To wire or not to wire?
Encyclopaedia Britannica versus Microsoft Encarta

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ABSTRACT

This paper will review *Encyclopaedia Britannica* and *Microsoft Encarta*, highlighting elements of audience appeal, educational value and potential for learning. Currently, encyclopaedia publishers compete to re-establish their position in the information age. In this context, *Britannica* and *Encarta* publishers concentrate their efforts in rejuvenating their products' agenda and their role in learning and education. While learning models are intermingled with business models, the need for re-evaluation remains necessary. These issues are drawn together to inform the future conduct of assessment and evaluation of encyclopaedia services.

Introduction

For many years encyclopaedias have provided summaries of information and introductions to many knowledge domains. Historically, encyclopaedias had a much broader significance: to define the scope and systematise the shape of knowledge. Since its inception, *Encyclopaedia Britannica* has perpetuated the ideological perspectives of the Enlightenment. *Britannica's* social-scientific approach and authoritative content – covering over thirty-two volumes – and scholarly style has been emblematic of those perspectives. Gradually *Britannica's* brand became *the* standard for encyclopaedias in the English language. Yet evidence has suggested that *Britannica* was dysfunctional and rarely used by younger generations of students (R. Brown, personal interview, September 27, 2000; D. Skinner, personal interview, July 2000; see also, Rayport, 1995; Stross, 1996). When multimedia technologies were introduced in the late 1980s, they were presented as valuable tools to transform and reinforce the learning potential of large reference works. Effectively, works like encyclopaedias could advance the educational value of the personal computer for home users. As a result, Microsoft grasped the opportunity to extend its influence, and in 1993 offered *Encarta*, a multimedia product on CD-ROM that was based on the print encyclopaedia *Funk and Wagnall's*. Arguably *Encarta* did not have the deep information of *Britannica*. However it proposed an alternative value: better search capabilities, portability, entertaining media features, and was much less expensive. Those alternative value propositions and Microsoft's aggressive marketing strategy and distribution power contributed in making *Encarta* one of the most widely recognisable electronic encyclopaedia brand.

Network technologies and the popularisation of the World Wide Web further provoked the evolution of encyclopaedias. New media forms that range from search engines to portals and web directories have gradually transformed the ways people search for information. At the same time, e-learning and gaming platforms blur the boundaries between education and entertainment and suggest new possibilities for enhancing teaching and knowledge acquisition. As a result, encyclopaedias now incorporate a variety of reference and popular media genres to appeal to a variety of interests and lifestyles. As diversified economics make the competition among commercial information and learning services more intensive, *Britannica* and *Encarta* continue to dominate in the battle for the attention of educators, parents, librarians, students and causal researchers by promoting the value of authorial quality and editorial selectivity through new 'encyclopaedic' products and services. At the same time, both companies (Britannica Inc. and Microsoft Learning Business Unit) pioneer in adjusting their design rationales and production agendas to facilitate several kinds of functional outcomes within the realm of: Internet guidance, trustworthy information provision, contextual knowledge, situated learning, curriculum assistance and engaging instruction. Nonetheless, the latest strategies of *Britannica* and *Encarta* suggest more emphasis on a business model and less interest in learning needs and demands of consumers. This paper will present a critical review of *Encarta's* and *Britannica's* range of services, highlighting elements of audience appeal, educational value and potential for learning.

Competing perspectives

Encyclopaedias have been transformed from bulky repositories of knowledge to inexpensive CD-ROMs or free Internet services. The two leading companies are intensifying their efforts to capture different consumer segments and cater for their daily information needs or learning preferences. Both brands offer a wide range of services in multiple formats and price variations depending on multimedia and reference context, mode of access (online vs. offline) and demographic appeal (schools and institutions prefer advertising free networked services or acquire site licenses, whereas the preferred option for home users are the finished products). The advantages of the disc over online reference are obvious. There is no worrying about access availability or cost with the CD-ROM version, which allows leisurely browsing and more multimedia context. On the other hand, online versions offer more powerful search facilities, direct links to current affairs and direct updates. List prices vary between $75 USD and $50 USD for *Encarta Reference Library* and between $70 USD and $45 USD for *Britannica Deluxe*, while existing customers can purchase new versions for much lower with mail-in rebates.

Encircling the global versus embracing the local

Encarta offers local editions worldwide. Although the encyclopaedia's production methods are determined centrally, there are deals with local publishers. *Encarta's* separate annual editions operate in more than a dozen countries including the UK, South Africa, Australia, India, Japan, Germany, France, Spain, Brazil, Italy and Holland. These are not just translations of the American *Encarta*. Most of the original content is modified in order to take into account country-specific requirements (e.g., national curriculum and educational systems), and local cultures. Local versions try to avoid a homogenising experience and attempt to promote a pluralist vision in providing contemporary knowledge interpretations. Nevertheless, differing *Encartas* spawn inconsistencies. For example, the UK edition credits the telephone to the Scottish-born Alexander Graham Bell, while the US version calls him an American inventor, and the Italian version credits Antonio Meucci for the invention of the telephone. Microsoft argues that changing the content to reflect local views and beliefs is a result of its pluralistic vision.

Britannica's publishers do not try to appeal to local sensitivities nor do they change content depending on the country of distribution. However, there are slight variations depending on the country of distribution. For example, the spelling is revised for the British edition that also includes the *New Oxford English Dictionary*, instead of the *Merriam Webster's Dictionary* that appears in the North American product. *Britannica's* approach is more universal and less pluralistic.

Reference digest versus educational software

Both companies offer a *Standard* text-based edition of their encyclopaedia. Alternatively, *Deluxe* editions (*Britannica Deluxe*, *Encarta Deluxe*) promote interactive multimedia environments and include more reference tools and selected web links for up-to-the-minute updates and extensions to related topics. Increasingly, both *Encarta* and *Britannica* integrate features and tools that serve specific student and teacher interests. *Encarta* provides alternative structures of its contents to cater to specific national curricula. DVD versions provide additional multimedia material and offer enhanced interoperability among the reference tools, liberating users from the burden of switching discs. Microsoft offers the *Encarta Reference Suite*, a 'reference library' that comprises several discs (or a single DVD) including the *Deluxe* version of the encyclopaedia, an *Interactive World Atlas*, *Encarta World English Dictionary*, *Encarta Africana*, an encyclopaedia of Black History and Culture, curriculum guides and much more.

Britannica has evolved to be much more visual and its new user interface allows navigation through the content more effectively. *Search Britannica* is a search mechanism that uses natural language search queries or boolean methods to browse the encyclopaedia's extensive index. Search results may become complicated and unfamiliar users can be presented with several hundreds matches. It is advisable that users utilise the 'restrict search' feature and 'summaries'. The latest edition incorporates quite effective navigational tools and familiar structural metaphors (e.g., back, next, bookmarks, and history, content buttons) that help users accessing topics that range across long articles. Although the structure that was inherited from the print versions has been abandoned, *Britannica* still retains some elements from this approach for structuring its domains. Alternatively, content can be accessed via the *Timelines*, *Compass* (Atlas) or the *Spotlights*. *Britannica's* style is still quite scholarly; therefore, it is more suitable for senior students and adult researchers.

Encarta has become much more authoritative than in the past. Its magazine-like layout integrates interfaces of the web and the Internet Explorer browser. Articles in *Encarta* tend to be much more concise than *Britannica's* and an index-based search engine can also include web searches (via *Encarta's Web Centre*, a service that hosts selected links to the web in a custom browser). The encyclopaedia editors' mission is to provide information to support quick and easy ways to answer questions. This is illustrated in the narrative structure: each article in the encyclopaedia has a contents page that contains a preview of all related information and associated media. According to editors and usability engineers, this organisation aims to increase memorability and comprehensibility. However, this organisation may also encourage users to read the outlines without going into much detail. An alternative structure is to place outlines at the end of topic sections.

Both products incorporate extensive multimedia treatments (*Encarta Collages*, *Britannica Spotlights*) in tricky curricula subjects or popular topics (e.g., on Human Anatomy, The Ecosystems, but also on Dinosaurs and the Olympic Games). These sections aim to attract attention and promote understanding, while they can be used separately for classroom presentations, or to support specific learning tasks and schoolwork. Likewise, *Britannica's Analyst,* a customisable tool that allows researchers to use country-specific comparative statistics or superlative instances of data and view custom charts and graphs, has a similar function. In addition, both *Britannica* and *Encarta* deluxe versions incorporate interactive tools for annotation and organisation of research (*Britannica Research Assistant*, *Encarta Researcher*), as well as a number of creative mechanisms that allow users to choose different combinations of content to be accessed or export specific documents and media for use in other files. Such tools aim to discourage users from crude 'copy and paste' activities and instead enable them to achieve critical literacy skills and accomplish learning tasks in an entertaining way. Nevertheless, only evidence from actual use of these services in the school and at home can prove the success or failure of such services.

One could observe a less obvious difference between *Encarta* and *Britannica*, which reflects the different backgrounds of the producing companies (Software versus Publishing): *Britannica* preserves the tradition of scholarly electronic encyclopaedia that promotes a combination of unified reference and educational software. On the other hand, as much as Microsoft promotes a unified reference model with the *Encarta Suites*, it also provides the means for tools to function apart from *Encarta* in other applications. For example, *Encarta World English Dictionary* can be integrated within *Microsoft Office* applications and *Internet Explorer*, where it can be activated by a right-hand mouse click. Likewise, product planners at the Microsoft Learning Business Unit are considering the incorporation of *Encarta* within *MS Windows XP* and the *XBox* gaming platform. Once more Microsoft extends its strategy to provide familiar user experience across several products and therefore encourage customers to only use Microsoft products.

Learning tools versus education portals

Both companies provide subscription-based premium services, which include daily updates, the text and images of the entire encyclopaedia content. *Britannica* services mainly cater for institutions like libraries, colleges and universities (www.eb.com or www.eb.co.uk), whereas *Encarta* online service, accessible as a reference and learning channel via the Microsoft Network (http://encarta.msn.com or http://encarta.msn.co.uk), is aimed at individual users. These services are basically organised around search and Internet guidance.

In addition, both companies have extended their brands to offer online learning services, which aim to cater to schools. *Britannica School* and *Encarta Schoolhouse* (http://www.britannicaschool.com, http://encarta.msn.com/schoolhouse/) are subscription services customized for use in schools. They offer relevant web resources, templates for lesson planning, teacher activity and study guides, games and other interactive tools as well as links to teacher training and implementation programs. Both sites indicate a range of educational services partners. Interestingly, both services have agreements with *Classroom Connect* (www.classroomconnect.com), a company that supplies curriculum and professional development services for the US market). The emphasis on both services is on American curricula and this approach is probably rather limiting for teachers and students in other countries.

Finally both companies have further extended their services to provide free-to-access web sites along the lines of web portals. The differentiation of these 'knowledge portals' is stressed by the traditional 'encyclopaedic' values as they are translated for the new media: editorial selectivity and authorial quality together with e-learning and web guidance. *Britannica* pioneered this approach in October 1999, when it offered *Britannica.com* (www.britannica.com), a service that sought to contextualise the reference requests of researchers providing additional information and links to current affairs. Britannica.com has an easy to navigate interface and an

impressive integrated search mechanism that retrieves information from a range of databases: the encyclopaedia, a database of over 75 magazines (among them *The Economist*, *Newsweek*, *Discover*, etc), and news services, selected web sources, plus a database of books in print that contains more than 2 million bibliographic records and a link to Barnes and Noble, an online bookshop. In addition, other e-commerce facilities are linked to related queries and broad network of co-branding partners operates to offer services that range from gaming and teenagers' portals to career advice. In the summer 2001, *Britannica.com* revised the initial approach: original features such as topical intelligent commentaries are minimised and instead there are more reference tools (e.g., Dictionary, Thesaurus and Atlas), whereas access to premium encyclopaedia content is only available through subscription.

Encarta promotes *MSN's* learning and research channels *(*http://encarta.msn.com or http://encarta.msn.co.uk). The sites offer integrated search facilities, similar to that of *Britannica.com.* These services extend *Encarta's* reference scope to offer guidance to practical activities and 'how to' learning. For instance, the encyclopaedia article on basketball, has an extensive section on 'how to' play on several positions, strategy tips and, of course, a number of related links to MSN, and premium partner content (i.e., direct links to *Electric Library* to discover more basketball techniques from related magazines). Likewise, the 'Homework' section provides selections of homework help sites, advice on how to manage stress for exams, as well as tips for tricks to improve memory, writing style, and much more. In general, homework features function as an alternative way to structure information, and they lack multimedia facilities and interactive tools that promote understanding. Likewise, features devoted to training primarily function as platforms for advertising specialised Microsoft and partner products or services. Thus, they should be considered rather as guides to lifelong learning than facilitators of it. Interestingly, users can browse the site depending on the demographic segment they belong to (teacher, parent, college student, etc. sections) or clearly depending on their information specific needs and lifestyles: for example there are divisions for training and distance learning, homework, exam revision, course finders, expert advice, and so on.

Conclusions

Undoubtedly, digital technologies and the pace of information change have transformed encyclopaedias to better serve their aim in providing sound introductions to topics and to instruct learning in a more contemporary and pleasing fashion. Likewise the scope of encyclopaedias has evolved to provide context to any kind of past and current affairs and promote learning and guidance in a way that fits individuals' lifestyles or segmented communities learning tasks and practical activities. Both *Britannica* and *Encarta* producers have pioneered in this respect, as they have embraced a great deal of variation to enhance the educational mission and general appeal of their products. This includes enabling users to develop new media literacy skills that help them make effective use of new information highways. In fact, these new services suggest a new hybrid genre, 'omnipaedia' (Rettig, 1999). This genre consolidates many media forms, where the search of information is blended with everyday life activities, and educational goals can be accomplished through leisurely activities.

Moreover, digital technologies have triggered the adoption of encyclopaedias. More CD-ROM encyclopaedias have been given away or purchased since the advent of the CD-ROM than print sets were sold in the previous 200 years (Esposito, 1996). In 2000 *Britannica.com* was the most visited online research site in the US followed by Encarta.com (Strother & Mak, 2000), while *Encarta Reference Suite* still remains the most popular encyclopaedia in US schools (M2 Presswire, 2000). Very little is known however, about the ways that encyclopaedias satisfy learning and research goals or how they enhance teaching and enrich learning and knowledge building. When editorial selectivity is blended with corporate intent and engaging instruction is intermingled with commercial interests, the mission of encyclopedias might be in jeopardy. In this context, the evaluation criteria for digital encyclopaedic services should be re-defined and their use re-assessed. This should also take into account the nature of use and reception of *Britannica* and *Encarta* products and online services by the various audience segments. Such task may involve observing the use and measuring the performance of these educational materials in the school or college and at home. Yet some of the following criteria may stimulate the dialogue for evaluation:
1. assessment of the effectiveness of creative mechanisms and productivity peripherals to support personal creativity, group collaboration and learning through the curriculum;
2. evaluation of the use of genres from popular media (i.e., games, magazine articles, etc) in engaging instruction and conceptual understanding;
3. identification of the nature of cross-referencing (within the encyclopaedia) and of linking to external services;
4. evaluation of the way that new media and critical literacy are facilitated.

Hopefully, such critical dialogue will occur, and *Encarta* and *Britannica* and other 'omnipaedia' will improve in quality.

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