

“The Rolls Royce of the Library Reference Collection”

The Subject Encyclopedia in the Age of Wikipedia

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This paper reviews the development of the subject encyclopedia as an information resource and evaluates its present role, with particular focus on the academic library. The paper looks especially at online subject encyclopedias and the extent to which academic libraries are facilitating and promoting access to these resources.

A generation ago, fledgling reference librarians were reared on Bill Katz’s popular textbook on reference work. Katz devotes a chapter to encyclopedias, drawing a distinction between the general encyclopedia and the subject encyclopedia:

Many subject encyclopedias are examples of what can be done in the synthesis and the presentation of knowledge in a clear, understandable, and intelligent fashion. Admittedly stretching an analogy, the subject encyclopedia is the Rolls Royce of the library reference collection, whereas the general encyclopedia is the Ford or Chevrolet.¹

With the enormous changes that have occurred in the world of information retrieval during the last thirty years, it is probably time to ask

ourselves whether Katz’s dictum still applies. Are subject encyclopedias still an important resource? We know that they are still being published, and that librarians are still purchasing them for their reference collections, but are we only doing this out of habit? Do the benefits we derive from these works still justify the money that we are spending on them? Do our clients still use them?

The aim of this paper is to briefly review the subject encyclopedia’s development as an information resource and to evaluate its present role, with particular focus on the academic library. This paper will look also at the question of online access to subject encyclopedias and the extent to which academic libraries are facilitating and promoting access to these resources.

THE RISE OF THE SUBJECT ENCYCLOPEDIA

Ignoring some earlier precursors, we can say that the eighteenth century saw the birth of the comprehensive alphabetical encyclopedia. The century of the Enlightenment saw the publication of works such as the *Encyclopédie* (1751–80) of Diderot and d’Alembert and the first edition of the *Encyclopaedia Britannica* (1771).

The expansion of learning in the

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nineteenth century created a demand for works that were restricted to specific domains of knowledge but still modeled on the universal encyclopedias that were by then so popular. Among the titles published in the English-speaking world were William Smith's *Dictionary of Greek and Roman Antiquities* (1842), Robert Chambers' *Cyclopaedia of English Literature* (1844), and George Groves' *Dictionary of Music and Musicians* (1879–89), while on the Continent important works such as Pauly's *Real-Encyclopädie der classischen Alterthumswissenschaft* (1842–6) appeared.

The publication of subject encyclopedias gathered pace during the twentieth century. By 1961, Ranganathan was able to write that "today we have encyclopaedias at all levels of intension. . . . For example we have encyclopaedias for most of the main classes. . . . In more recent years encyclopaedias are being produced even in subjects of still higher order of intension."² He goes on to cite titles such as the *Handbuch der Astrophysik*, Mitzakis's *Oil Encyclopaedia*, and the *Encyclopaedia of Islam*. By the 1970s, as evinced by the quotation from Katz previously cited, the subject encyclopedia was firmly established as a central pillar of library reference work.

By 1986, when the *American Reference Books Annual* published the first edition of its *Guide to Subject Encyclopedias and Dictionaries*, we had reached the heyday of the subject encyclopedia.³ The *Guide* was restricted to works in English published in the previous eighteen years, but it gives a very good overview of the range of titles in use at the time. Table 1 shows the number of works listed in selected subject areas of the *Guide*.

This data might suggest that the subject encyclopedia was a resource that played a greater role in the humanities than in the social or natural sciences, but we should bear in mind that it tells us nothing about the level of use of individual titles.

There is often a disconnect between the information sources librarians use and recommend and the information sources researchers and students actually use. Ranganathan rightly warns that "many readers are not aware of the existence of encyclopaedias in subjects of such narrow extension. They have to be brought to their notice by the reference librarian."⁴ Nonetheless, it seems clear that the major subject encyclopedias were being widely used throughout the twentieth century. For example, more than seven hundred articles in the economic journals archived in the JSTOR database cite the various editions of Palgrave's *Dictionary of Political Economy*. In the same database, more than nine hundred articles in the sociology journals cite the *Encyclopedia of the Social Sciences*,

Table 1. Works Listed in the 1986 ARBA Guide to Subject Encyclopedias and Dictionaries (Selected Subject Areas Only)

Subject Area	Number of Works
Religion	71
History	62
Music	43
Psychology	36
Earth Sciences	34
Chemistry	29
Education	24
Physics & Mathematics	16
Astronomy	10
Sociology	10

or its successor, the *International Encyclopedia of the Social Sciences*, and five hundred articles in the classical studies journals cite editions of the *Oxford Classical Dictionary*.

GOING ONLINE

In 1986, Ken Kister, an American reference librarian regarded as an authority on encyclopedias, was able to write that

computers will not replace encyclopedias anytime soon. . . . At present, the electronic encyclopedia is in its infancy. Only two titles of any significance, the *New Encyclopaedia Britannica* and the *Academic American Encyclopedia*, are currently available in electronic form, and usership is quite limited. But by the end of the century, as more and more homes, libraries, schools, and offices become equipped with computer terminals, I look for automated encyclopedias to compete more or less on an equal footing with print encyclopedias.⁵

If the general encyclopedias to which Kister was referring were only moving slowly into electronic format, the specialist subject encyclopedias did not move much faster. Among the pioneers were the *Kirk-Othmer Encyclopedia of Chemical Technology*, which was published on CD-ROM in 1987, and the *International Encyclopedia of Education*, which appeared on CD-ROM in 1988.

Of course neither librarians nor publishers at that time anticipated the web's development, or the revolutionary changes in information retrieval that lay ahead. Sometime in the early 1990s, students in search of basic, introductory information on a given topic began to realize that they could often find it quickly from their desktop computers via the Internet, and this trend rapidly accelerated with the web's mushrooming development. Educators became increasingly concerned about the dubious quality of the information that their students were using, and librarians began to see a new role for themselves in teaching the evaluation of information found on the web.⁶

While students were eagerly exploring the new possibilities of the web, publishers of subject encyclopedias were slow to adapt to the new medium. Gale made the *Dictionary of Literary Biography* available by subscription on its GaleNet site in 1997. Xrefer began to offer free online access to a range of reference works in 2000, hoping to fund this service from advertising revenue. Like the *Encyclopaedia Britannica*, it found that this was not a sustainable business model, and the company had to reinvent itself as a subscription service now known as Credo Reference. Oxford University Press began to make a range of its subject encyclopedias available online as Oxford Reference Online in 2002. Other major publishers soon followed.

THE AGE OF WIKIPEDIA

Wikipedia launched in 2001 as a free, collaboratively produced online encyclopedia, and it expanded rapidly over the following years. Despite criticisms from academics and information professionals about the quality and authority of the content, its breadth of coverage and high ranking in Google search results meant that it quickly established itself as the prime information source for students at all levels.

A 2008 survey of eighty-six undergraduate students in the humanities and social sciences at seven institutions in the United States found that "Wikipedia was a unique and indispensable research source for students . . . there was a strong consensus among students that their research process began with Wikipedia."⁷ The students surveyed used Wikipedia to obtain an up-to-date, concise overview of their research topic, to identify and clarify relevant terminology, and to access the bibliographic references to lead them to further information: in short, for all the reasons that students have traditionally used printed encyclopedias.

The same investigators conducted an online survey that attracted more than two thousand

responses from students in all major disciplines at six campuses. They found that 85 percent of respondents were using Wikipedia to obtain background information on a research topic. Only 61 percent of respondents were using encyclopedias (whether print or online) for this purpose.⁸

Not just undergraduate students use Wikipedia. A 2009 survey of more than five thousand doctoral students in the United Kingdom refers to the "prevalence and popularity of Wikipedia."⁹ In the same report, a "critical incident" study of the last significant piece of information-seeking activity asked students to report the main source that led to the information. The most common sources were Google or Google Scholar, citation databases, and e-journal databases, but in about 3 percent of cases the source was Wikipedia, which ranked slightly higher than "works of reference."¹⁰

Many faculty and librarians now appear to accept Wikipedia. A recent evaluation of Wikipedia by two Canadian academic librarians concluded,

It seems that the ongoing professional discussion about whether Wikipedia is good or bad is irrelevant. It exists; it is being used. It is a logical starting point for research for many individuals; it is particularly good as a definition tool that acts as a springboard for further research. . . . Wikipedia has a place within the context of information gathering.¹¹

THE SUBJECT ENCYCLOPEDIA TODAY

So what is the position of the traditional subject encyclopedia as an information resource in the academic world today? As university libraries review or downsize their reference collections, are they retaining and augmenting their collections of subject encyclopedias? Or are libraries moving them into the general collection in the hope that they might be more visible there? Or are they purchasing online versions in addition to (or perhaps instead of) printed encyclopedias?

In her report of a reference collection weeding project at Bowling Green State University, Singer lists various types of material that were targeted for removal: printed journal indexes, directories, subject bibliographies, language dictionaries, and collections of quotations. Subject encyclopedias are not mentioned, suggesting that these publications were still considered a useful component of the reference collection.¹² She notes that a subsidiary aim of the weeding project was to identify reference works that were now available online and to "shift some of the budget allocation from print to electronic format."¹³

As reference librarians in universities are well aware, the attitude that "if it's not online, it doesn't exist" is becoming more prevalent with every passing year. For a 2005 article on the transition to electronic reference sources, Roncevic interviewed executives from major firms specializing in the publication of reference books, and their perspectives on this issue make interesting reading.¹⁴ The executives made comments such as the following: "I do not approve any new project that doesn't have an online exploitation plan"; "It takes a huge investment to build a database and then sustain it"; "The biggest challenge is believing that even if there is a market for electronic products, librarians will buy them in the quantities needed to sustain a profitable publishing program"; "It remains a great challenge to convince students and other researchers that free web sites should not be used for serious research"; "The demand among end users is enormous, but a library's ability to make an ongoing commitment is very much a finite thing."

Four years later, subject encyclopedias continue to be published in considerable numbers. Sixty-six subject encyclopedias were reviewed in *Reference & User Services Quarterly* during 2009. This figure represents a slight increase on the sixty-three encyclopedias reviewed in 1999, suggesting that the market for such works has remained stable over the last decade. As the average price of the works reviewed in 2009 was almost \$270, it is safe to assume that most of them were published almost solely for the library market, so it would appear that libraries are still purchasing such works in considerable numbers. Whether such purchasing decisions are based on sound evidence of user demand or merely on librarians' traditional attachment to the "Rolls Royce of the library reference collection" is not clear.

The sixty-six encyclopedias in question were published by a range of American and international publishers who all specialize in the production of reference works. After surveying the publishers' websites, it appears that forty-five of the sixty-six titles are currently available as part of online e-reference databases, the principal platforms being SAGE Reference Online, Gale Virtual Reference Library, and the ABC-Clio e-book Collection. It is encouraging that so many of the titles are available online, but their dispersal across multiple platforms puts them at a disadvantage when compared with the "one-stop shop" that is Wikipedia.

Are researchers still using subject encyclopedias? A search was conducted of the educational journals in the Sage Journals Online database from January 2004 to December 2009 to locate citations to the second edition (2003) of the *Encyclopedia of*

Education, an eight-volume set published by Macmillan Reference and available online by subscription from Gale. Only three citations to this major encyclopedia were found, although there were many citations to a range of other encyclopedias in the discipline. In the same sample of journals, Wikipedia was cited ten times.

To take an example from another discipline, journal articles published from 2005 to 2009 in the subject grouping philosophy on the SpringerLink database were checked for citations to the standard print encyclopedia in the field, the ten-volume *Routledge Encyclopedia of Philosophy* (1998), which is also available online via subscription. Fifty-five articles cited this work. However, 245 articles cited the free, peer-reviewed, online *Stanford Encyclopedia of Philosophy*, confirming the expectation that when two quality resources are available, the free online resource will be much more popular. Seventy-nine articles cited Wikipedia.

Of course, citation in journal articles is not the whole story. The main function of a good subject encyclopedia should be to provide both undergraduate students and researchers with a starting point to clarify terminology and discover further reading. Finding data to indicate how often this is happening is not easy.

As printed encyclopedias are usually noncirculating, use statistics can only be obtained with difficulty. A survey of use of the print reference collection at Stetson University during 2003–2004 produced a list of the sixty-five most heavily used titles. Only eight of these were subject encyclopedias.¹⁵

For online encyclopedias, we can sometimes obtain disaggregated use statistics from vendors. Table 2 shows the number of articles downloaded by students and researchers at the University of Queensland in 2008 from thirty subject encyclopedias available on the Gale Virtual Reference Library platform.

Considering the expense of these titles, the download figures are disappointing for a large university with about forty thousand students, 25 percent of whom are postgraduates. Clearly many of our online subject encyclopedias are not earning their keep.

PROMOTION OF SUBJECT ENCYCLOPEDIAS IN ACADEMIC LIBRARIES

The data in the preceding section suggest that subject encyclopedias are an underused resource. They are expensive, high-quality products

Table 2. Articles Downloaded from Selected Titles in the Gale Virtual Reference Library at University of Queensland, 2008

Title	Downloads
<i>Encyclopedia of Religion</i> (2005)	368
<i>International Encyclopedia of the Social Sciences</i> (2008)	313
<i>New Dictionary of the History of Ideas</i> (2005)	140
<i>Encyclopedia of Social Theory</i> (2005)	133
<i>Encyclopedia of Sociology</i> (2001)	129
<i>Encyclopedia of Modern Europe: Europe 1789–1914</i> (2006)	104
<i>International Encyclopedia of Organizational Studies</i> (2008)	101
<i>Encyclopedia of Education</i> (2003)	85
<i>Encyclopedia of Anthropology</i> (2006)	82
<i>Europe 1450 to 1789: Encyclopedia of the Early Modern World</i> (2004)	82
<i>Encyclopedia of Occultism and Parapsychology</i> (2001)	79
<i>Dictionary of American History</i> (2003)	67
<i>Encyclopedia of Drugs Alcohol and Addictive Behavior</i> (2001)	66
<i>Encyclopedia of European Social History</i> (2001)	65
<i>Encyclopedia of Islam and the Muslim World</i> (2004)	51
<i>Encyclopedia of Communication and Information</i> (2002)	49
<i>International Encyclopedia of Marriage and Family</i> (2003)	43
<i>Encyclopedia of Bioethics</i> (2004)	38
<i>Encyclopedia of Management</i> (2006)	32
<i>Encyclopedia of Population</i> (2003)	30
<i>St. James Encyclopedia of Popular Culture</i> (2000)	28
<i>Encyclopedia of Business and Finance</i> (2001)	27
<i>Gale Encyclopedia of Psychology</i> (2001)	25
<i>Encyclopedia of Politics</i> (2005)	22
<i>World Press Encyclopedia</i> (2003)	21
<i>Environmental Encyclopedia</i> (2003)	20
<i>Gale Encyclopedia of Nursing and Allied Health</i> (2002)	17
<i>International Dictionary of Film and Filmmakers</i> (2000)	13
<i>Encyclopedia of Russian History</i> (2004)	10
<i>Encyclopedia of Leadership</i> (2004)	8

produced by reputable, specialist academic publishers, so why are they not being used as heavily as they should? And is there anything that librarians can do about this?

It is now a cliché of librarianship that our clients are more interested in convenience than quality and that our high-quality resources will only be used if our clients can identify and access them

easily. This explains why the printed subject encyclopedias in our reference collections are sometimes covered in dust. As Flaxbart remarked some years ago, “the use of printed reference works in the sciences has almost dropped off the meter these days,” and this is becoming increasingly true in the social sciences and humanities also.¹⁶ But if we have electronic access to these encyclopedias,

surely students and researchers will use them? Unfortunately, electronic access on its own is not enough. As Blankenship and Leffler point out, "it can be a challenge for a library to alert patrons to available online reference sources," and even if users are aware of a particular online encyclopedia, how many hoops do they have to jump through to access and search it?¹⁷

Some interesting solutions to this problem have been proposed. Peterson has suggested placing wooden dummies in the reference collection at the classification number appropriate to the online resource, and putting "also available online" labels on the print version of works that can be accessed electronically.¹⁸ Ballard and his colleagues at Quinnipiac University have developed a web portal which presents their e-reference titles in Library of Congress Classification order. Unfortunately the titles are presented as book spines, so they run vertically down the screen and are not particularly easy to read.¹⁹ The problem with both of these solutions is that they are trying to replicate a traditional method of finding information (namely, browsing book stacks), which is foreign to a generation that grew up on Google and Wikipedia.

When liaison librarians have access to sites that students in a particular course will use frequently—such as electronic course reserves or course management systems like Blackboard—they have the opportunity to insert links to relevant electronic encyclopedias. If the links are prominently situated, students might notice and use them. Demonstrating a particular resource in a library instruction session or providing links to it in a subject pathfinder are other valuable promotional techniques.

To find out more about how academic libraries are promoting online encyclopedias to their clients, the author conducted a survey of the websites of twenty randomly selected university or college libraries in the United States, United Kingdom, and Australia. The survey revealed that libraries were promoting these resources in three ways: by listing the works individually in the online catalog, through subject guides (pathfinders), and via lists of databases or e-books.

Nineteen of the twenty libraries surveyed create individual catalog records for their online encyclopedias, even when these are part of larger packages such as Credo Reference or Gale Virtual Reference Library. Does this significantly increase use of the encyclopedias? In cases where the title is well known and often cited in the discipline, it is reasonable to assume that many users will be searching for it in the catalog and will follow the link to the online version. However, for titles that are not household names in their field, it is much

less certain that an entry in the catalog will do much to increase use.

Nineteen of the twenty libraries surveyed provided subject guides (sometimes called research guides or pathfinders) on their websites. The content and layout of these guides varies enormously, not only from one library to another but even within the one library system. Some of them give considerable information on both print and online encyclopedias, others provide links to online encyclopedias only, and others give no information at all about encyclopedias, even in disciplines where many such works exist.

All of the libraries provide some sort of gateway to their online resources, but only some of these are helpful for locating electronic encyclopedias. Typically, several clicks are required to reach the listings of online encyclopedias, and often the path leads through links with text such as "Reference Works" or "Reference Material," which are terms well understood by librarians but probably misleading to many of our clients. An additional problem is that there is often no disaggregation of important packages: a link to Gale Virtual Reference Library or Oxford Reference Online tells the user nothing about the many important titles in those collections.

Let us look at some individual cases. The University of Sydney Library has a tab on its homepage (www.library.usyd.edu.au) labeled "Databases And Electronic Resources." This leads to a page with the option "E-books" in a sidebar. This displays a page headed "E-book Collections," where one can scroll down to a heading, "Reference Works," where there are links to collections such as Blackwell Reference Online, Gale Virtual Reference Library, Oxford Reference Online, ScienceDirect, Wiley Interscience, and also to some individual, free-standing electronic encyclopedias.

The John Rylands University Library at the University of Manchester has an "Electronic Resources" tab on its homepage (www.library.manchester.ac.uk). This leads to a page that has the option "Reference Material" in a sidebar. This displays a page where one can scroll down to the heading "Encyclopaedias" to find an alphabetical listing of major titles.

Of the twenty libraries surveyed, only one comes close to providing prominent and effective access to its electronic encyclopedias: North Carolina State University Library. On the homepage (www.lib.ncsu.edu) there is a link to "Reference Tools." This displays a page that first offers a dropdown menu of "Subject-Specific Reference Tools," which connects to the "Reference Tools" tab on the relevant subject guide. More importantly,

the “Reference Tools” page includes a search box labeled “Search Inside The Reference Books On Our Shelves (sort of . . .).” This text is somewhat misleading, because it suggests that the search will only retrieve print resources. It is, in fact, a widget that uses the Reference Universe software to search both the electronic and print reference books in the library’s collection.

FEDERATED SEARCHING: THE SOLUTION?

As noted earlier, one of the obvious differences between Wikipedia and the online subject encyclopedias purchased by academic libraries is that Wikipedia provides a single search interface for its huge database of articles, whereas a library’s collection of online encyclopedias is dispersed over a number of platforms, each with its own search interface. This is a perfect example of the “convenience versus quality” dichotomy. A recent announcement that ABC-Clio content will be added to the Gale Virtual Reference Library platform suggests that the publishers are now realizing that dispersal of reference books across multiple platforms is not good for business.²⁰ Is there a solution to this problem?

Two of the twenty libraries surveyed use Reference Universe to provide access, at article level, through a single search interface to both the print and electronic encyclopedias in their collections. This is a commercial product marketed by Paratext that, according to the vendor’s website, “brings together links to all major and minor electronic reference works, as well as the complete indexes to your library’s printed subject encyclopedias, compendia and handbooks. Reference Universe contains more than 20 million citations to nearly 20,000 electronic and print reference works.”²¹

A reference librarian at Wright State University describes the product as follows:

Reference Universe collaborates with hundreds of publishers to index the article titles, tables of contents, and indexes of more than 40,000 reference titles. . . . Keyword searches retrieve a list of relevant articles found in a library’s reference collection. Links to either the e-book article or the catalog record for print titles connect the user to reference material.²²

A federated search engine dedicated to encyclopedias and similar compendia, both print and online, seems the ideal solution. However, federated search is a rapidly developing area, so there might already be general federated search products

on the market that can limit results to entries in online encyclopedias.

THE FUTURE OF THE SUBJECT ENCYCLOPEDIA

Does the subject encyclopedia have a future? If it does, the future is surely online; but do online encyclopedias even have a future?

Perhaps the real question is this: will today’s students use encyclopedias? Or, to rephrase that question, does the term “encyclopedia” as a brand mean anything to Generation Y? Twenty years ago, all students coming to university had used encyclopedias—perhaps a set that proudly stood on its own shelves in the family living room, or else a set in the school or public library. The students understood and valued what an encyclopedia could do.

If the concept of an encyclopedia still means anything to undergraduates today, then ironically this may be because of the much maligned Wikipedia, which has kept alive the model of a comprehensive information source divided into discrete articles written by different authors and providing a clear overview of specific topics, often with a list of further readings. If we think that our students still understand and value the encyclopedia as an information resource (and this is a question that probably merits further research), then why are we not promoting our encyclopedias more prominently on our websites?

If we believe that subject encyclopedias have a future, and if we plan to continue spending large sums to buy them (in the sure and certain knowledge that publishers will keep producing them as long as libraries keep buying them), then we have to do more to facilitate and promote access to these valuable and expensive resources. To be used, they must be online. But being online is not enough: they must be easily findable and ideally cross-searchable so that we can leverage the variety of content and viewpoint in our entire electronic encyclopedia collection. It is only in this way that our encyclopedias can hope to provide a viable competitor (or complement) to Wikipedia.

The alternative is to accept that the encyclopedia no longer has a place in today’s information environment. There are librarians who seem to have already reached that conclusion, if one is to judge from some of the subject pathfinders on library websites. Perhaps they are right. Ten years hence, the subject encyclopedia may be just another mythical creature from the distant past of reference work, along with printed journal indexes, telephone directories, and looseleaf news digests. If so, Bill Katz will be turning in his grave.

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