Documentation and sport information: the challenges and opportunities brought by new technologies

Jill Haynes

National Sport Information Centre
Australia

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Sport information comes in a number of different guises, and is packaged for a wide variety of audiences from the sports fan, to the coach to the sports scientist. This paper discusses sport information required by sport practitioners, be they coaches, sports administrators, athletes, academics, students or sports scientists.

The rapidly increasing amount of sport information available in a number of different mediums needs to be managed to enable retrieval by the potential users of this information. The role of the sport information manager or documentalist is to:

- identify the information needs of their clients;
- identify and organise sources of information that are relevant to those needs;
- facilitate access to that information;
- actively promote and disseminate the availability of this information (Poncet 2000).

Traditionally in libraries information was collected and catalogued and made available to users visiting the library. A major change was the use of databases to index material held in a number of different physical locations, thus expanding the horizons, but still requiring access via inter-library loans. These databases improved searching capability, and allowed simultaneous updating of the catalogues across a number of sites.

These two methods of access are still applicable, but the introduction of the Internet has thrown the doors wide open. It provides many opportunities for those seeking information, and challenges those documentalists trying to facilitate access to quality sport information.

History

The history of sport information as a separate discipline is a relatively short one. The initial requirement for access to sport information was recognised by sport scientists in Europe as they began to seek information on research being undertaken by their colleagues.

When the International Association for Sports Information (IASI) was founded in 1960, the membership was dominated by sport scientists. Very few documentation centres for sport existed in 1960, and there were few information specialists working in the field of sport.

Finding sport information in the 1960s was not an easy task. A few related printed indexes such as ERIC existed. ERIC was a printed index to education material, and provided access to some physical education material. Index Medicus was also available to search medical information.

It was not until the 1970s that databases of sport information began to develop. Initially, they generated printed indexes:

- Sport Documentation Monthly Bulletin (UK) began to produce annual indexes from 1977; this included European journals;
- Sociology of Leisure and Sport Abstracts (Canada), published from 1980;
- Sport bibliography (Canada) published by the Canadian Sport Information Resource Centre (SIRC) in 1981; coverage of sport literature including books, conferences and journals back to 1974.

SPOLIT database

The first computerised database of sport was SPOLIT, developed by the Bundesinstitut for Sportwissenschaften in 1972. This database indexed advanced level sport science articles in German and English. The database later became available on a CD-ROM, and is now available via the Internet.

SPORT Database

The printed indexes mentioned above were produced from databases, the primary one being the SPORT database created in 1975 in Ottawa, Canada, by SIRC. The database began initially as a resource for Canadian coaches, but it was soon realised that coaches required such a vast array of information that it was a little step to move from coaching to the whole area of sport.

Negotiations between IASI and SIRC resulted in the recommendation adopted by the Executive Committee of IASI in Mexico City, September 1983 which read:

> The group members have agreed to designate the Canadian Sport Information Resource Centre, SIRC, as the core in the beginning stages of building this international database system.
>
> (Chiasson 1985)

In a cooperative venture between IASI and SIRC, it was decided that the SIRC SPORT Database would be recognised as the international database for sport and that each country was to be invited to add their national information to this database on the model of an 'international cooperative information system'.

The SPORT Database currently lists 17 countries as having bilateral information exchange agreements to contribute data to SPORT Discus. The amount of material indexed by these partners varies significantly and SIRC covers the indexing gaps internationally. In addition to the SPORT Database SIRC has negotiated contracts and provides three other discrete databases with the CD-ROM. These are:

- Atlantes: the largest Spanish-language database in the world containing bibliographic information on sport, physical activity and leisure. It includes bibliographic references contributed by some of the documentation centres and specialised libraries which form part of the Latin-American network for Sports Documentation, Sportcom.
- Heracles: the largest French-language database in the world containing bibliographic information on sport, physical activity and leisure. It is provided by Sportdoc, an association of more than 15 sport

and education organisations. Heracles contains over 50,000 citations and adds more than 4,000 each year (Heracles is also available free of charge on the Internet).

▪ Catalogue of the IOC Olympic Museum 1830–1996: this database has over 11,000 records.

Traditionally these databases covered the indexing of bibliographic materials – books, serial articles, conference proceedings and book analytics. With new media the indexing covered videotapes and CD-ROMs.

Internet

The Internet has thrown open the old world of information documentation, and presented a whole host of new opportunities and challenges.

In the sport information provision world the challenge is to make the most of the advantages the new technologies bring, while minimising the current disadvantages of the Internet, such as the difficulty in locating quality information, and the transitory nature of information posted.

The questions should be asked 'Is sport documentation still necessary with the growth of the Internet? Do researchers need an intermediary?'

Currently the answer is yes – sport documentation is required to provide the following:

- An interface between information available electronically, and information in other formats (print, audio, video). The Internet is a great source of current sport information and statistics, but for the researcher looking for results from the Atlanta Olympic Games, or for a sports science publication published in the 1980s it is not so useful.
- Quality control of information. The Internet allows almost everybody to be a publisher. The sport documentalist can ensure only reputable information is indexed, saving much of the weeding through the chaff.
- Location of information.
- Archiving of material. Because of the nature of the Internet, it is just as easy to destroy material as to publish it. Much of the information on the Internet has a very short life. The Sydney 2000 Olympic Games web site that had 11 billion hits during the Sydney Olympics was no longer available on the Internet by 1 January 2001. Not only do valuable sites disappear, they also change their domain name, often without a forwarding message, making access very difficult. By archiving valuable information, not only does this ensure access, it also maintains a permanent URL.

Sport documentalists internationally are looking at several different models to address the new challenges of providing access to sport information. The models are changing as technology changes.

SPORT Database

The SPORT Database had an infrastructure established for the indexing of bibliographic material. This has been extended to cover the indexing of Internet materials.

Web sites were indexed by SIRC from 1996. The WebSPIRs technology on which the CD-ROM SPORT Discus ran, and access to the SPORT Database on the web, allow click-through access to the sites indexed. The major problem encountered here was due to the transitory nature of the Internet. Because web sites had often ceased to exist, or had moved before or just after the printing of the CD-ROM, the click-throughs went nowhere.

Through its National Sport Information Centre (NSIC), the Australian Sports Commission – an indexing partner of SIRC – took a different approach to indexing web materials for the SPORT database. A decision was made to index only material for which a permanent URL could be guaranteed. Relevant material was archived in a full text area of the Australian Sports Commission's web site. Publishers of relevant Australian and, more recently, New Zealand material were approached and asked permission to archive their material for posterity. To date no request has been refused, and the NSIC has been approached to archive material.

In March 2001, the directory with the greatest number of hits on the Australian Sports Commission web site was the full text directory www.ausport.gov.au/fulltext with 8,000 hits in one week. Currently there are several thousand documents in the full text directory. Documents are stored as both html and PDF files.

Digitisation projects

Digitisation projects aim to digitise publications that were previously only available in print. These projects provide free access on the Internet to information that was previously stored in a handful of libraries.

These projects in the past have often targeted publications that are no longer covered by copyright. More recently agreements are being signed, usually with non-profit organisations, to archive their publications.

Several sport information centres are undertaking sport digitisation projects. The most ambitious to date is that of the Amateur Athletic Foundation of Los Angeles http://www.aafla.org/. The Amateur Athletic Foundation library is engaged in a project to convert selected scholarly journals and historically significant Olympic publications from paper to digital format.

The Foundation's web site includes many electronically available texts.

Titles include: From the North American Society for Sport History (NASSH) the *Journal of Sport History*, and *NASSH Proceedings*. From the Australian Society of Sports History (ASSH) *Sporting Traditions*: *The Journal of the Australian Society for Sports History, ASSH Bulletin* and *ASSH Studies in Sports History*. The International Centre for Olympic Studies in London, Ontario provides *Olympika,* and *Olympic Research Symposium Proceedings and Sport Management Review* come from the Sport Management Association of Australia and New Zealand. The most recent addition is the *Journal of Olympic History* from the International Society of Olympic Historians.

Olympic documents include a dozen Olympic Games official reports from 1896 to 1984. In addition, the International Olympic Committee has granted the AAF permission to digitise back issues of the IOC publications, *Olympic Review* and *Revue Olympique*. Several years of back issues are now on this site. When the project is completed, the back issues will extend to 1894.

A search engine on the Foundation's site allows full text searching of the documents, which are stored as PDF files. Currently there is no link between these records which are indexed on SPORT Discus, and the URL on the Foundation's site. This linkage would enhance both services.

The North American Sport Library Network has formed a Digital Sport Group (DSG). This group is pursuing the digitisation of 19th and early 20th century US sports periodicals. The group is undertaking a pilot project to digitise the journal *Outing*. The purpose of the pilot project is to demonstrate to potential funding agencies that DSG (a) can work together effectively as a group and (b) can produce a viable digital product (Nasline 2001).

Archiving electronic publications

As mentioned, the National Sport Information Centre of the Australian Sports Commission regularly archives electronic publications. Other organisations such as SIRC are also undertaking archiving projects with links to the SPORT Database.

Archiving web sites

One example of an organisation archiving web sites is the National Library of Australia. The Library has established the PANDORA project to archive selected Australian online publications, including web sites. http://pandora.nla.gov.au/sport_recreation.html

It has selected several sport-related web sites, and provides snapshots of these sites at various times of their life cycles. Several sites related to the Sydney Olympic Games have been archived, creating a valuable historical archive of digital information that would otherwise have been lost.

More work needs to be undertaken in this area by both national institutions and web creators to ensure future access to information, once available in print format, but now increasingly only available electronically.

Organisers of major sporting events need to be made aware of the need to archive electronic information to ensure access for future needs.

Sport portals

A sport portal offers information on a specified area of sport, and provides links to sites of interest to their targeted audience.

There are a number of excellent sport portals available on the Internet. Some of these cover specific

sports, other cover specific disciplines, and others cover sport at a national or regional level. The target audience varies in these portals, from the general public, to sport scientists to academics and students.

Examples of these sport portals are:

www.ucalgary.ca/library/ssportsite

This subject directory brings together web sites which will assist the serious sports researcher, kinesiology librarian, sport information specialist, college/university student and staff. It is maintained by the North American Sports Library Information Network.

www.sponet.de

Sponet is a database produced by the Department of Sport Information Documentation at the Institute for Applied Training Science, Leipzig, Germany. The target audience is sport scientists, coaches and athletes. This database with search tools in both German and English indexes Internet resources on sports science. To date more than 5,500 resources have been evaluated, indexed and input in to the database. Access is free via the Internet.

Electronic journals

Electronic journals fall into two categories, those that are only published online, and those whose online presence supplements the hard copy publications. If both hard copy and online access is provided, again there are different models. Some provide exactly the same information – the online version is a straight copy, usually as a PDF file of the hard copy. Others vary the content – some allow the online environment to provide additional functionality, such as Excel spreadsheets the reader can manipulate; while others may limit the access to only selected sections of the hard copy journal.

Electronic journals can provide tremendous advantages to those seeking information, but they can also provide tremendous headaches to those trying to document, and retain access to them.

Electronic journals are new for the publishing world, and the publishers are trialling many different methods of access. Methods include:

- Free access to all material
- Free access to selected material
  Often used as a teaser to encourage subscription. Articles tend to be available for a short period of time. Alternatively older material may be available, but for more current material you need to subscribe.
- Access via IP address
  Provides access to one or a range of IP addresses. Only useful for generally larger organisations who have a stable IP address.
- Access via password
  Fine for single subscribers, but not easy to administer for large organisations with many titles with

many different passwords.
- Aggregated online services (access to a number of titles in one package)
  Useful for large organisations such as universities, but titles not applicable yet for stand-alone sport information centres. These services tend to be quite expensive, but cut down on overheads as there is a stable method of access to a number of titles.
- Pay per view
  Useful method of access for journals that are not required on a regular basis. Can be very cost effective.

All provide challenges to the documentalist who wishes to provide the most direct access to the specific article the client is seeking. The best scenario for sport information centres and users is free access to a permanent URL, thus when an item is indexed, be it on a web site, or via an indexing tool like SPORT Discus, a link is provided to the full text of the material. Where organisations such as the Amateur Athletic Foundation of Los Angeles and the Australian Sports Commission are archiving material, this model works well. Unfortunately this is the exception rather than the rule as most publishers are in the business to make money.

Different models need to be created for different forms of access. With most information centres having to deal with all access methods, and publishers regularly changing their models, it is necessary for more intermediary resources, than was the case when the client could simply walk in and find the journal on the shelf.

Interface between electronic and print
Sport information providers are working towards the seamless interface between electronic and hard copy materials. Currently too many of our clients are reliant on either

Electronic — where they search the Internet, often not very effectively and think they have found all that is available
or
Hard copy — where they rely on the journals that come across their desk.

There are products available that are assisting in the integration of formats. Silverlinker, a Silver Platter product allows libraries to add their holdings to their CD-ROM products, so users can tell immediately if they have access to the relevant journals. The next stage in this process would be to link to the full text of the relevant item, but this would require a permanent URL for each item, and the database such as SPORT Discus providing the URL in their record.

It seems at present a hybrid of products is required to fulfil the needs of clients of sport information services. The challenge of the sport information documentalist is to ensure all forms of sport information products are indexed and readily available to clients.

Currently there is a large amount of duplication in the indexing of sport information. Often this indexing is undertaken at the local level, and access is not provided to a wider information-seeking market.

We are seeing a move to provide free access to sport indexes on the Internet. These indexes include traditional bibliographic databases such as Heracles, indexes on Internet resources such as Sponet, and indexes of full text material such as the Amateur Athletic Foundation of Los Angeles index. The next step is to encourage others to make their databases free on the Internet, and to develop a powerful search engine to search across all the databases.

Conclusion

This is a challenging and rewarding time to be working in the area of sport information. New technologies are enabling improved methods of access to sport information resources. Various projects are facilitating global access to material previously only available to a select few.

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