

DELIVERING INFORMATION LITERACY SKILLS IN RESOURCE - BASED ASSIGNMENTS THROUGH VIRTUAL SCHOOL LIBRARY

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Abstract: *Resource-based school assignments have good potential to expose and guide school children on IL. IL integration through resource-based assignments is highly recommended these days. Delivering IL skills through resource-based assignments require collaborative efforts from both the subject teacher and the teacher librarian. A collaborative effort between the two parties is needed to design an all-encompassing assignment that will both improve students' subject-content mastery, as well as research and IL skills. Technology could play important role in assisting students to develop their IL skills, one of it is through virtual library services. Virtual library becomes increasingly important in providing reliable and updated information in inquiry-based learning environment.*

Keywords: *Information literacy, resource-based assignments, virtual libraries, school library, school resource centers, teacher librarian, collaborative efforts*

INTRODUCTION

Rapid advancement of Information and Communication Technology (ICT) has affected every single aspect of our modern life, including re-shaping the global education system. The global educational system has gone through massive changes in every aspect of instructional process. Gone are the traditional days of chalk and talk teaching, and

teacher centered teaching method where teachers are the sole information provider. Student-centered learning, authentic learning, and resource-based learning is the trend in today's instructional process. The educational paradigm shift has not only affected instructional processes, it also has created a tremendous demand on school library services. With classrooms buzzing in various learning activities, more resources, information, and services are needed to feed the information famished children and teachers.

Changes in instructional method, as well as proliferation of new information sources have also resulted in new predicament to cope with the abundance of information from which to choose from. Students need to be taught on new ways to seek, handle, use, and store information. They need to be taught on IL skills, if they were to survive in the ICT and information era.

Resource-based school assignments have good potential to expose and guide school children on IL skills as they are engaged in authentic learning, utilizing multiple resources. Delivering IL skills through resource-based assignments requires interdisciplinary collaborative efforts from both the subject teachers and the teacher librarian if they were to be effective. Teacher and teacher-librarian collaborative efforts in teaching IL has been well discussed in various work, among others: the UNESCO/IFLA school library Manifesto (2000) cites, "*it has been demonstrated that when teachers and librarians work together, students achieved higher level of literacy, reading, learning, problem solving and information and communication technology skills*". A collaborative effort between the two parties is needed to design instruction that assists students to acquire information. It helps students to achieve information skills such as locating, selecting, analyzing, evaluating, and utilizing information and communicating knowledge. A number of researchers (Breivick, 2006; Bowler & Street, 2008; Chu, Tse & Chow, 2011; Monteil, 2005, 2006; Williams & Wavell, 2006) identify the need for greater collaboration between teachers and teacher librarian to ensure successful IL education programmes. Successful collaborations will help provide students access to a wide variety of local and remote resources and to alternative methods for presentation of ideas.

Hence, it is time that school library and teacher librarian should be made more directly involved with the students' research projects.

STUDENT'S ASSIGNMENTS, LIBRARY USAGE AND IL SKILLS

In the Malaysian education system, there is no formal teaching of IL in schools. No specific period is allocated for IL in the class time tables. IL skills are intended to be taught as an integral part of the lessons across the curriculum, often with no clear IL syllabus. Some examples of these resource-based learning activities are through school projects. Authentic IL engaging school assignments started when the students attend secondary schools, beginning in form one (grade seven). These school project assignments are introduced through subjects such as history and geography, where the students are expected to conduct mini research on the local historical events or local geographical developments in their area. While there are formal syllabus specially

prepared for the research-based assignments, the method of instruction, the extent of supervision extended to the students, and the implementation of these assignments are very much decentralized, depending on the teachers' own skills and effort in supervising resource-based assignments. In most cases, students are not properly train on IL and research skills, which are the vital component in any research work prior to their project assignments. This leads to the majority of them are not fully capable to perform their task.

Many studies (Bawi, 2002; Hart, 2000; Jackson, 2006; Mc Kenzie, 2000; Williams & Wavell, 2006) reveal that students receive inadequate IL guidance for their information-based tasks. In short, the researchers, regardless of their background, find that students receive little guidance on how to work on their projects. Findings from some studies (Jackson, 2006; Macklin, 2001; Probert, 2009) also disclose that many teachers believe that there is little need for them to help their students as the students already possess excellent information seeking and locating skills. Since there is also little guidance on how to work on resource-based assignments, students resort to their own way of getting their task completed, not surprisingly, many has opted to plagiarize. Unethical use of information and plagiarism issues are also discussed in a number of studies (Laverty, 2002; Williamson *et al.* 2007. The researchers discuss direct copying and plagiarism practices among students while working on resource-based assignments. The researchers discuss that it is quite common for teenagers year old students to copy passages directly from resources rather than to pick up points from several sources and synthesize them on their own. They also find that 10 year olds children tend to copy ready information rather than to construct their own topic sentence because they know that any information is acceptable as long as they collected enough information that meet the specified criteria. Laverty concludes that it is easy to understand why children resort to copy information directly from resources as they can find ready answers to their task problems. It also seems unnecessary for the students to reword the information when it is already presented at its simplest form.

This raises questions on the quality of learning, as well as the quality of the work produced by the students. Researchers have raised concern on students' unsupervised research work and infatuation with the Internet, while others suggest that we capitalize on modern technology to improve students' project supervision. Some of the views are mentioned here: Studies on information sources use unsurprisingly declare that the free web is the most popular information source used by school children for their assignments, (Aalst *et al.* (2007; Meyers & Eisenberg, 2008). The researchers observe that the children have infatuation with the Internet and convinced that they are able to find any information from the Internet. Almost half of the students (48%) in Meyers & Eisenberg's study reported to use Web resources most often for their homework. The same study also reveals that although the students are provided with a range of reliable, full-text periodical databases, they underutilized the information source (2.6%) and would instead look for magazines and newspapers elsewhere. This finding has concerned the researchers that the students might not clearly understand the role of the databases as a credible and trustworthy information source.

Findings from other studies (Jackson, 2006; Merchant & Hepworth, 2002; Meyers & Eisenberg, 2008) suggest that today's students do not necessarily possess sophisticated information seeking skills, or fully exploit library services to look for information. Jackson (2006) discusses some problems faced by students while seeking for and locating information for their research. Among others, they are: using inappropriate search terms, simplistic online searching, avoidance of using advance search features, hesitance to use sources other than the Internet, and the indifference to the quality of the sources they use.

Church (2005) raises her concern over the uncontrolled use of the Internet and free web among the students to complete their school project assignments. Practically, all students are using the Internet to do their research these days. The problem is, left on their own, students probably will resort to select information indiscriminately from the various easily assessable free webs, where the qualities of the information are unknown. Church adds that to make the problem worse, students often carry out their research outside the school period and school building, which also means outside the supervision of their teachers. She strongly recommends that school resource centers should provide their own websites or digital libraries to provide access to quality resources and instructions in using electronic resources.

Likewise, Vessey (2005) and Mardis (2007) voice their concern about students collecting information indiscriminately from the Internet. Vessey mentions that most of the students' research lack support as they prefer to use information from the free webs compared to the web-based encyclopedias, library-sponsored web-based subscriptions and periodical services. He points out the responsibility of teachers to expose their students to various resources in doing research and responsibility of teacher librarians to teach the students on how to evaluate free resources on the web, as well as how to formulate search strategies before releasing the students to do their research. Mardis adds that the finding of a recent research found that the science, mathematics, technology and life science collections in middle school libraries in Michigan are unsubstantial and outdated. He strongly recommends the use of digital library to provide reliable and updated information in inquiry-based learning environment.

Another research by Fitzgerald and Galloway (2002) has some lesson to learn and share. To their surprise and dismay, they found that two groups of respondents i.e. 10 high school students and 10 undergraduate university students, had conducted a few, if any, resource-based inquiry projects in the past. According to the high school students who are the top students in the class, most said they had never written research papers before. Likewise, the undergraduates reported that they had written very few research papers during their scholarly years and were having difficulty to complete the tasks they had to perform during the survey.

Thus, in this study, Fitzgerald and Galloway (2002) had found that there were five difficulties probably the cause to the students' inexperience with the research and writing process. They are: (a) *Technology literacy*. The students were lacking of system knowledge. That affects the students' ability to find digitized information; (b) *Domain knowledge*. The students have a problem with comprehension relating subject

knowledge, particularly with the difficulty of reading material. ; (c) *Searching*. Most students have trouble with searching because very few understood Boolean logic, reluctant to check the readily available help files, search features and often made spelling errors; (d) *Relevance*. To determine whether the articles were relevant or not, quality or not, it will take a lot of energy and effort. In the quest, it always falls back to considering relevance; and (e) *Evaluation*. From the observation, the high school students did not seem to consider the credibility and reliability of information. While the university students were somewhat aware of the potential problems.

BEST PRACTICES OF VIRTUAL SCHOOL LIBRARY

In today's school, technology plays a major role in assessing information. Today's children are technology savvy and would prefer to use the computer and internet at any time to other traditional printed materials to do their work. As such, they need to be properly trained in using modern electronic facilities to support their learning process. In line with the preference for modern technology, it is time that school library be gradually transformed into virtual library. Modern technology provides more opportunity for effective communication, access to vast quantity of information, and the management and utilization of data. Through the use of technology, the teacher librarian, working collaboratively with the media teacher can help the teachers and students in:

- Enhancing information inquiry and processing skills,
- Gathering information from global perspectives,
- Communicating with others in a global environment,
- Analyzing data,
- Facilitating presentation and production of ideas through multimedia, and
- Expanding teaching and learning opportunities.

(US Missouri Department of Elementary and Secondary Education, 2003)

A growing number of schools in Malaysia have already started to gradually transform their school libraries to school virtual libraries. It is part of the objectives of the Ministry of Education to transform all schools into smart schools. Most school libraries have started the transformation by replacing the traditional card catalog with OPAC, and by providing computers with internet access in the libraries to facilitate the students' need to search for information. An increasing number of school libraries have also started to have their own library websites. This is an optimistic sign which signals that our school libraries are definitely moving towards the virtual libraries. However, more collaborative efforts are needed from the various parties in the schools to work on the websites and make them more informative with features of true virtual libraries.

School libraries in the developed countries such as in the United States are known to be in a much more advanced state as they already embraced and employed the virtual library concept. These ideas could be considered to be adapted in the Malaysian school environment. Here are only two examples of best practices of virtual school libraries.

1. The Thomas Dale High School Library Media Center.

The library media specialist at Thomas Dale High School, Chesterfield County, Va., has introduced the concept of a virtual library in her school on 2000. At that time

the school library facility was still undergoing renovation. The Thomas Dale High School Library Media Center Virtual Library Web page [http://chesterfield.k12.va.us/Schools/Dale_HS/library/Virtlib/media.htm] offers a number of helpful services to facilitate information searching and to conduct research work.

Among the features available at the school library web page are: links to online public access catalogs, subscription databases, internet search engines and Web evaluation guides, the Big6 research model, a virtual reference desk, and classroom links, class lists of hotlinks and research assignments developed through the collaborative efforts of classroom teachers and library staffs.

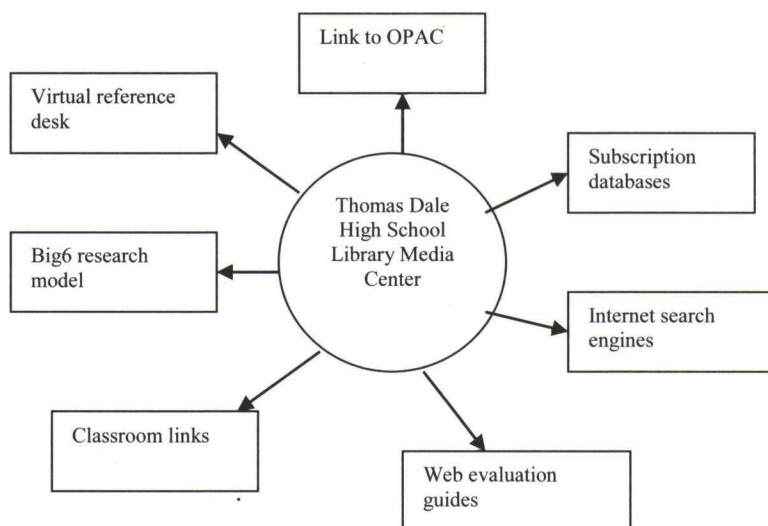


Diagram 1: The Thomas Dale High School Library Media Center

2. The Springfield Township School District in Erdenheim, Pa.

Springfield High School Virtual Library Web page [<http://mciu.org/~spjv> web]. Among the features available on the library websites are; links to catalogs and databases, the reference desk, pathfinders for research are links to the school's Research Guide, Online Lessons, and information Literacy lessons. The library media specialist uses the online environment to teach search strategies; resource evaluation; and summarizing, paraphrasing, and quoting skills.

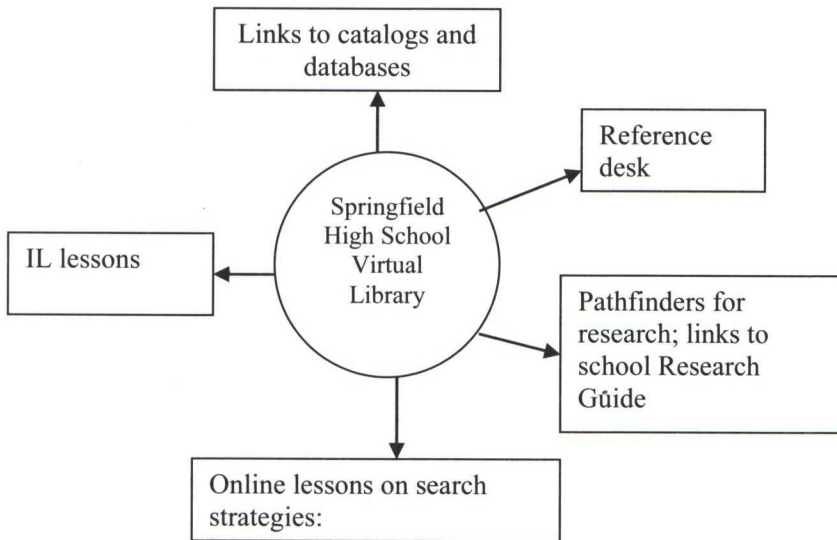


Diagram 2: The Springfield Township School District

SUGGESTIONS / RECOMMENDATIONS

The Department for Education and Skills (DfES) working with the Chartered Institute of Library and Information Professionals (CILIP), the Association of Senior Children's and Education Librarians (ASCEL) and the School Library Association (SLA) have come up with the publication and the promotion of a special brochure; "School Libraries Making a Difference" as part of an advocacy campaign supporting the advocacy of school libraries during the school year of 2003/4. According to them, there are top ten steps in which a school library could make a start to develop itself into an effective, functional school library. They are:

- Range of stock to reflect the whole curriculum
- Collaborative planning between teaching staff and the librarian
- Used of the library included in curriculum planning and schemes of work
- Collections of resources for topic teaching
- Text to support literacy across the curriculum
- Fiction to support curriculum topics
- Identified and book marked websites
- Celebrating success – displaying pupil's work
- Links to outside agencies – especially the schools library service
- Regular current awareness bulletin for teaching staff – detailing how the school librarian resources and skills can support the new curriculum initiatives.

(UK Department for Education and Skills, 2001)

After discussing the features and services of school libraries which will be best serving the students' needs in research-based type assignments, as well as looking into some of the best practices of school virtual libraries, we have some recommendations on how to improve the current state of the Malaysian school libraries. Some of these suggestions may require the cooperation and intervention from the higher authorities such as the

Ministry of the education and the State Educational Resource Centre. Here are some of the suggestions:

- Start a library website for each school. This is the first step towards a school virtual library. Schools which already have their own library website can go on improving the websites to include more features and services, qualifying them to become true digital libraries. Developments of the virtual contents should take place gradually.
- Information, Instruction and Guidance. Students should be informed of an information search process, such as Kuhlthau's (1993), Big Six (Eisenberg and Berkowitz, 1990) or any other existing models. If the students chose to use any of the search process, the teacher librarian should instruct them exactly where in the process the virtual library should be used. Spend time with them to become oriented to the virtual library. A minimal orientation is good enough to get them started. In addition, guide them if they need individual coaching when they embark upon their assignments.
- Expand and modify the role of teacher librarians. The AASL Position Statement On The Role Of Library Media Specialist In Outcome Based Education have stated that modern teacher librarians should assume a few roles in their services; They are: To be an information specialist, a teacher, and an instructional consultant (American Association of School Libraries, 2006). The majority of teacher librarians in the Malaysian schools are expected to teach their own subjects (not IL or library skills related subjects), as well as to manage the library at the same time. They are normally given lower teaching load to enable them to manage the library. Most of these teachers are so consumed with the teaching and library management jobs that it is not possible for them to assume the role of information specialist and instructional consultant. There are also some library teachers who are lucky enough not to be given any teaching responsibilities. These teachers, however, do not try to take hold of the opportunity to take on the other two roles of library teachers as it is not yet a common practice here. The state educational resource centre officers should educate library teachers on their expanding roles as library teachers.
- Communicate effectively with the higher authorities such as the Ministry of Education officers and State Educational Resource Centre officers on the situations and problems facing the school libraries. This will help solve some general problems faced by the school library management such as shortage of teacher librarians, high turnover of teacher librarians, untrained or inadequately trained teacher librarians, high teaching load of teacher librarians, limited budget to run the library, and inadequate school library facilities.
- Flexible scheduling: Flexible library schedule, as opposed to fix library schedule should be introduced in schools to allow teacher librarians to assist subject teachers by jointly teach and help students in IL and research skills related assignments. This will provide greater opportunities for student to intertwine research, analysis, communication, and production into complete learning experience.
- Subscribe online databases. The support from the higher authorities is greatly needed on this matter as it involves significant increase in the school library budget. However, the benefits of the online databases will hopefully outweigh the high cost incurred in the expenses as the students will enjoy the benefits of reliable and high quality sources of information. Presently, the students can only be satisfied with the information they get from the free web on the internets. Subscription of online

databases, a vital component of a digital library has become increasingly important especially in the more developed countries in providing reliable and updated information in inquiry-based learning environment.

- Problems alert. Teacher librarian should take note on the problems and design interventions for them. This could help for continuous improvement and user satisfaction.

CONCLUSION

In sum, by incorporating IL skills during the working process of resource-based school assignments have good potential to expose and guide school children on the IL skills. Delivering IL skills in resource-based assignments to students require interdisciplinary collaborative efforts from both the subject teachers and the teacher librarian if they were to be effective. Now is the right time for school library and teacher librarian to be more directly involved with students' research projects with the help of technology. In the ICT era, it is also a time that virtual library concept should be employed by all school libraries in Malaysia

We are presently witnessing the growing number of schools in Malaysia gradually transforming their school libraries to school virtual libraries. It is a part of the objectives of the Ministry of Education to transform all schools to be technologically equipped schools. This is an optimistic sign which signals an orchestrated movement towards the virtual libraries. However, more collaborative efforts are needed from the various parties in the schools to work on the websites and make them more informative with features of true virtual libraries. It is the responsibility of teachers and teacher librarians to ensure that students can use virtual libraries in a productive manner. Virtual library is one robust tool through which it could help to increase the level of information literacy among the students.

With the proliferation of virtual libraries all around the globe, questions may arise. Are the students ready to use these systems? How well-equipped are they? How can these systems be used to support information literacy instruction? What strategies can teacher librarians adopt to assist students apply their information literacy skills in this borderless world? These are the questions that we would consider whenever virtual libraries are established.

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