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## **RECENT DEVELOPMENTS IN PHYSICAL SCIENCES**

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### ***Abstract***

*Physical education has emerged from the era of the ex-service drill sergeant and the public schools gentlemanly games to the approach to education through the ability to use the body and mind for activity as well as for intellectual processes alone. These developments, including the addition of outdoor pursuits to gymnastics, games and swimming, have tended to produce a different outlook on training. The increased specialization of medical electronics, and the administrative difficulties of employing any person in both the Health Service and in Education, has led to a divergence of training and interests between the physical educationists and the physiotherapists. Other evolutionary changes have occurred in the training of athletes, in educational gymnastics and dance, tending to swing interests towards the Educational but unfortunately away from the physical. Recently, this swing has been halted, and the place of the biological sciences in physical education is becoming apparent, but different from the older approach through a simplified anatomy and physiology lecture course based on a watered down version of that given to the medical student.*

***Keywords:*** *Developments, Physical Education, Schools*

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## **Introduction**

Physical education has emerged from the era of the ex-service drill sergeant and the public schools gentlemanly games to the approach to education through the ability to use the body and mind for activity as well as for intellectual processes alone. These developments, including the addition of outdoor pursuits to gymnastics, games and swimming, have tended to produce a different outlook on training.

The increased specialization of medical electronics, and the administrative difficulties of employing any person in both the Health Service and in Education, has led to a divergence of training and interests between the physical educationists and the physiotherapists. Other evolutionary changes have occurred in the training of athletes, in educational gymnastics and dance, tending to swing interests towards the Educational but unfortunately away from the physical.

Recently, this swing has been halted, and the place of the biological sciences in physical education is becoming apparent, but different from the older approach through a simplified anatomy and physiology lecture course based on a watered down version of that given to the medical student.

Pupils from primary schools to secondary schools are expected to do 2 periods or 1 hour of PE throughout the year except a week before examination. In most secondary schools, games like badminton, football, basketball and tennis are available. Pupils are allowed to bring their own sports equipment to the school with the authorization of the teacher. In most secondary schools, physical exams are rarely done, but schools record pupils' height, weight and number of push-ups they can do.

Students ranging from Kindergarten to High School have PE integrated with their curriculum. Kindergarten until Grade 3 of Elementary students have gymnastics, starting from Grade 4 of Elementary School, students will be introduced into traditional martial arts PencakSilat and some team games such as badminton, tennis, soccer, basketball, etc. Starting from Junior High School, Both genders are separated during PE class. PE find its place in extracurricular forms, where students can specialize themselves in one kind of sports they choose. Sport Festival can be

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held during vacuum period, usually after examination. At this time students can compete each other by bringing own class' flag. Some universities such as ITB include PE in curriculum for freshmen. Many games such as Basketball, volleyball, cricket, tennis, badminton, kho-kho, kabaddietc are played. Several drills and physical training are taught.

### **Current trends in school PE and sports-**

Physical education trends have developed recently to incorporate a greater variety of activities besides typical sports. Introducing students to activities like bowling, walking or hiking, or Frisbee at an early age can help students develop good activity habits that will carry over into adulthood. Some teachers have even begun to incorporate stress-reduction techniques such as yoga, deep –breathing.

Studies have shown that tai chi enhances muscular strength and endurance, cardiovascular endurance, and provides many other physical benefits. It also provides psychological benefits such as improving general mental health, concentration, awareness and positive mood. It can be taught to any age student with little or no equipment making it ideal for mixed ability and age classes. Tai chi can easily be incorporated into a holistic learning body and mind unit.

Teaching non-traditional sports to students may also provide the necessary motivation for students to increase their activity, and can help students learn about different cultures. For example, while teaching a unit about lacrosse in, for example, the South western United States, students can also learn about the Native American cultures of the North eastern United States and Eastern Canada, where lacrosse originated. Teaching non-traditional (or non-native) sports provides a great opportunity to integrate academic concepts from other subjects as well (social studies from the example above), which may now be required of many P.E. teachers. The four aspects of P.E. are physical, mental, social, and emotional.

Another trend is the incorporation of health and nutrition to the physical education curriculum. The Child Nutrition and WIC Reauthorization Act of 2004 required that all school districts with a federally funded school meal program develop wellness policies that address nutrition and physical activity. While teaching students sports and movement skills, P.E. teachers are now incorporating short health and nutrition lessons into the curriculum. This is more prevalent at the

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elementary school level, where students do not have a specific Health class. Recently most elementary schools have specific health classes for students as well as physical education class. With the recent outbreaks of diseases such as swine flu, school districts are making it mandatory for students to learn about practicing good hygiene along with other health topics. Today many states require Physical Education teachers to be certified to teach Health courses. Many colleges and Universities offer both Physical Education and Health as one certification. This push towards health education is beginning in the intermediate level, including lessons on bullying, self-esteem and stress and anger management.

**Several factors account for this.**

1. High educational standard of applicants entering P.E.
2. A small but increasing number of physical educationists who have post-diploma or post-graduate training.
3. Employment of whole time lecturers in P.E. colleges, or in colleges with a P.E. wing, who have qualifications in physiology, medicine and psychology.
4. The acceptance of Physical Education in a few universities as an academic discipline.
5. The need for a scientific understanding of coaching and fitness training, helped by the employment of knowledgeable national coaches.
6. The entrance of some physical educationists to certain learned societies, their contributions to the proceedings, and the siting of meetings in colleges of education.
7. The inclusion of physical education in the Bachelor of Education degree course in several colleges and Institutes of Education.
- 8 Government support through the Sports Council and its Research Committee.
9. Interest of M.R.C. and other research laboratories into environment physiology.
10. The application of this knowledge gained in Physical Education to rehabilitations. The involvement of doctor, coaches and therapists as members of a rehabilitation team.

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## **Conclusion**

The increased specialization of medical electronics, and the administrative difficulties of employing any person in both the Health Service and in Education, has led to a divergence of training and interests between the physical educationists and the physiotherapists. Other evolutionary changes have occurred in the training of athletes, in educational gymnastics and dance, tending to swing interests towards the Educational but unfortunately away from the physical. Recently, this swing has been halted, and the place of the biological sciences in physical education is becoming apparent, but different from the older approach through a simplified anatomy and physiology lecture course based on a watered down version of that given to the medical student.

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