

**TECHNOLOGICAL RESEARCH FOR SUSTAINABLE DEVELOPMENT OF
SPORTS IN NIGERIA**

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ABSTRACT

The importance of technological research to sustain sports development in Nigerian cannot be over emphasized. Looking at sports and modern technology, one has to flash back to industrial revolution which has produced greater quantity and quality of athletes within and outside the world in comparism with the past athletes. The paper therefore tries to explain the importance of technological research in sustaining sports development in Nigeria. In the paper, concepts as technology, research and sustainable sport development were explained with a critical over view of the technological improvements on sports and finally conclusion and recommendations were made that government at all levels should plan policies on sports that are real and practical, provide adequate infrastructures in all sporting centres, adequate use of scientific facilities and equipment in training sports personnel and athletes, attention should be given to the area research developments, research committee should be set to advise government on sport policies, allocation and use of funds, professional and experienced sports personnel should head all sporting activities in the country without bringing politics in sporting affairs.

Keyword: *Technology, Sport, Research, Sustainable Development*

INTRODUCTION

Sport is a highly organized physical activity usually guided by rules and regulations with its scientific principles of training, using modern technological sporting facilities and equipment. Sport is a competitive activity that involves vigorous physical exertion or use of relative complex physical skills by athletes, Omuruan J.C (1996) Sport is used as a source of entertainment, it consolidates health problems, it is also used as an instrument for unity and peace, economic and political power. Sport is an agent of social change in a society. It develops individual, community and brings glory to a nation. Sport development is an area that has many problems that needs to be researched into in order to enhance more scientific findings in the area of training and application of modern technological facilities and equipment discovered. The paper therefore examines technological research for sustainable sports development in Nigeria.

DEFINITIONS OF TERMS:

Technology is derived from a Greek word. “techne” meaning art or craft. Hence technology had been used to refer to ways of making or doing things, Ojemer (1998). Technology also refers to knowledge which we possess concerning ways of doing things, those things are designed, produced and distribute and sell as goods for the services of man kind. Slack (1997), views technology as being concerned with the means by which an organization transform inputs into outputs which includes materials, application of knowledge, equipment and processes required to produce a desired goods or services.

Research is explained as a careful investigation or systematic investigation towards increasing the sum of knowledge for progress and development in the area of general education, Amuchie (1992). Research is also viewed as a means to explore all over something hidden, to scrutinize or probe scientific facts over a theory, (The chambers dictionary of 19th century (2001). Luttgens (1982) defined research as a scientific method of controlled inquiry or investigation that involves process of verifying knowledge that will help to achieve good goal, such goals include new discovery of laws or generalization about behaviour which can be used to make predictions. Research provides a frame work within which the process and the products of system could be brought under critical questioning and critical justification of facts.

In other words, research is concerned with the development and testing of theories on athletes' attitudes, interest, physiological and sociological profiles in respect to training loads, methods of training, use of equipment and facilities and so many other factors that could improve and develop sporting activities.

RESEARCH FOR SUSTAINABLE DEVELOPMENT

The word development means the act of making something to grow gradually to fuller, larger or to a better standard. It can also be looked at as the process of increasing in its complexities as a system. Therefore when we talk about the role of research in sports development, we mean the part or contribution that the research can make sports grow to its fuller and better level or position.

Sport development refers to bringing sports to be more advance or more highly organized. For sport to develop, it means to work out the potentialities or elaborate or cause sport grow to an acceptable standard, (The chambers dictionary of 19th century 2001). Sport development therefore refers to all lines of planned action which could advance sports development in a highly organized state and this can only be achieved when there are adequate provision of facilities and equipment, well trained personnel, adequate planned training schedules and other technical devices that could make athletes perform well.

SUSTAINING SPORTS DEVELOPMENT

A sustainable sport development is the process of improving sports at national and at international levels to a standard, acceptable and to a durable status. For this reason sports development must focus on the utilization of athletes, trained sports personnel, adequate utilization of modern scientific facilities and equipment, use of modern techniques on training and with the use of visual training aids, sustainable development in sports is that area where attention is given to sports to meet the present standard and the generation to come Wikipedia (2008).

Sustainable sport development has to do with social, psychological, physiological, mental and economic developments which improve the total quality of life of human beings and the society in general both for today and for future generations. Sustainable sports development therefore must be geared towards making the nation self independent, using modern technological facilities on the ground which is commonly practiced in developed countries. (Wikipedia 2008).

THE PLACE OF TECHNOLOGY IN SPORTS DEVELOPMENT

Technology in sports implies the correct application of scientific research findings to update and advance sports to a highly organized and acceptable standard using improved technological facilities and findings observing rules and regular towards perfecting the athletes to win medals in national and international competitions. Through sports technology, athletes are made to be aware of their bodies in relation to time, space, height, length, width and sports to be selected, Adedeji (1987).

Technology in sports involves the use of scientific ideas in creating or solving problems refining inventions in order to improve upon life in the society and in the field of sports. Ojeme (1998) explained technology in sports as that area which find ways technologically to enhance human movements' performance. The secret behind the achievements of some developed countries of the world in the field of sports lies in the premium they placed on sport technology. Athletes of these countries have been able to develop and work themselves to the peak of excellence in achieving in selected sports. Thus, knowledgeable coaches, better facilities, equipment and scientific training methods which were linked with technology in sports help to develop sports.

This may, perhaps, explain better why those Nigerian sportsmen and women who left this country for the United States of America or other countries are doing better in their respective sports. There is enough evidence to show that the foreign-based Nigerian sportsmen and women are achieving better results than their home-based counterparts. It is now firmly believed that for Nigeria to achieve excellence in sports at the international scene, she must adopt sports technology right now.

1. Sports technology and training method:

In recent years sport coaches have discovered that scientific training methods have contributed tremendously to the achievement of excellent results in sports. A number of technological developments have emerged in training of sportsmen and women. The introduction of weight training was a radical change in coaching methods (Adegboyega, 1988).

Track and field coaches in some countries have made use of Fartlek as a training method. This is a Swedish word meaning “speed-play”. Also a combination of fartlek and interval training was used by Billy Hayes of Indiana University and Dink Temptation of Standard University to hit limelight (Van Dalen and Bennet, 1971). Fartlek is the most natural form of scientific training. It does not require any equipment. The athlete runs for a length of time rather than a certain distance and during the session he runs over hills and valleys, in the woods and across sand, runs fast and slow stretches according to the way he feels. This training system develops endurance.

2. Sports technology and periodic testing:

Many sports coaches in Nigeria with the exception of the few highly trained ones do not understand the concept and the role of periodic testing of sportsmen and women. Testing is very important and necessary in order to monitor and make user that the sportsmen and women understand the content of their training programme, monitor the health status of the athletes right from the beginning to the end of their training programme, monitor the skill development, provide feedback to the sportsmen and women so that they can further be motivated to improve on their performances, and to determine how physically, technically and psychologically these sportsmen and women are ready at every phase of their training programmes. This will require the enlistment of the support of medical doctors, sport physiologists and sports psychologists.

3. Videotape and computer in sports:

Sports scientists have discovered that computer and videotape could be used to analyze human movement in sport skill performances. Adedeji (1987) explained that the most important new development in competitive sports is the use of computers to visually depict the biomechanics of movement in real time. This system is the use of infrared camera whereby the camera picks up light from the diodes and feed on image directly into the computer. Another tool used for the improvement of skill is the videotape.

Through the use of videotape and computer, it is possible to be motivated by these tools to improve performances through analysis of motion and viewing the motion realistically. Through these systems, athletes could be informed of how he or she can alter the sport skill for optimal performance. The videotape can be played back immediately for the athletes to see themselves performing the skill, while the data collected through computer could be used to correct the error in seconds.

4. Advanced information technology (AIT) :

Advanced information technology, a major facet of microelectronic technology, is a result of the merging of computer and telecommunications technology. By linking computers together via telephone systems, AIT allows virtually anyone with a microcomputer to send and receive information (Slack, 1997). This type of technology can be used to manage geographically dispersed operations, to place orders, and control inventory, to facilitate group decision making without everyone being in the same room, and simply to enhance communication. Quicker than traditional methods of sending and receiving information, it allows for better identification of problems and facilities broader participation in decision making. Many sports organizations make use of AIT. Coleman, the sporting goods manufacturer, recently increased its reliance on personal computers as a means of communication, Slack, (1997).

Advanced information technologies provide increased flexibility; equipment like cellular phones, fax machines, laptop computers, and modems mean that people do not have to be in a fixed location to send or receive information. The use of AIT will improve the quality of service because more comprehensive information will be more readily available than traditional method.

5. Sports facilities equipment, and supplies:

The achievement of some countries in the field of sports is directly linked with the exposure of the athletes to better facilities and equipment. However, the lacks of these are some of the constraints confronting better sports performance in educational institutions of Nigeria. A close observation will show that most schools in Nigeria do not have adequate sports facilities and equipment. The

schools with sports facilities and equipment may have these in limited quantities and inferior qualities.

To keep abreast with modern technology, and to provide athletes from the schools with state of the art equipment and supplies, Nigeria must embrace Microelectronic Technology. The major facet of microelectronic technology on the structure and operations of sports organizations especially in the field of equipment and supplies is computer integrated manufacturing (CIM). This term refers to the linking together by computer of the different parts of the manufacturing process: the ordering and inventory of raw materials, the sequencing, and control of the production process; and the warehousing, shipping and servicing of the finished products. The different components of computer integrated manufacturing include an automated materials-handling system, computer-assisted engineering, and (the two most common elements of CIM) computer-assisted design, used to help in the design and drafting of new products, speeds up these processes by allowing designers to easily make modifications to products using the available computer technology. In this way alternative designs can be developed and tested to meet changing customers need, slack. (1997).

CONCLUSION AND RECOMMENDATIONS:

In recent years because of industrial revolution and technological research findings on the area of sports, competitive sports have advanced in a highly organized and in a scientific manner. For sports to be sustained and maintained a high level of its developmental status, the hand of the stake holders in the sporting industry must be a collective responsibility.

- Federal and state ministry of education must insist on policies that are real and practical in operation like other developed countries. Development of sports infrastructures, sport personnel and athletes at this age of modern technology should be given adequate attention.
- The federal ministry, state ministry of sports and social development and sports agencies should collaborate towards this direction in order to sustain sport development in the country. To achieve this, there should be adequate Provision of funds to encourage sports research development in the country.
- Federal and state ministry of sports as a matter of urgency should constitute sports research development committee to advice government on sports programmes, for example on sports policies, allocation and use of funds, training of sports personnel and athletes.
- Government should encourage the use of modern technological facilities and equipment to provide sports personnel and athletes with scientific principles of training and learning skills.
- Sound academic professionals and experienced personnel's should always be given positions in the affairs of sports and avoid political interest.

Finally companies or corporate bodies, government and commercial media houses should plan programmes on sports and invite professionals to educate the public about importance of sports.

REFERENCE

- Adedeji J. (1985). *The teaching of physical and health education*. West Nooks publishers Ltd.
- Adedeji J. (1987) *achievement level of human performance in sports through technology*. Monograph series No. 12 PHE Dept. University of Ibadan.
- Adigboyega (1988) Sports Technology in Colleges of Education. An alternative approach to achieving excellence of sports in NATCEGA 6th Games at Oyo State 19th – 16th April, 1988.
- Amuchie F.A. (1992) *sports as a pragmatic instrument for national unity and internationalism*. Unpublished conference paper at the college of education AWKA.
- Luttgens K.T, Wells K.F (1982) *Scientific Basic of human motion*. New York. The Ronald press.

Slack T. (1997) *Understanding sports organization. The Application Theory U.B Human Kinetics.*

Sustainable development govt UK (2008) what is sustainable development? Available on line [http: www. Sustainable.development.govt.UK/what/index.htm](http://www.Sustainable.development.govt.UK/what/index.htm) downloaded July 2009.

Ojeme E.O (1999). *Building a solid Base of sport Technology for gressroot sports programes. Building a secured foundation for vision 2010 sports development success NAPHER.* S.O monograph series No. 1

Omuruan J.C (1996). *A Book on Physical Education, sports and Recreation Nigeria.* S. Asekome & Co.

Wikipedia. *The free encyclopedia (2008) vocational education available on line*