition toward online physical education. This study initiates a descriptive database for future research studies regarding online physical education.


This article was a case study of a virtual program called Cyber Junior Secondary which is offered in Canada. The purpose of this study was to explore the participants’ experiences, understandings, and perceptions of their participation in one virtual school program. Interviews were the primary source for most of the data used. Instructors, parents, and students involved with the program were solicited as participants for the interviews. In total 32 interviews took place: 12 with teachers, 13 with students, and 7 with parents. Overall, seven teachers were involved in the virtual school program each year. Economic and political forces influenced decision-making regarding implementation of the virtual school program. Important issues associated with program implementation that teachers identified were increased workload (compared with face-to-face teaching), overwhelmed teachers and students in confronting
change, software and maintenance problems with the computers, and the difficulties of building 
positive working relationships with students and parents. The teachers believed that the program 
benefited the students, the school, and themselves. One of the teachers in the study proposed the 
metaphor for teaching in the virtual school program of “being a first-year teacher.”

School After Two Years of Operation. SRI International.

This article evaluated Virtual High School programs through case studies. Some of the 
concerns about the VHS program were its cost-effectiveness and teacher availability and interest 
beyond the two who are already involved. Keep in mind this article was written in 1999. One of 
the authors main concerns was the lack of student to student interaction. The article presents case 
studies, surveys of participants, teachers learning conference evaluation criteria, Net Course 
Evaluation Board standards, and an expert panel to explain the findings of the evaluation of 
VHSs. Overall the sentiment regarding VHSs were very positive with recommendations for 
continuation.

Grant, B. K. (2010). Feasibility of a Face-to-face Intervention with Online 
Components Aimed at Improving Physical Activity and Self-worth in Women. 
University of Nebraska at Omaha.
The purpose of this study was to determine the feasibility of a face-to-face intervention with online components aimed at improving self worth and physical activity in women. Nine women participated in 13 meetings over 13 weeks, 8 participated in the face-to-face intervention with online components and one participated solely online. Four women (mean age 42.75 years) who participated face-to-face with online components, completed baseline and week 13 questionnaires. From baseline to week 13, objective PA using pedometer steps, and subjective PA using the Godin Leisure Time Physical Activity Questionnaire and Modifiable Activity Questionnaire did not increase significantly. Self-worth, using the SW scale of the Adult Self-Perception Profile did not increase significantly. Body mass index (BMI), decreased from 37.03 at baseline, to 35.83 at week 13, however this was not statistically significant. There was no correlation between PA and use of online components (i.e., blog, audio files, etc.) with the exception of the number of times the newsletter was accessed. Qualitative findings from a satisfaction survey, suggest members enjoyed the social support and the frequency (one hour per week) and duration of the 13 week intervention. Members expressed that the online blog was a resource they liked. Blog themes included: 1) empowerment and making oneself a priority, 2) fear of change, 3) motivation, and 4) changing their mindset about PA. Fit Minded may be feasible because members attended weekly meetings, accessed most website resources, especially the blog, and attended the offered PA Outings. Online components such as blog and chat room should be explored with a larger sample to determine if the internet can play a part in increasing PA and SW in women.

This article gave some startling statistics for the growth of online learning in America. It stated that in 2000, about 45,000 K–12 students took an online course. However, by 2009 that number skyrocketed to more than 3 million K–12 student. The authors described the blended-learning environment, which is where students learn online in an adult-supervised environment at least part of the time. The blended programs are where most of online learnings growth has occurred. The article conveyed an excitement about the transforming potential that online learning has with regard to the American education system. It mentions that online learning can serve as a platform for more specialized learning to occur.


This study was conducted to determine how preservice physical educators feel about their level of competence to integrate technology effectively in their professional careers. Several calls have been made to increase preservice physical education teachers preparedness in the use of technology in recent years. However, only a few grants have focused on helping physical education teacher education programs and K-12 physical education programs in preparing teachers who are tech savvy. Self-assessments were done based on instruments from the International Society of Technology in Education (ISTE) to determine basic computer skill levels
and the student’s ability to integrating technology into their learning, research, and future teaching. A large majority of the preservice teachers rated their level of competence to be minimal. It was obvious by the findings that the preservice teachers felt they were not receiving the training they thought they needed to be successful in integrating technology into their future programs.


There were four separate purposes of this article; (1) discuss the growth of distance education and online courses, (2) delineate the pros and cons of online courses, (3) describe how online health-related fitness (HRF) courses can be used in physical education, and (4) provide some suggestions for developing, implementing, and evaluating online HRF courses. The author looked at the advantages and disadvantages of participating in an online health related fitness high school or college physical education curriculum. The article concentrated on providing meaningful content for students who are normally difficult to reach or have specific situations that make participating in normal physical education a challenge. The author suggested that online courses can be used as a supplement to quality physical education.


This article examined the viability of disseminating internet based physical activity interventions over that of print based. Out of the participants (n=249) the authors looked at the following groups; motivationally tailored Internet (tailored Internet, n = 81), motivationally tailored print (tailored print, n = 86); and 6 researcher-selected Web sites available to the public (standard Internet, n = 82). Participants were assessed at baseline and at 6 and 12 months. Results indicated no significant differences between the 3 groups listed above. Behavior changed similarly for all three of the groups as well. With cost always being an issue the authors focused on the ability to reach more people with less cost by using an internet based protocol.


In this dissertation the author examines physical education in Florida’s Virtual Schools. He mentions that the Shape of the Nation Report (2010) concluded that at least 22 states allow required physical education credits to be earned through online physical education courses. Florida Virtual School’s (FLVS) Personal Fitness course has exploded in popularity and is now used in over 25 states and at least14 countries. This descriptive study explained that while there are large growth rates and projected increased enrollments, there are those among the physical education profession that still question virtual physical education (VPE). It was determined by
the authors that if designed and implemented appropriately, VPE may serve as an alternative appropriate method of instruction and that it can promote relevance and positive attitudes for students. This study explored the characteristics of VPE students (n=19,994) enrolled in FLVS physical education for the school year 2008-2009. Student records and surveys provided for a description of characteristics, demographics, learning preferences, learning experiences, and achievement levels of both completers and noncompleters of VPE. Results for this study provided initial findings with regard to the students of VPE at FLVS and revealed significant differences between completers and noncompleters. This research continued to build the groundwork for this understudied area.


Online physical education is an exciting and attractive, yet untested, alternative method to delivering quality physical education. Many school districts originally developed online education and physical education courses to reach the needs of diverse students. The most commonly provided online physical education courses, often provided by universities, are physical activity electives and/or fitness courses. Like other online courses, the burden of self-organization, self-discipline, and self-responsibility rests with individual students to complete learning tasks and manage time. The following “initial” guidelines are offered to assist secondary school administrators and teachers to determine if online physical education courses are an appropriate instructional alternative. It is important for students to go through an approval process for taking online courses to assure students have successful learning opportunities.
Teachers should have adequate professional development and training specific to online instruction and must be aware of the required time commitment to work in an online environment. The curriculum, and courses, should not only be standards-based, but should be relevant, meaningful, and challenging. Accountability for learning and student motivation are two reasons for assessment. If there are no opportunities for hybrid courses and in-person assessment, alternative assessment should be used. The number of students taking an online physical education course can and does affect the quality of teaching and learning, including the amount/quality of feedback offered by the instructor. Students and teachers will need to adjust to a new schedule and online courses will have different demands when compared to face-to-face teaching. Both school and community facilities should be available for learning. School districts, students, teachers, and parents must share the responsibility of assuring that equipment and technology systems are accessible, working properly, and safe. Course and program evaluation are critical for the development, validity, and relevance of the online learning. Online physical education courses should serve and be available for students with special needs including disabilities and language barriers.


While reading the title to this article one would not normally think of physical education, but there are situations where physical education needs to be provided to those who are diverse
enough that PE in the school setting is not possible as well as situations in the school setting where there are barriers. This qualitative study was based on a series of focus group meetings, 15 students with mobility limitations (9-15 years) and 12 parents identified four categories of barriers at their schools: (a) the physical environment (e.g., narrow doorways, ramps); (b) intentional attitudinal barriers (e.g., isolation, bullying); (c) unintentional attitudinal barriers (e.g., lack of knowledge, understanding, or awareness); and (d) physical limitations (e.g., difficulty with manual dexterity). Recommendations for promoting accessibility and full participation are provided and discussed in relation to inclusive education efforts. Some of these were pre-emptive school design changes, strict bullying policies, and more emphasis on inclusion in teacher education programs.


The purpose of this study was to evaluate the feasibility and effectiveness of a 3-month intervention in which Dutch office workers were provided with a personal activity monitor (PAM) coupled to simple and concise Web-based tailored PA advice (PAM COACH). Participants were randomly assigned to the 3-month PAM intervention (n = 51) or received a single written information brochure with brief general PA recommendations (n = 51). Study outcome measures were changes in PA (recall of minutes per week spent on PA, as measured by the Activity Questionnaire for Adolescents and Adults), determinants of PA, aerobic fitness, and
body composition. Follow-up measurements were performed immediately after the 3-month intervention and at 8-months, 5 months after the end of the 3-month intervention period. No significant intervention effect was observed in the PA outcomes at the 8-month follow-up. For the determinants of PA, aerobic fitness, and body composition, no statistically significant intervention effect was observed in the total study population immediately after the 3-month intervention or the 8-month follow-up. The intervention appeared to be easily applicable to real-life settings. The intervention was ineffective in improving PA behavior or its determinants in healthy office workers. This study provides us with the knowledge that a PA advice intervention does no more to improve participants PA than having basic information. This is important for online physical education because there need nor be a dedicated fitness counselor.


The purpose of this article was to examine the characteristics of participants and non-participants (parents recruited through schools) in a computer-tailored physical activity intervention delivered through the Internet. Data was collected in two ways. First, 5706 brochures with a call to participate in a physical activity program, with as key element a website-delivered tailored physical activity advice, were distributed through their children to parents of all pupils in 14 primary and secondary schools in Belgium. Parents were asked to return the reply
card mentioning if they wanted to participate or not. Second, characteristics of participating and non-participating parents were collected by distributing 2000 short questionnaires to pupils between 10–18 years of age, in 12 of the 14 schools. The recipient’s of the questionnaire age or physical activity level could not be used to determine their interest or participation beforehand. It was determined that a variety of health programs would be beneficial in reaching more of the population.


The purpose of the study was to examine the effectiveness of a computer-tailored physical activity intervention delivered through the Internet in a real-life setting. Adults in good health (n=5,526), recruited in six worksites, between 25 and 55 years of age participated. The participants were randomly assigned to one of three groups receiving, online-tailored physical activity advice 1 stage- based reinforcement e-mails, online-tailored physical activity advice only, online non- tailored standard physical activity advice. After six months there was no significant difference found between the groups with regard to physical activity levels. However, the total physical activity, physical activity at moderate intensity and physical activity in leisure time significantly increased in all study groups between baseline and the testing six months later. The e-mail group did not feel overwhelmed by the number of e-mails received. Also tailored advice was more well received than standard advice but, this did not transfer into the online-tailored physical activity intervention program outperforming online standard information.

Just like in the United States the Province of Quebec in Canada has lowered their requirements and funding for physical education. The purpose of the thesis was to examine ways in which available technology - specifically a blended learning approach involving multimedia and classic physical education class - can be employed to increase student time on task by reducing demonstration and instruction time by the teacher during class time. A literature review of criticisms and studies of blended learning was used to determine a proper mix of technology and classic instruction that would best make use of available time. The author concentrated on badminton specifically. Although the dissertation did not mention randomization, 100 participants were separated into two control groups and two experiment groups and completed a junior level badminton course. The control groups participated in a regular badminton class and the experimental groups utilized a badminton website specially created to take the place of regular classroom instruction. At the end of the study the students underwent a badminton performance and knowledge test in order to evaluate whether or not significant differences existed between groups. The results revealed that the online groups did better in both the performance and knowledge category of the study.

The purpose of this study was to examine the social competence of high school students enrolled in online Physical Education courses. A sub purpose to the study was to gather and examine demographic information regarding students who enroll in online Physical Education courses. There were 60 participants for this study who were students taking one of two Physical Education courses at the Florida Virtual School during the spring 2005 term. The assessment instrument used was the Teenage Inventory of Social Skills created by Heidi Inderbitzen. The Teenage Inventory of Social Skills is a 40-item self-report questionnaire consisting of statements rated on a 6-point scale. The instrument was divided into two sub-scales; a positive scale and a negative scale. Results indicated that there was no significant mean difference found between the students enrolled in online Physical Education courses and the mean of students established by the TISS. With the majority of respondents being female, Caucasian, and were attending public or private schools for most of their classes the results could not be generalized.


When this article was written there were 22 states in the United States that offered online physical education. The purpose of this study was to examine physical education teacher educators’ attitudes toward and understanding of K-12 OLPE. Data were collected utilizing semi-structured open-ended interviews. Participants (N=25) were current physical education teacher
education (PETE) faculty members at universities granting a bachelor’s degree in physical education certification. Participants were randomly selected using a stratified sampling technique based on the Carnegie classification of their universities. Results revealed that PETE faculty know that online K-12 physical education is out there but generally do not think much of it. These same faculty members believe only Standard 1, which relates to motor skill competency of the NASPE (2004) National Physical Education Standards could be met online. The faculty members had strong negative feelings about the use of OLPE in elementary physical education.