Media Resource Libraries in Singapore Schools: Challenges and Opportunities

Schubert Foo
Division of Information Studies, School of Applied Science
Nanyang Technological University, Singapore 639798

ABSTRACT

This paper examines the important roles of the Singapore schools’ Media Resource Libraries (MRL) in the context of the emerging information society. It identifies and outlines six areas of challenges and opportunities for the MRL in meeting the needs of schools in the new millennium. These include planning for the MRL to support education’s new focus; assessing and deriving an organizational structure for the MRL to ensure it meets current and future demands; developing the human resource training package and programme for MRL staff; developing and managing the MRL collection of materials and services; identifying ways to make the MRL the hub of educational and learning activities; and incorporating an MRL component in the school’s ranking system. A three-point basic action plan to address these challenges and opportunities is proposed.

INTRODUCTION

In Singapore schools, there is a clear move towards a combination of examination and extra-curricular excellence, information technology know-how and computer literacy skills. This is in line with the Singapore government’s change in emphasis from a low-cost manufacturing economy in the last 20 years to a value-added knowledge-based economy in the future, as a strategy to stay abreast with global trends and developments, and maintain competitive advantage in the global economy.

The knowledge-based society, the knowledge-driven economy, the information age, or more simply, the information society are now familiar terms that acknowledge the new breed of knowledge worker who is able to add value to products and services, and build the intellectual assets of the organization and country. The contents of this paper is largely derived from a keynote address by the author (Foo, 1999) at the Library@School conference organised by the Ministry of Education and National Library Board. It specifically aims to examine the role of the MRL in the context of the information society, and identifies six main areas of challenges and opportunities for the MRL in meeting future needs of schools. Finally, it proposes a basic three-point action plan to address these key challenge areas.

ROLE OF MRL IN THE INFORMATION SOCIETY

In moving towards and promoting an information society, many governments have put their efforts and focus on technology as a necessary first step to arrive at such a
society. The Singapore government has been continuously setting prominent examples in this regard. They have typically focused on increasing awareness of the potential applications (e.g. e-commerce); on improving the availability of and access to modern digital communications (e.g. Singapore ONE, 1999); and on encouraging people and organizations to use technology more effectively and efficiently. They have also encouraged and funded the development of programmes to harness skills to improve the level of technology-computer literacy of its workforce (e.g. Singapore National Computer Board, 1999; Singapore Standards and Productivity Board, 1999). Such focus and emphasis are important first steps in realizing an information society.

Nonetheless, it is also important to realize on the onset that technology in schools can best be used to support and enhance engaged learning. Schools no longer have the choice of not incorporating technology. Rather, the question is how well will they use it to enhance learning (Valdez, 1999). Technology’s main purpose in schools is therefore to improve learning. Technology cannot replace good teachers but instead, expand their horizons, enhances their abilities and creativity.

Therefore, there is a need to logically progress from a technology focus to a focus on the content that flows through the technology (Oxbrow, 1998). In other words, we need to focus on information literacy. This focus is aimed at information and knowledge – how to create it, manage it and use it. The Schools are tasked with this very important role in educating and training our new generation of students to become knowledge workers of the future, thereby realizing the Singapore government’s vision of a “Thinking School, Learning Nation” paradigm.

In this respect, the school’s MRL will play a very crucial and central role in supporting this new age of education. It is anticipated that such emphasis is likely to be even more profound in the new millennium, as the nation gears itself towards a true information society. In such a society, schools will eventually be transformed into information age schools.

An information age school is distinctively different from the traditional school that most of us are used to. In an information age school (ALA Presidential Committee on Information Literacy, 1991), there will be more interactions as students pursue questions of personal interest, interact with other students and teachers. Both students and teachers will be familiar with the need to ask productive questions, gather data of all kinds, and synthesize, analyze, interpret and evaluate information in all its forms. There will be more coaching than teaching as teachers recognize the importance to arouse curiosity, ask the right questions at the right time, and stir up debate and serious discussion. With a vast array of information resources, learning will also be more self-initiated. This paradigm shift sees the teachers no longer as merely reservoirs of knowledge but also as guiding hands to information resources beyond the classrooms (American Society of School Librarians, 1995).

The MRL is therefore a vital instrument in the education process in both aspects of teaching and learning. The MRL is the central depository of tangible information resources that are supplemented with online digital resources that can be made available through networked connectivity to others parts of the school, or even to the homes of students and teachers.
Thus, the position of Head of Department (Information Technology cum Media Resource Library), with the support of the Principal, Vice Principal, Teacher Librarians, other library staff and all other teachers in the school, is key and pivotal to make this happen. The MRL “team” working in close conjunction with the teachers and education authorities is a key success factor in developing an information age school. Substantial effort and commitment is therefore needed in the development of the MRL, since it will become the hub for resource-based learning, pupil-centred activities and other forms of school activities in the future.

**OPPORTUNITIES AND CHALLENGES FOR THE MRL**

The introduction of the *Master Plan for Information Technology in Education* (Ministry of Education, 1997) over the intended five year period of 1997 to 2002 has paved the way for the gradual implementation of information technology and information literacy education in schools over different phases. Among its many objectives, it aims to provide every student access to an IT-enriched school environment, to have a network system within each school, and to link all schools through a Wide Area Network and Singapore ONE. Schools are at the various stages of the technology focus. MRLs are being equipped with the necessary computing hardware, networked connectivity and Internet access. Schools lacking in this aspect can “catch up” rapidly through vendor help and emulating other existing schools’ MRL models.

Using the managerial framework of planning, organizing, leading (motivating) and control, six main areas of opportunities and challenges for the MRL are identified and elaborated.

**1. Planning for the MRL to support Education’s New Focus**


Much research work has been done, and ongoing academic research work continues to be done in the area of information literacy education and training in schools. A *National Forum on Information Literacy* was created in the US in 1990. Some of its objectives include examining the role of information, providing guidelines on the integration of information literacy training programmes, and developing teacher education programmes to insure that new teachers are able to incorporate information literacy into their teaching (National Forum on Information Literacy, 1999).

Many schools and institutions have already explored some possible components that are combined into a coordinated multi-tiered approach to information literacy training and general education, both locally and abroad. Some of these techniques include the use of CD-ROMs, course-integrated instruction, drop-in workshops, handouts and guides, information kiosks, online Web-based instruction, stand-alone information literacy courses, subject-specific instruction, tours and video presentation (The
University of Arizona Library, 1999). Numerous online resources are available on the World Wide Web, with new resources been added constantly (e.g. American Society of School Librarians, 1999; Australian School Library Association Inc., 1999; International Association of School Librarianship, 1999; Canadian School Library Association, 1999; Gateway to Education Materials, 1999). It would obviously be prudent to closely and continually monitor these sites, their developments, and the availability of new online resources, and update the framework of information literacy and general education in schools.

More importantly, there is a critical need for a mindset change and a whole fresh approach through all the ranks of the educators in the school system in order to make the transition from the existing examination focus to a project work focus. Project work, both during term time and vacation, would be an important feature in this new mode of education and assessment. It has recently been announced that admissions to the local universities from the year 2003 will be based on students’ examination results, reasoning test, extra-curricular activities and project work (Straits Times, 1999; Ministry of Education, 1999). In other words, there is little time to lose in gearing the MRL to support this new emphasis of education and training. A new urgency in planning and implementation must take place for this to happen.

(2) Assessing the suitability of the current MRL structure and ensuring it meets current and future demands.

The organizational structure and set up of the MRL is too important to be left to chance. Although autonomy in schools is desirable and useful in many ways, this has also led to different schools putting different emphasis on what is deemed important. The development of MRL in schools has not been spared in this respect. Some schools have put much emphasis on developing its MRL while others have put little emphasis. A coordinated and agreed emphasis on the development of the MRL is critical in future.

A uniform organizational structure for the MRL across the schools is desirable since this ensures that sufficient emphasis is placed on the MRL, and that it becomes adequately staffed, resourced and developed. As such, there is an urgent need to review the roles of all the stakeholders of the MRL. This includes the Head of Department (IT cum MRL), the Library Coordinators, Audio-Visual Coordinators, Media Resource Specialists, Teacher Librarians, Library Officers, Pupil Librarians and Volunteers.

There is a need to take stock of the responsibilities of these different roles in the MRL set up, streamlining them if necessary, and to carry out a job assessment exercise to accurately estimate the time commitment needed for these role holders to discharge their responsibilities. This can be facilitated through a study of existing models in overseas schools that have successfully subscribed to such education programmes (e.g. American Society of School Librarians, 1999).

A high-level MOE committee or task force should be formed to carry out such a study. Even when this is impossible, schools should be able to move their existing MRL organization into a more ‘ideal’ setup by emulating existing success models that are found locally and abroad. For example, the norm in many overseas schools’ is to
view the Head of Department (IT cum MRL) or Teacher-Librarian as the school’s information and resource specialist, with professional qualifications in both education and information science/librarianship. This person is directly accountable to the Principal and responsible for initiating and participating in the teaching of information literacy in the context of the school’s total curriculum, and managing the MRL’s information resources and services to facilitate learning and teaching. (e.g. New South Wales Teacher Librarians’ Action Group, 1992; Orana, 1996).

A successful structure from the point of view of the organizational structure is not enough. It is necessary to re-look at its policies and reward systems so that a re-evaluation and re-design of the “remuneration package” for the stakeholders is required. Therefore, if the MRL is to play such a critical role in tomorrow’s education success, new career tracks for teaching staff fulfilling these roles may need to be introduced.

It is proposed that the Head of Department (IT cum MRL) role forms an important training ground for future Vice Principals and Principals. This observation stems from the fact that the MRL will form the focal point of educational and project-based activities for almost all the subjects in the whole curriculum. Thus, subject heads and teachers are expected to work hand-in-hand with the MRL in developing courseware, assignments and assessments. The MRL will need to facilitate and support these new requirements through developing its resources and collections, and new library instructional programmes.

(3) Developing the human resource training package/programme for existing and prospective MRL staff

Along with the idea of a revamped MRL structure and reward system for its stakeholders, it is also critical to recognize the important role of proper staff development to ensure that the MRL is staffed with trained personnel to handle the various functions of the MRL. This training encompasses overall library management, staffing, facilities management, collection development and management (for both print and non-print resources), library promotion and marketing, library programmes and services, information management and financial management. In the emerging information society, there is a paradigm shift from ownership to access, just-in-case to just-in-time, intermediaries to end-users, stand-alone MRLs to networked-MRL services and resources, and print-on-paper form to formless data. Learning by “trial-and-error” without proper guided training in such a novel environment can lead to undesirable and potentially adverse outcomes.

Proper and adequate training is paramount to a successful MRL. Training encompasses both informal and formal training. Informal training includes stop-gap training, acquisition of necessary skills and knowledge in a short period of time, and continuing education. Internal in-service training carried out by trained personnel can be used to complement external training.

A more important aspect would be formal training where participants are subjected to the vigor and rigor of formal programmes that cannot be obtained through informal training programmes. In Singapore, there are two main educational institutions that offer such formal training, namely, Temasek Polytechnic that produces library and
information science (LIS) para-professionals (Temasek Polytechnic, 1999), and Nanyang Technological University that produces LIS professionals or more generically, *information professionals* (Nanyang Technological University, 1999)

Nanyang Technological University, through its Division of Information Studies, offers a one-year full-time and two-year part-time professional degree programme. The Master of Science (Information Studies) programme is geared at educating a new breed of *information professionals* (that are crucially needed in a true information society) who are able to work in a range of information-intensive environments, including the schools’ MRL. The current programme allows two main areas of concentration, namely, library and information services, and information management and systems. Eight areas of specialisations are offered within these two areas of concentration. These include public libraries, academic libraries, school libraries and media resources, corporate information services, Internet and multimedia-based information systems, information systems and products development, document and records management, and knowledge management.

There is a need for the unique combination of professional librarianship skills and teacher skills in order to manage the MRL effectively and efficiently. Both the International Association of School Librarianship (1993) and Australian School Library Association (1994) have thus advocated that school librarians be qualified teachers who have completed professional studies in librarianship.

These qualifications ensure that the Head of Department (IT cum MRL) or Teacher Librarian is both an educator and an information manager, with integrated understandings from both of the areas. As a result, a knowledge of the curriculum, teaching strategies and learning styles is combined with a knowledge of resources and information access systems. Teachers completing such a mode of formal training, would be equipped with the mix of pedagogical skills (acquired in their earlier teacher training at the National Institute of Education) and LIS skills that are essential for managing the MRL and implementing the information literacy training and education in schools. Currently, there are already many teachers enrolled in this M.Sc. (Information Studies) part-time programme.

From experience, it is observed that many such teachers have opted to undertake MRL-related projects for their dissertations. This augurs well for the schools since they are tackling real issues that concern the schools, such as the information needs of schools, evaluation of MRL programmes and services, level of information literacy education, teacher perspectives on information skills, the extent to which students’ needs for information skills have been satisfied in schools, comparative studies to identify information literacy common policies and practices in schools, and so on. As the completed dissertations are put online on the Division’s Web site for general access, they will become invaluable resources for consultation and use in the future (Nanyang Technological University, 1999).

The Ministry of Education has a “Reimbursement of Course Fees” scheme with a list of courses (including M.A. (English), M.Ed., Postgraduate Diploma in Chinese, Malay, English, History, Geography and Literature) that is looked upon as fulfilling an area of need for the teaching service (Ministry of Education, 1998). It is important to include M.Sc.(Information Studies) programme in this scheme since every school
requires at least one or two teachers that have undergone such formal training to spearhead and effectively manage the information age MRL in the future. Inclusion of this programme as part of the “Reimbursement of Course Fees” scheme would highlight the important need of formal training in this area. With the existence of almost 400 schools in Singapore, the full-time M.Sc.(Information Studies) programme, introduced in 2000, will play an important contributory role in the development of such a pool of adequately trained manpower in the education industry.

(4) Developing and managing the MRL collection and services

The collection of the MRL is critical in fulfilling its role as the hub of teaching and learning activities of the school. On-line and electronic materials will swamp the information society in a big way. The future MRL will be equipped with a strong set of print material that is complemented by a set of equally strong digital library resources. The challenge is to effectively manage these resources of the future. Managing in this context includes acquiring, maintaining, using and archiving these MRL resources.

The MRL will also play an important supporting role in identifying relevant material for selection and acquisition. Specific subject profiles can be identified and built up. Selective dissemination of relevant and timely information (e.g. new book releases, AV materials, etc.) becomes important services to the MRL of the future. Thus, Subject Heads, Subject Teachers, other teachers, MRL staff, the Ministry of Education, and the National Library Board need to work in unison as part of a team to continuous build up and develop the collection. The collection must cater to real user needs that include all stakeholders’ needs, including students’ needs. Adopting a client-centered approach to developing systems and services are important factors for consideration.

(5) Identifying and finding ways to make MRL ‘a place to be seen’ and ‘a joy to use’

If the MRL is to succeed as the information and education hub of the school, a natural challenge and opportunity is to identify and find ways to make the MRL ‘a place to be seen’ and ‘a joy to use’. The MRL needs to be dynamic and innovative with bright ideas in the form of its collection, services, programmes and promotions. The MRL should exude an aura and ambience that reflects the formation or presence of a thinking school, where students are actively utilizing a host of resources (not necessarily within the confines of their own MRL) to complete their assignments and projects.

There are numerous programmes and services that can be hosted and brought into the MRL. Examples include debates, arts-and-craft fair, story-telling classes, colouring sessions, educational games, talks on books, cultivation of the reading habit, family reading groups, promoting various hobbies, computer appreciation, exhibitions on theme-of-the-month, and so on. Cultural activities such as theatrical performance, music appreciation, art and museum exhibitions are all possible programmes. At he Nanyang Technological University, the annual Convocation Dinner is held in the
University Library! This shows the range of possibilities and potential for the MRL that are likely to be unexploited currently.

(6) **Incorporating an MRL component in the schools ranking**

Despite its advantages and disadvantages, the school ranking system is likely to remain. In contrast to using a single composite rank, ranking in a different number of areas is more useful since it more adequately highlights the school’s competencies in these areas. If the MRL is truly that important for the school, then a MRL component can be incorporated in the ranks. Many MRL indicators and management statistics can be used to aid such an assessment. For example, this can include:

- collection use analysis (e.g. circulation statistics, circulation history data, reservation statistics, etc.)
- use of MRL facilities (e.g. media resource rooms, discussion rooms, training rooms, equipment booking, use of computer terminals, etc.)
- searching (e.g. searching statistics, response time, searches in progress, etc.)
- collection development statistics (e.g. summary of orders, subject selection lists, desiderata reports, material notification, etc.)
- cataloguing statistics (online records used for cataloguing, catalog cards, bar coded labels, spine labels produced, etc.)
- financial statistics (fund control, fine reports, missing/lost books cost, etc.)
- system transaction (for automated systems only- activity log, error log, help log, database statistics, down-time statistics, etc.)
- vendor performance reports (orders placed and completed, pricing discrepancies, discount percentages, etc.)
- staff training (how many staff have formal LIS qualifications?) and productivity statistics
- level of inter-school and community libraries collaboration.

Ideally, schools in the context of MRL should not be competing against each other. Rather, the challenge and opportunity is to make them more effective and complementary with each other in order to exploit resource sharing, since it is impossible for individual schools to be fully equipped with all the desired resources to support the project-work approach in education. This is the direct result of the shift to electronic networked resources and the limited budget of the MRL. Thus, a more important measure is to explore how well the school MRL can work with other information resource centres including the public and community libraries of the National Library Board. Some form of a bigger master plan to develop the schools’ MRLs may be necessary in order to make them more efficient and effective. Different schools may be tasked to develop different specialized collections that can be readily accessed by other schools. In doing so, we may be able to build up knowledge clusters around Singapore that are used to serve different user needs (including external users of school libraries). In other words, the concept of “information as the most important commodity in an information society” must form the focal point of attention and ingrained into every member of the information society.
**Action Plan**

Based on these observations and proposals, a three-point action plan that addresses the major issues and challenges can be developed. This plan can form the basis for further deliberation and action by the education authorities and all concerned.

1. Formation of a high-level committee to review the role and organization of the MRL, and its stakeholders in the context of the new education emphasis. This may include the introduction of a new career path for MRL staff (teachers) to proceed through the ranks of the school hierarchy. Such a new organization and policy can be homogeneously implemented in all schools in Singapore.

2. Developing a comprehensive training programme to ensure that both informal and formal training is administered. This is to ensure that necessary knowledge and skills are acquired for the management of the MRL. This includes identifying the relevant training avenues and formal courses, and transmitting a clear message to teachers of the need for, and relevance of the training through supportive schemes such as the Reimbursement of Course Fees, No Pay Leave, or so on.

3. Formation of a task force to oversee the deployment of networked MRL to facilitate resource sharing and optimization. This is especially applicable in the context of very expensive electronic resources. This in turn will directly influence the collection development policies of individual MRL so that it fulfills the dual role to support individual school’s special needs as well as core needs of the national curriculum.

**CONCLUSION**

The information society is the future! This society requires both the important ingredients of computer literacy and information literacy. Singapore is not far from achieving the first. In the years ahead, we are likely to see a substantial focus change from computer literacy to information literacy. Information professionals will be much in demand in the 2000s as IT professionals have been in the 1990s. The MRL plays a critical role in schools to develop and impart this training to our current and future generation of students. The implementation of the proposed action plan will propel the MRL and her staff nearer to accomplishing the objective of transforming all schools in Singapore into information age schools. MRL staff, when fully trained, will be valued for their information expertise and technological know-how. Coupled with their pedagogical skills, these staff (teachers) will become a catalyst for change.

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**References**


**Author Biography**

Schubert Foo (BSc, MBA, PhD, CEng, FI MechE, FBCS) is the Head of the Division of Information Studies at Nanyang Technological University (NTU). He joined NTU in 1990 and served as the Sub Dean in the School of Applied Science from 1991 to 1996. His current research interests include multimedia technology, Internet technology, computer security, digital libraries and information management. He can be contacted at: School of Applied Science, Nanyang Technological University, Blk N4 2A-32, Nanyang Avenue, Singapore 639798 or at h-dis@ntu.edu.sg.