

OLYMPIC EDUCATION AND TECHNOLOGY

Educating the youth of the world lies at the heart of the Olympic project. Olympic education has also been seen by scholars and administrators as the most effective cure for various problems encountered by the Olympic Movement - from enhancing participation in sport, through doping to current reforms. The scale and popularity of the Olympic Games have surpassed the wildest dreams of their founders, but at present, more than ever before, the IOC is seeking to broaden the educational impact of its policies.

In order to promote Olympic values and ethics, the Olympic Movement engages in a number of educational ventures. Attaining the educational aims of Olympism even in the smallest community of people, for example a class of pupils, has always presented a challenge for all parties involved. How to disseminate Olympic values to the widest possible audience? What to be the most appealing form for presenting information? How to motivate people to learn and eventually change their behaviours? These are just some of the questions that constitute a part of Olympic educational ventures.

Modern technology offers promising solutions to the above issues which educators have tried to tackle for many years. The advance of personal computers, desk top publishing, the internet with its news and chat-groups, web-communities and on-line publishing, e-mail and hypermedia present enormous opportunities for exploring and popularising Olympic values and ethics. Advances in tech-

by Vassil Girginov*, Jim Parry**
and Jim Harris***

nology have been backed by political interventions. The summit of the Prime Ministers of the European Union countries in Lisbon (Portugal) in June 2000 clearly declared the importance of technology for societies in the 21st Century, and set a target for all schools in the member countries to have access to the internet by the end of 2001. There is very little doubt that these developments will impact on the production, delivery and acquisition of information on Olympism.

Olympic Education: The Traditional Approach

In his lifetime Pierre de Coubertin, the founder of the modern Olympic

Movement, produced over a thousand publications - books, articles and speeches. Today, to the best of our knowledge (which is by no means complete) there are about 17,000 volumes, numerous articles and papers, 100,000 web pages and 100 films on Olympism, not to mention the still images. Clearly over the past hundred years the amount and the content of information have increased in complexity and structure. This turned Olympism into a rich content domain which, with a few notable examples (e.g. video and film services provided by the Olympic Television Archive Bureau), is not well-organized. Some of the typical features of not well-organized knowledge domains include non-uniformity of explanation across the range of issues, non-lin-



The computer aids Olympic research.

earity of explanation and content-dependency.

Delivering information and transferring it into knowledge in a rich and not well-structured domain, such as Olympism, inevitably leads to the loss of information and makes education harder. The traditional approach to Olympic education relies on linear media, e.g. textbooks and lectures, is teacher-led, offers little feedback to the learner, and as Kidd (1997) in his 'Pedagogy of the Olympic Sports' argued, is informational rather than developmental. The use of linear media (or close-ended, with beginning, middle and end, e.g., books, audio or video) for education would not have been problematic if Olympism was a simple and well-structured subject matter. However, it is not and the next section looks at the application of non-linear and multi-dimensional approaches in Olympic education.

Enhancing Olympic Education Through Interactive Learning

Education, in the words of Roszak (1986, quoted in Ragsdale and Kassam, 1996:586) "...begins with giving the mind images - not data points or machines - to think with". The idea of interactive learning has stemmed from three main sources - computer-based training, interactive video and open learning. Barker and Tucker (1990: 18) defined interactive learning as "learner-centred learning using a multimedia approach". It is, they argued, "a process rather than a technology, implying the creation of an information-rich learning environment involving interaction between: people (teachers and learners); print-based material, typically produced using desktop publishing methods; new computer-based media including

hypertext/hypermedia, optical discs, satellite and cable".

The true meaning of this interactive environment is exploration, where individuals would browse, discover, hypothesize, problem solve, and generally engage in what Mayes, Kibby and Anderson (1990:121) described as "*effort after understanding*".

Central to interactive learning is the use of a new communications medium called hypermedia which was created by the convergence of computer and video technologies. Spiro and Jehng (1990:167) referred to hypermedia as "*nonlinear computer learning system in any medium (including multiple media)*". The pure hypermedia (nonlinear learning media), according to Cotton and Oliver (1994:98) include three major features: "*one, it is interactive, two, it involves a variety of combinations of media selected by the user, and three, it is formally non-linear, with no beginning, middle or end*".

The ultimate aim of education, and Olympic education in particular, is the transfer of information into knowledge, that eventually results in associated changes in people's behaviour. There is growing evidence in the literature to suggest that this transfer and its effects on individuals taught in non-linear conditions is significantly improved, compared to performances in a fixed format (linear condition). So it is worth examining briefly the key implications of interactive learning on educators and learners. These are discussed in turn below.

Learning environment

The interactivity in education brought about by the new technology creates a whole new learning environment that, as Stanton and Stammers (1990:114-5) argued:

- "allows for different levels of prior knowledge;
- encourages exploration;
- enables subjects to see a sub-task as part of the whole task;
- allows subjects to adapt material to their own learning style".

Different users and variety of learning styles

The type of user and their learning style is also an important variable in the new (non-linear) learning environment. It can be seen as a predisposition to displaying a particular kind of behaviour, and reflects an individual's personality and cognitive characteristics. Brooks, Simuits and O'Neil (1985, quoted in Stanton and Stammers, 1990:115) described four general categories of differences that are related to learning strategies. These are: abilities, cognitive style, prior knowledge and motivation. Related to these categories of different users, are three broad learning styles (strategies): top-down, when an individual looks at the most important things first; bottom-up, where the learner progresses from the more basic information upwards to the more complex concepts; and sequential, when the user decides on the actual sequence of looking at particular units from the overview screen.

Blurring the distinction between teacher and learner

The advance of new technology also transformed the relationship between teachers and learners. As the amount of information that is made available electronically is increasing all the time (for example posting on the internet the volumes from the International

Education

Olympic Academy Sessions, since 1960 until present, which are otherwise not widely available), that is, it can be accessed at any time by everyone, the notion of the teacher as a repository of knowledge is replaced by the concept of the teacher as an expert guide.

Mutability of the knowledge-base

A consequence of the changing relations between teachers and students is the mutability of the Olympic knowledge base. As the traditional static data (non-linear) in the form of books or lectures is complemented by more open-ended information (on-line and desk-top publishing or Olympic web-groups), this implies that both teachers and students will be able to contribute to the production of new knowledge in an ongoing fashion. In addition, the new knowledge is quicker and cheaper to produce, and can be readily updated.

Learner-centred approach

Another key implication of interactive learning is that it changes the traditional teacher-led approach to education to a learner-centred approach. In a learner-centred teaching environment, the student is offered three main benefits. First, it allows students to study various aspects of Olympism at a pace that suits their needs. Second, it provides students the ability to control the order through which the instructional material is presented. Third, a learner-controlled approach allows students to choose the portion of the content materials they want to study. All these advantages are further reinforced by the combined use of text, graphics, sound, images and video.



An information terminal at the Olympic Museum in Lausanne.

Knowledge-based learning environment in which the developer, teacher and learner exist in a symbolic relationship

In contrast to the traditional approach to learning where there is no or very little interaction between the teacher and media developers (books or video authors), the interactive learning approach involves the tutor and the learner in a constant feedback with the developer, in a way that the contents of instructional material can be instantly updated.

New knowledge has to be applied in greatly varying contexts

The idea that Olympism is a rich content domain which lacks uniformity of explanation implies that the knowledge that has been acquired has to

be applied in various cultural contexts. An interactive learning environment encourages different interpretations rather than imposing uniformity in understanding, and seeks for an implementation relevant to a social reality in which students live.

Implementing new technology in Olympic education

The Olympic Themes CD-ROM is an attempt to address the challenges presented to both educators and learners by new technology in their pursuit of Olympic education. This project is a partnership between the University of Luton, the University of Leeds and the British Olympic Association, with the support of OTAB. It is an interactive educational multimedia package for studying the

Education

fundamental aspects of modern Olympism designed for undergraduate and college students in sport and leisure. It may also be used by students pursuing degrees in sociology, communications, history and marketing. The Olympic Themes CD ROM aims to create an interactive learning environment by establishing a centralized information resource that uses both the distribution advantages of a multimedia CD ROM, and the topic-relevant information available through the Internet.

The Olympic Themes CD ROM offers twelve fundamental building blocks - 'themes' or 'gateways' for comprehending Modern Olympism in its entirety. Each theme is a self-contained unit which can be studied independently. No particular point of view is promoted. Rather, different interpretations of Olympism have been put forward, and the reader is invited to evaluate them critically. Representing the diversity of opinions, and the dynamic character of the Olympic Movement, the twelve themes introduced are:

- The Olympic Movement in the 21st Century
- The Olympic idea
- Olympic history
- The Olympic Movement - structure and power relations
- Olympic politics
- Olympic marketing
- The Olympic Games and the media
- Running the Games
- Economic and environmental impact of the Olympic Games
- Ethics of sport and Olympism
- Olympic education
- Olympic arts

The content of the CD ROM is divided into three main sections:

- Lecture Room: The user can study any of the twelve themes and their

associated sub-themes. Further investigation is facilitated through referenced material, tables, pictures and video footage. Students can use the embedded web addresses to explore and expand their understanding of a particular theme. Modules are included to enhance writing and presentation skills.



CD ROM on the Olympic Themes.

- Library: The Olympic Themes library gives the user the opportunity independently to read, view, visit or listen to all resources included in the CD ROM.
- Olympic Gallery: The Olympic Themes virtual gallery enables the users to enjoy the relationship between arts and sport through the art work of artist Kevin Whitney.

The academic content and format of the CD-ROM has been subjected to expert evaluation and discussions, involving prominent figures from academia and sports industry.

*Luton Business School, University of Luton; **Department of Philosophy, University of Leeds; ***Learning Technology Centre, University of Luton.

References

- Barker, J., and Tucker, R., (eds.), (1990), 'The Interactive Learning Revolution: Multimedia in Education and Training', Kogan Page, London.
- Cotton, B., and Oliver, R., (1994), 'Cyberspace lexicon', London.
- Kidd, B., (1997), 'Towards a pedagogy of the Olympic sports', in Donnelly, P., 'Taking Sport Seriously: Social Issues in Canadian Sport', TEP, Toronto.
- Mayes, T., Kibby, M., and Anderson, T., (1990), 'Signposts for conceptual orientation: some requirements for learning from hypertext', in McAleese, R., and Green, C. (eds.), 'Hypertext: state of the art', Intellect Limited, Oxford.
- Ragsdale, R., and Kassam, A., (1996), 'The Magic of Multimedia in Education: Promises of the 21st Century', in Reisman, S., (ed.), 'Multimedia Computing, Preparing for the 21st Century', IDEA, London.
- Spiro, R., and Jehng, J-Ch., (1990), 'Cognitive flexibility and hypertext: Theory and technology for the nonlinear and multidimensional traversal of complex subject matter', in Nix, D., and Spiro, R., (eds.), 'Cognition, Education, Multimedia', Lawrence Erlbaum, London.
- Stanton, N., and Stammers, R., (1990), 'Learning styles in a nonlinear training environment', in McAleese, R., and Green, C. (eds.), 'Hypertext: state of the art', Intellect Limited, Oxford.
- Toohey, K., and Veal, A., (2000), 'The Olympic Games', CAB International, London.