



ISSN Print: 2394-7500
ISSN Online: 2394-5869
Impact Factor: 3.4
IJAR 2015; 1(4): 254-257
www.allresearchjournal.com
Received: 16-02-2015
Accepted: 04-03-2015

Parmod Kumar
M.P.Ed,
Department of Physical
Education,
University of Delhi, India

Future trends and challenges in physical education and sports sciences

Parmod Kumar

Abstract

The purpose of this study is to recognize the present trends and challenges in physical education and sports and based on these present challenges, future trends and challenges would be examined. There are different factors which are diminishing the attention of students in physical education activities. Even though the physical education is being taught as a part of programme in all the schools but lack of sufficient time and trained teachers, good facilities are accountable for little concentration in this field. The future challenges to make this field interesting involves a sufficient programme, sufficient funds allotment for holding various competitions and function of technology to generate awareness about the importance of physical activities and sports in our daily life. All these issues have been discussed in the present study.

Keywords: Physical education, sports, curriculum, technology.

Introduction

Physical education should be individualized. One size does not fit all. This is extremely challenging, but with creative tools like Physical Best, Fitness for Life, and Fitnessgram, physical educators are becoming more like personal trainers than coaches. We should focus on activity and nutrition leading to good health and wellness. If we can't do everything, we need to at least do this.

Therefore, while playing age appropriate games is important, our emphasis needs to be on building lifelong skills and attitudes. Being active and eating well is vital at any age, but it becomes a matter of life or death as we get older. We can't put fitness in the bank and use it later; we have to keep active and eating well to maintain the benefits.

We also need to emphasize participation and stop the trend toward becoming a nation of spectators, with a few highly skilled athletes playing and everyone else watching. All students should be provided opportunities to both cooperate and compete in physical activities. Both are important life skills, and both can be fun.

Our students should graduate with an understanding of the key principles of fitness and nutrition. They should be informed consumers of activity, nutrition, and wellness and be ready to assume self-responsibility for their own health through prevention.

And, please, let's make sure our K-12 schools provide a logical scope and sequence let's teach articulated curriculums and not just bump the volleyball for 13 straight years.

Finally, we have to embrace technology to effectively communicate our message and get people moving. New innovations can help kids become physically active while playing video games and provide motivation for those who otherwise wouldn't be active.

However, from a personal perspective, I hope technology only plays a supporting role in the future. I think we're going to rob kids of something special if we only promote their participation in a virtual world. I grew up outdoors, in the wind and rain and snow and mud. And as I approach 55, I'd still rather play tennis or basketball or hike with my dog than play a video game or watch TV. I hope physical education in the future can help kids enjoy activity in the real world, not just the virtual one.

His words dodge ball still can cause some adults to shudder, even though it might have been

Correspondence:
Parmod Kumar
M.P.Ed,
Department of Physical
Education,
University of Delhi, India

decades since a ball beamed them in a physical education class.

Though some adults thrived on the competition in their school physical education classes, others remember the experience as humiliating, with the operative word being *last* -- picked *last* for a team or coming in *last* in the mile run.

For too long, some fitness experts say, physical education has not lived up to its name: Traditional phys-ed classes provide too little activity to too few students, offer little or no guidance for maintaining a healthful lifestyle, and can make less athletic children feel inadequate, which can further turn them off to exercise.

Enter a new generation of phys-ed, with programs that stress lifelong fitness activities, such as walking, biking, in-line skating, and tennis; educate students about healthful diets; and teach students how to monitor their heart rates and pulses.

To accommodate those new programs, some school districts have renovated their gymnasiums to look like fitness centers and revamped their curriculums to emphasize fitness over competition. Several national organizations also are promoting changes to phys-ed curriculums and working with school systems that want to offer new activities.

Being active gives you that feel-good vibe that not only brightens your mood, it also does wonders for your body.

Being physically active is one of the most important things you can do to improve and maintain health. That's why it's essential to find a way to make physical a positive and enjoyable part of your life.

Here are some ideas to help you get that feel-good feeling every day.

Solutions for your exercise challenges:

Lack of time

There are exercises you can do while at work and at home. National physical activity guidelines recommend 150 minutes of moderate physical activity a week to be healthy. If you're pressed for time, try doing 10 minutes of exercise three times a day to add up to 30 minutes. Even a *little exercise* is better than none.

Lack of energy

Exercising can actually give you more energy. Start out by doing just a little bit, then gradually build it up. This way you won't feel as tired.

Lack of motivation

Try different types of activity until you find something you like. Picture yourself as an active person. Start by going for a walk around the block, or taking the stairs instead of the elevator.

Start slowly and keep at it. You may not like something the first time you do it but really enjoy yourself once you get better at it. Ask your friends and family how they got started.

Set small, realistic goals for yourself. You'll be amazed at what you can accomplish over time.

I feel fine, I don't need to exercise

You may not be ill, but that's not the same as being fit and well. Your heart, lungs and circulatory system need a workout to keep you in top form for the rest of your life.

Future in physical education and sports science

Over fifty academics and educators from Australia and New Zealand attended the lecture held at the Faculty of Education's Epsom Campus in June.

Professor Tinning's address illuminated some of the key issues and influences on the field of health and physical education in New Zealand.

Professor Tinning is the first to admit that physical education makes friends and enemies of people. In his opening speech at the Dean's Lecture on Wednesday, Richard said that physical education is an almost universal experience for children and youth in schools in countries all across the world. Moreover, in all these countries there is physical education as a field of study in university.

Richard shares his time between Auckland where he is Professor of Physical Education in the School of Curriculum and Pedagogy at the Faculty of Education and Brisbane where he is Professor of Pedagogy and Physical Education in the School of Human Movement Studies at the University of Queensland.

Internationally known for his research and focus on issues related to the knowledge, identity and professional development of health and physical education teachers, Richard has long standing interests in the purposes of school physical education and how the subject has changed in response to educational trends and government initiatives.

However, a degree in exercise science does not provide prospective health and physical education teacher with the necessary background knowledge for teaching the subject says Richard. Teachers work in schools with children and youth who are both biological and social beings, who live in both nature and culture simultaneously, and for whom the most pressing issues often relate to the personal and the social.

"In this context, while bio-scientific knowledge is important, it is insufficient for teachers to fully understand such complex bio-social phenomena as health or complex socio-cultural activities such as sport.

Role of Technology

Technology is a double-edged sword. Computers, for example, contribute to sedentary leisure-time behaviors (e.g., playing sedentary computer games). On the other hand, technology has been used to promote physical activity and change exercise behavior. For years, pedometers, accelerometers, and heart rate monitors have been used as motivational tools. Newer technologies and approaches being used to promote physical activity include global positioning system (GPS), geographic information systems (GIS), interactive video games, and persuasive technology. Also, experts suggest that Internet-based physical activity interventions should be used by clinicians to promote and change exercise behavior (Marcus, Ciccolo, and Sciamanna 2009).

Pedometers

Pedometers count and monitor the number of steps taken throughout the day. Most pedometers provide a fairly accurate count of steps taken during ambulatory activities such as walking, jogging, and running. Estimates of the distance walked and caloric expenditure are less accurate. Some newer devices also provide an estimate of the total time spent during continuous walking at a moderate

intensity for durations of 10 min or more. To provide accurate step counts, most pedometers need to be attached to a firm waistband; however, some can be carried in a shirt pocket, a pants pocket, or a bag held close to the body. Studies show that some pedometers provide a valid (bias <3%) and reliable (coefficient of variation <2.1%) measure of steps during constant- and variable-speed walking for both healthy and overweight adults when the pedometer is placed on the waistband (sides and back), in a shirt pocket, or around the neck; however, positioning the pedometer in a pants pocket or in a backpack decreases accuracy (Hasson *et al.* 2009; Holbrook, Barreira, and Kang 2009).

Studies show that pedometer-based walking increases physical activity (Williams *et al.* 2008). In a synthesis of studies addressing the use of pedometers to increase physical activity, Bravata and colleagues (2007) reported that on average, pedometer users increase their physical activity by 27% over baseline levels. A key predictor of increased physical activity is setting a step goal (e.g., 10,000 steps per day) for participants. Pedometer-based walking programs are associated with significant decreases in body mass index, body weight, and systolic blood pressure (Bravata *et al.* 2007; Richardson *et al.* 2008).

Thresholds for health benefits from walking have been established using pedometers. Accumulating 8000 to 9000 steps per day at a rate of no less than 100 steps·min⁻¹ is equivalent to 30 min of moderate physical activity, the health benefit threshold. For weight loss, accumulating 11,000 to 13,000 steps per day is recommended. Using criterion-referenced approaches, youth-specific thresholds for good health are being established. In the future, minimal levels of steps per day may be used to identify health risk thresholds for cardiovascular diseases, obesity, and osteoporosis. Table 3.4 presents classification of physical activity levels for adults and children based on the number of steps taken daily (Tudor-Locke *et al.* 2005, 2008). Additional information about the validity and accuracy of pedometers is available (Holbrook, Barreira, and Kang 2009; Lamonte, Ainsworth, and Reis 2006; Tudor-Locke *et al.* 2002, 2006).

Accelerometers

Accelerometers record body acceleration minute to minute, providing detailed information about the frequency, duration, intensity, and patterns of movement. Counts from accelerometers are used to estimate energy expenditure. Recently, accelerometers were used to provide an objective measure of compliance with physical activity recommendations for the U.S. population (Troiano *et al.* 2008). Accelerometer data indicated that less than 5% of adults in the United States engaged in 30 min per day of moderate exercise, 5 to 7 days per week. This is substantially lower than the self-reported value (49%) from national surveys. Also, only 8% of adolescents reached the goal of exercising 60 min per day, 5 to 7 days per week, based on accelerometer data. The relatively higher cost of accelerometers (about \$300 per unit) compared to pedometers (\$10 to \$30 per unit) limits their use in large-scale physical activity interventions. In the future, lower-cost units may be developed and be more widely used in national surveys and community-based interventions. Detailed information about best practices and research recommendations for using accelerometers are available (see Ward *et al.* 2005).

Heart Rate Monitors

Heart rate monitors are used primarily to assess and monitor exercise intensity. These devices are especially useful for monitoring exercise intensity of individuals in cardiac rehabilitation programs and highly-trained, competitive athletes. Because heart rate is linearly related to oxygen uptake, it can be used to estimate the individual's exercise energy expenditure. However, estimates of energy expenditure from heart rate may be affected by factors such as temperature, humidity, hydration, and emotional stress.

Combined Heart Rate Monitoring and Accelerometry

The prediction of energy expenditure during physical activity is improved by 20% when data from heart rate monitors are used in conjunction with accelerometer measures of physical activity (Strath, Brage, and Ekelund 2005). New devices that simultaneously monitor heart rate and body motion provide valid and reliable measures of physical activity of children, adolescents, and adults in free-living conditions (Barreira *et al.* 2009; Crouter, Churilla, and Bassett 2008; Zakeri *et al.* 2008).

Global Positioning System and Geographic Information System

Global positioning system (GPS) uses 24 satellites and ground stations as reference points to calculate geographic locations and accurately track a specific activity. For example, using a portable GPS unit provides information about altitude, distance, time, and average velocity during hiking. A graph depicting the uphill and downhill portions of the terrain is also provided. Global positioning system can be used in conjunction with accelerometers to assess and monitor physical activity (Rodriguez, Brown, and Troped 2005; Schutz and Herren 2000; Troped *et al.* 2008). As small receivers become more affordable and accessible to the general public (e.g., in laptop computers and mobile telephones), GPS may be more widely used to assess and to promote physical activity.

The geographic information system (GIS) is a computer system that stores information about location and the surrounding environment. With use of GIS, the impact of the environment (i.e., its form and design) on physical activity can be assessed (Zhu 2008). Detailed information about using GIS to assess environmental supports for physical activity is available (Porter *et al.* 2004).

Persuasive Technology

Persuasive technology is defined as a computer system, device, or application that is intentionally designed to change a person's attitude or behavior (Fogg 2003). This technology uses tools (e.g., pedometer or balance board), media (e.g., video, audio, or both), and social interaction (e.g., playing with another person) to persuade individuals to adopt the behavior without their actually knowing it. Although the DDR was not developed specifically to promote physical activity, it has changed exercise attitudes and behavior of children and youth using principles of persuasive technology. Dance Dance Revolution uses video, music, and a dance platform to capture interest and engage children in the activity without their being fully aware that they are exercising. The emerging field of persuasive technology has enormous potential for promoting physical activity and healthy behaviors (Fogg and Eckles 2007; Zhu 2008).

Conclusion

The present practices and current course needs to be modified to produce attention of students in physical education and sports activities. The expectations challenges will mainly be the proper curriculum to be made and followed and to make accessible sufficient funds from various organizations in order to maintain the needy but intelligent children so that they can only focus on their game without worrying about the funds. The expertise will also play an important role in expanding and creating the interest in physical activities. The importance of physical education and sports activities are being identified in today's world and efforts are being made to progress the situations so that more and more endowment can be accepted.

References

1. Andrew C. Sparks Research in Physical Education and Sport. Exploring Alternative Visions. The Falmer Press, London, 1992.
2. Anonna Guha, Mumbai. Role and function of dance: Historical context (Part 2)
3. Pate RR, Davis MG, Robinson TN, Stone EJ, Young JC. Circulation 2006; 114(11):1214-1224.
4. http://www.educationworld.com/a_curr/curr346.shtml
5. Sallis JF, Floyd MF, Rodriguez DA, Saelens BE. Circulation 2012; 125(5):729-737.
6. <http://www.humankinetics.com/news-and-excerpts/news-and-excerpts/my-vision-for-the-future-of-physical-education>
7. Rosen LD. Understanding the iGeneration and the way they ●Rosen L. D. Educational leadership 2011, 2010; 68(5):10-15.
8. <http://www.mhp.gov.on.ca/en/healthy-ontario/active-living/challenges.asp>
9. <http://www.hms.uq.edu.au/hpe-teacher/news/fresh-insight-for-the-possible-future-of-health-and-physical-education/>



Parmod Kumar
Department of Physical Education,
University of Delhi, India