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Acquiring Electronic Databases in School Library Media Centres to Enrich Curriculum Delivery in Nigerian Schools

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Abstract

This article examined how electronic databases could be used to enrich curriculum delivery in Nigerian schools. Some of features of electronic databases were discussed in the article and the potentials of free websites were also examined. A number of free electronic databases were also listed for use by schools and School Library Media Centres. The article recommended that School Library Media Centres should be adequately funded by the government and private school owners to facilitate the use of electronic databases. In addition, Nigerian School Library Media Specialists would be able to maintain a virtual library presence through links to free database resources and selected Internet portals when adequately funded.

Introduction

School libraries today are no longer traditional reading rooms and study halls; they are evolving to become facilitators of information services and gateways to the wider information world (Singh, 1996). Cochrane (1992) asserts that libraries are computerizing their services all over the world and, to take advantage of the immense benefits in information management offered by Information Technology (IT), a library must first computerize its services. As more teaching supplements and topical information are made available in electronic formats, Nigerian school libraries find themselves lagging behind due to financial constraints in subscription to electronic databases. School Library Media Specialists (SLMS) can now use electronic sources to meet the information needs

of students and teachers because some of these resources are available free on the Internet. An increasingly important function of libraries today is the provision of information in electronic formats and School Library Media Centers (SLMC) in Nigeria should not be left out of this revolution. School Library Media Specialists (SLMS) should be skilled in accessing and evaluating information regardless of delivery system, book or computer, and providing leadership in the appropriate use of current information technologies. Several studies (Scheirer, 2000; CASL, 2007; Lamb & Johnson 2009) have established that teachers collaborate more in schools with a School Library Media Specialist and students read more, enjoy reading, write better, access and use information more effectively and excel in academic content areas. The inadequate funding for the purchase of library books coupled with the general absence of up to date information that would support and enhance school curriculum required for learning in both primary and secondary schools makes free electronic databases very attractive. Nigeria in particular has a lot to gain from the vast information available on electronic databases produced to enhance school curriculum. This however depends on being able to gain adequate access to the free information on the internet which has a high potential of enriching school curriculum.

What is Electronic database?
An **electronic database** is a collection of information organized so that a computer can quickly access requested data (Lamb & Johnson 2008). Like a traditional file cabinet, databases are organized by fields, records, and files. A wide range of tools allow users to browse or search the contents of electronic databases. Electronic database also refers to a system of complete, easily retrievable and organized information that is accessible electronically and easily manipulated (Bernhardt, 1999).

Delivery Format of electronic databases

Until the late 1990s, most electronic databases were marketed as CD-ROM products. However, the market has shifted to predominately online delivery. Although the CD and DVD formats are being used for single topics such as subject area encyclopedia, very few companies now promote sales of CD-ROM materials for large, frequently updated databases. The major advantage of the CD format is immediate access. In other words, even if the Internet is slow or down, access to locally networked CDs would be available. In addition, if a subscription program ends, users would continue using their CDs.

Disadvantages of the CD format include the small storage space and constant need for updates. When CD-ROM was first announced, users in developed countries were shocked by the huge storage capacity. Today, people are frustrated by how little a CD could store compared to huge hard drives, DVDs, and other storage medium. However, the major disadvantage of CDs is the need to continuously access updates.

The advantages of online delivery really addressed the problems cited with CDs. With online delivery, there is no need to worry about storage space or updating files. All resources are accessed through a remote server. Without the installation of the Internet in schools, access to online electronic data would not be possible. However, if access to Internet is slow or unreliable, online delivery could be frustrating. An increasing number of free databases are available on the Internet and these facilities should be utilized by School Library Media Centre's in Nigeria.

Features of Electronic Databases

Although many electronic databases are designed for adults, some of them could still be used by children and young adults. In addition, some companies specialize in providing resources for youths and children. According to Lamb and Johnson (2009), the following features of electronic databases that should be taken into consideration by SLMS in Nigeria:

1.   Free vs Subscription electronic databases

While some databases are available on the web for free, others require a subscription. Some of the free databases are resources that are in the public domain such as classic pieces of literature. In some cases, databases are supported by government agencies, museums, grants, or other funding sources in developed countries. Sometimes companies provide free databases to draw users into a website that also contains paid services. Some companies provide a portion of their service for free. For example, they might provide abstracts of articles free and full-text for a charge.

2.   Formats

Some electronic databases focus on a particular format of information such as images, newspapers, magazines, or artwork. Electronic encyclopaedias are among the most popular electronic databases. **World Book Encyclopaedia Online** is a favourite choice for children and young adults. **New Book of Knowledge**, **Encarta**, **Encyclopaedia Britannica**, and **Grolier Multimedia Encyclopaedia** are also popular. When considering the individual differences of children and young adults, the importance of visuals, audio, animation, and video along with text should be taken into consideration.

3.   Search Tools

One of the most important features of an electronic database is its searchability that is the ability to provide multiple search options. They generally use natural language searching along with the option of an advanced search. Many databases also provide indexes and offer subject headings to help narrow their topic. For example, **NoveList** from EBSCO allows users to enter a word then select a level, number of pages, and publication date.

4.   Child Focus

Some databases are designed specifically for elementary age students. For example, as part of its subscription search,

EBSCO Published a tool called **Searchasaurus** that helps guide students through the use of its databases.

5. Evaluation

Like any library resource, selection criteria most be applied when evaluating electronic databases. In addition to basic content quality, the following areas could also help to explore special considerations for electronic databases:

a. **Content:** It is important to consider whether the resource supports the curriculum and aligns to standards. In addition, it's essential to look at the other materials in the collection and whether there's a need for this material. The layout of the content is also important. The pages should be visually appealing with easy-to-read fonts, lots of headings and subheadings, and a clean, uncluttered screen. The content should be accessed a number of different ways. For example, users should be able to print, save, e-mail, and/or take notes within the database.

b. **Reading Levels**: The reading level of the students should be taken into consideration because majority of students should benefit from the database.

c. **Technical Support**
   The following questions should be asked before the acquisition of electronic databases. What kind of technical support is provided? What happens when the system is down or access is slow? Is training needed to use the system or would people be able to explore without a lot of help? The system should load fast and be reliable. This is particularly important for young learners. Are help tools built into the system and easy to access? Can these help tools easily be searched?

d. **Access**: Are passwords and other security keys needed to access the system? Does the license allow patrons to use the materials at home?

e. **Price:** Electronic databases can be very expensive. Unlike the cost of a book or other library resources, electronic databases often involved an ongoing subscription cost. How does the price of this resource compare to other materials available on the same

topic? How does this electronic database fit into the overall library budget? Are discounts available?

f. **Purchase:** The SLMS should spend time viewing the materials found at the websites of popular electronic databases by comparing their services to the library's needs. Then the materials available for subscription and the free materials on the Internet should be compared in order to pick the best option. In most cases, a demonstration version or free trial is available online to find out what the database actually contains. As regards to purchase, the following questions should be asked:

- Would students use this database for research?
- Does the database support the need for information to support particular state standards?
- Would the database be useful for students who are searching or browsing?

The SLMS should try the database and also observe a child or young adult using the resources.

- Do they find it easy to use?
- Would they use it if it were available in the library?

g. **Use:** Although electronic databases are generally easy to use and have quality help available online, it's important to develop a plan for promoting effective use of electronic databases. Many of the companies that produce databases provide wonderful materials to help teachers, librarians, and parents use the materials. However it's also important to design instructional materials focusing on the specific needs of children and young adults.

6. Instruction

Libraries should developed guides for using their databases and these guides may be online or on paper. Some libraries developed bulletin board materials or sample printouts to help patrons.

List of Free Electronic Databases

Below are list of some free databases available from the internet for the use of School Library Media Centers and School Library Media Specialists in Nigeria. It was noted during Internet search that most databases on subjects relating to Africa was not free.

Art & Drama

1. **Bartleby.com: Includes** Encyclopaedias, dictionaries, thesaurus, Bartlett's Quotations, Gray's Anatomy and hundreds of books online. Available at http://www.bartleby.com/

2. **Biographical Dictionary**: Biographical details could be searched by birth years, death years, positions held, professions, literary and artistic works, achievements, and other keywords. Available at http://www.s9.com/biography/.

3. **Biography.com**: Database of over 25,000 notable people, both past and present. Available at http://www.s9.com/biography/

4. **Cliffs Notes**: Literature notes for most books that are read for English classes. Available at http://www.cliffsnotes.com/WileyCDA/Section/id-305001.html

5. **Guide to Grammar and Writing**: This college site answers any question about grammar, punctuation, composition, and more. Available at http://grammar.ccc.commnet.edu/grammar/

6. **Internet Public Library Teenspace**: IPL site helps in research and writing of papers. Available at http://www.ipl.org/div/aplus/

7. **One-Look Dictionary Search**: More than 900 online dictionaries indexed and searchable for looking up definitions, translations, and more. Available at http://www.onelook.com/

8. **Shakespeare's Complete Works Online**: Full-text of Shakespeare's works are available here. Available at http://shakespeare.mit.edu/

Sparknotes: **Free online study guide for a variety of books like Shakespeare, classics, and modern literature. Available at http://www.sparknotes.com/**

Speech Topics Help, Advice & Ideas: **Helps in speech writing. Available at http://www.speech-topics-help.com/**

Math
1. **Algebra Help -- Purplemath**: this site gives clear explanations along with examples to help in specific algebra topics. Available at http://www.purplemath.com/modules/index.htm
2. **College of Chemistry - UC Berkeley Weights & Measures**: Includes common equivalent weights and measures chart for quick reference. Available at http://chemistry.berkeley.edu/links/weights/equivalences.html
3. **Cornell Theory Center Math & Science Gateway**: Links to resources in math and science. Available at http://www.cac.cornell.edu/Education/SAGE.aspx
4. **The Math Forum - Ask Dr. Math**: includes Math questions with solutions. If the solutions are not there Dr. Math could be mailed for the answers. Available at http://mathforum.org/dr.math/
5. **The Purplemath Forums**: Helps students to gain understanding and self-confidence in algebra. Available at http://www.purplemath.com/learning/index.php

General Topics
1. **High School Ace**: Features interactive learning games, puzzles, and quizzes, as well as study help for English, foreign languages, math, science, and social studies. Available at http://mathforum.org/dr.math/
2. **Information Please**: Includes Almanac, dictionary, encyclopaedia, atlas, and more. Available at http://www.infoplease.com/
3. **KnightCite**: Citation generator for student. Available at http://www.calvin.edu/library/knightcite/
4. **One-Look Dictionary Search**: More than 900 online

Role of the Teacher Librarian in Accessing Free Electronic Databases for Successful Curriculum Delivery

The role of the library media specialist has expanded to include utilization of free electronic databases like e-books, e-reference resources, internet connectivity for computers, multimedia, and information in all formats, electronic as well as print (Braxton, 2000). The SLMS combines the knowledge of the curriculum, teaching strategies and learning styles are combined with knowledge of resource management, information services, personnel management and information systems. This knowledge enables the teacher librarian/SLMS to take an active role in curriculum support and implementation. Librarians provide a critical and unique form of leadership in this arena because of their knowledge of pedagogical principles, their global perspective on the school curriculum, their training as information managers, and their experience in forging cooperative partnerships with classroom teachers. School Library Media Specialists are important instructional partners with other educators in the school by helping to develop and support the curriculum by using the library's resources to expand upon the learning opportunities.

The role of a SLMS is diverse and challenging in that accessing and using information in an electronic world has become a complex task because of the following factors:

- The amount and quality of information potentially available to staff and students as a result of funding of the school libraries
- The increasingly sophisticated technological means of accessing information and the added responsibilities of the teacher librarian in assisting staff and students with the use of this technology
- Integration of new technologies and their effects upon teaching and learning within the school library

Examples of how the SLMS can mediate in effective use of free electronic resources for teaching and learning:

1. Students are taught about the available free electronic resources on the internet and how to locate them so that they can frame questions and conduct research in all subjects.

2. Students are taught about how to view electronic media and implement the skills of analysis, interpretation and production useful in English language.

3. Students have access to a variety of free electronic resources such as biographies; folktales, myths, and legends; and poetry, songs, and artworks to support learning in social studies.

4. Students could also research scientific topics with the librarian's assistance and use computers and ICT tools to support their investigations as a part of learning in science.

5. Students build a foundation of basic understandings in number, operation, and quantitative reasoning; patterns, relationships, and algebraic thinking; geometry and spatial reasoning; measurement; and probability and statistics through examples provided from free electronic resources in the library as a part of learning in mathematics.

Challenges Facing the School Library Media Specialist in Accessing Electronic Databases

As seen above the Nigerian School Library Media Specialists must fulfill many varied roles and responsibilities. However, there are many challenges facing SLMS as they strive to fulfill their multifaceted role, some are listed below.

• Funding: Traditionally, school libraries have been vulnerable to budget cuts. As schools move technology into the classroom, there may be fewer funds available for the school media centre. In developed countries, according to Scheirer (2003), there is also a perception by some administrators and teachers that there is no longer a need to develop the school library collection because of the use of the Internet and CD-ROM encyclopedias. Another threat with decrease in funding is that the position of SLMS could be reduced or eliminated.

• Training and retraining: Because there has not been an emphasis in the training of teacher-librarians/SLMS in Nigeria, there are fewer qualified teacher-librarians to replace

those who are retiring and the ones being placed in school systems may not be adequately trained.

• Lack of adequate staff to manage the school libraries. SLMS are expected to have technological expertise, and to share that expertise with teachers as well as students. Managing student access to work stations adds new demands because students are using technology not only for information retrieval but also in the creating and presenting stage of their research work. (Scheirer, 2003). For teacher-librarians, the changing technology has made locating resources much harder task. It is possible to pull books and magazines from a library collection for a teacher in a short amount of time. Incorporating electronic resources takes longer, because it takes more time to identify worthwhile sites. Hence the need for more staff in the school library.

Conclusion and Recommendations

School library media centers/ school libraries and teacher-librarians in Nigeria are really at a crossroads due to many challenges faced in the dissemination of timely and adequate information using electronic media. With the availability of free electronic databases on the internet some of the challenges are solved. According to Lamb and Johnson (2008), SLMS plays a key role in the selection of, the instruction about, and utilization of electronic resources and technology tools such as free online databases, Internet resources, and video programs used in the school, classroom, and learning community.

In order to move Nigerian school libraries forward and make them more functional, the following recommendations are suggested. Funding should be considered a priority by the government and private school owners in order to move Nigerian school libraries forward in the utilization of ICTs to enrich the school curriculum. All Nigerian school libraries should be staffed by employing qualified teacher-librarians and support staff. Teachers and teacher librarians should be provided with sufficient flexibility in timetabling to allow them to actively work together to cooperatively integrate information literacy through the use of free electronic database into the curriculum. Government and private school owners should

sponsor teacher-librarians to trainings and courses that would assist them to function appropriately in their duties.

In order to extend the school media center's presence beyond the constraints of their building location(s) and school day schedules, the teacher-librarian also can maintain a "virtual library" presence through online, digital collections that may incorporate student and teacher resources; collaborative projects, pathfinders, links to the online catalog and free database resources, selected Internet portals, plus provide needed online instruction and assistance to users (Lamb and Johnson, 2008). The teacher-librarian must become a technology role model and leader by been able to utilize electronic resources and databases. Failure of the school media centers/ school libraries to meet this new mandate and failure of teacher-librarians to embrace the challenge of this new role will inevitably lead to obsolescence. (Scheirer, 2003). It is also important for teacher-librarians to keep up with developments in following fields: telecommunications, information storage and retrieval, computer applications and instructional design so as not to be left behind in ICT revolution which is a major catalyst for the use of electronic databases.

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