

Developing a Knowledge Society through Teacher Librarians: A Conceptual Model For Sri Lanka

*Pradeepa Wijetunge
Director
National Institute of Library & Information Sciences
University of Colombo
P.O.Box 1698, Colombo 03
Sri Lanka
pradeepa@eureka.lk*

Abstract

This paper briefly discusses the knowledge society and characteristics of the knowledge society at the beginning. Secondly it discusses the implications of knowledge society on education and the role of teacher librarian in the knowledge society. Then it goes on to discuss the education system of Sri Lanka, status of school libraries in Sri Lanka, the second General Education Project which supports the implementation of education reforms and the establishment of National Institute of Library and Information Science (NILIS) with an emphasis on training of teacher librarians by NILIS. Finally it describes the implementation model of its knowledge skills programme and the model and contents of the actual knowledge skills programme. The paper is concluded with some remarks on the factors, which will affect the success of the project.

Knowledge Society

We are superseding the "Information Society" in which the emphasis was on up to date information. Educators, social scientists, policy makers and the like are realizing that information is not power anymore. It is the human understanding and knowledge that is power and information is how you get knowledge (Todd 2001). A society, which is well informed and knows how to use the information for the betterment of that society, is the "Knowledge Society". Attaining the knowledge society has become the central theme of many national policies in almost every nation.

In a knowledge society, the basic economic resources are no longer capital, natural resources or labour, but knowledge is. According to Drucker (1994) blue-collar workers grew phenomenally in the first half of the 20th century. But in the last forty years, have declined rapidly first as a proportion of the total and since early 1980s even in absolute numbers. Instead a new group of workers is emerging in the post-industrial workplace. This new group is the knowledge workers.

These knowledge workers, though only a minority of the workforce already give the emerging knowledge society its character, its leadership and its social profile. They may not be the ruling class of the knowledge society but they already are its leading class according to Drucker (1994).

Characteristics of the Knowledge Society

Drucker (1994) has pointed out that knowledge society has several significant characteristics.

The knowledge worker gains access to work, job and social position through formal education and this formal education required for knowledge work is education that can only be acquired through formal schooling. It cannot be acquired through apprenticeship. Education will be the centre of the knowledge society and schooling its key institution.

However it does not mean that the traditional school is becoming more important. In the knowledge society more and more knowledge and especially the advanced knowledge will be acquired beyond the school and beyond the formal age of schooling. This knowledge acquisition will be alternative educational routes in addition to the traditional routes of learning.

Acquisition of knowledge will no longer depend on obtaining a prearranged education at any given age. Learning will become possible at any age through means of new learning technologies.

The performance of an individual, an organization, an industry or a country in acquiring and applying knowledge will increasingly become the key competitive factor for career and earnings opportunities of individuals; for the performance and simply for the survival.

“The knowledge society will inevitably become far more competitive than any society we have yet known for the simple reason that with knowledge being universally accessible there are no excuses for non-performance. There will be no *poor* countries. There will only be *ignorant* countries” (Drucker 1994).

“Knowledge” of the knowledge society is essentially different from the “knowledge” in the earlier society. In the knowledge society, knowledge basically exists only in application and this knowledge application is highly specialised, therefore not applicable to anything else.

The predominant labour force in the knowledge society will consist of highly specialised people. Because of this specialisation they will always have to work in teams. “Teams become the actual work unit rather than the individual. The individual knowledge worker has to learn how to switch from one kind of a team to another, how to integrate into a team, what to expect of a team and how to contribute to a team” (Drucker 1994).

“If Drucker’s vision of knowledge society is correct the definition of an “Educated Person” will be radically changed. Traditionally it has been assumed that a well-educated person was one who had a formal, broad-based liberal arts background. The educated person of the future will be one who has the capacity to continually learn new concepts and modes of operation throughout his / her lifetime” (Dunlap 1995).

In summary, the significant characteristics of the knowledge society are: the education becoming an essential element, learning going on throughout the life span of an individual (lifelong learning), formal school losing its importance as the only place where learning can

be acquired, emphasis on the “application of knowledge” instead of the “collection of facts” as knowledge, and increased access to learning through ICT.

Implications of Knowledge Society on Education

Knowledge has four major categories (Forray and Lundvall 1996).

Knowing what – procedural knowledge which involves transfer of codified knowledge into facts

Knowing why which involves transfer of basic principles, rules and ideas.

Knowing how – knowledge that derives from direct experience or “know how”.

Knowing who – knowledge that involves the ability to communicate and work in teams.

Significance of procedural knowledge (*Knowing what*) is fading. Its place is gradually taken by the need to learn how to acquire facts and transform them into new knowledge. This implies that the aim of education is to develop cognitive skills and crucially to instil curiosity, both to equip the student with the knowledge of how to learn, the ability to learn and desire to learn (ILO 2001).

“For work in the knowledge economy, there is no way to economic and social prosperity other than to make learning and knowledge creation the central skill taught in schools and harnessed at the workplace” (ILO 2001). Any country aiming towards the knowledge society has to take this fact into consideration in planning its national education system.

The role of the student in the knowledge society is being changed from receiving the imparted knowledge passively to being more interactive and responsible for their learning. The role of the teacher is also changing from didactic nature to a more facilitative nature. Instead of delivering facts, the teacher of the knowledge society has to play a more active role in the students’ learning process by encouraging and training them for independent and lifelong learning.

Information and communications technology has become an essential tool for education in the knowledge society. Through communication networks individuals can have access to learning from a distance, and access to learning beyond the formal school. Adult learning and retraining are facilitated through networks. Access to information, which is the vital source of knowledge, is provided beyond the geographical boundaries of the information sources. These possibilities have profound effects on the role of the teachers in the knowledge society. In order to cater to the contemporary students, teachers have to be empowered in the necessary skills required for the knowledge society.

Literacy Skills for the Knowledge Society (2002a) states “that literacy means more than knowing how to read, write or calculate. It involves **understanding** and **being able to use** the information required to function effectively in the knowledge-based societies that will dominate the twenty-first century.” These skills are defined as follows:

Prose literacy: the knowledge and skills needed to understand and use information from texts including editorials, news stories, poems and fiction.

Document literacy: the knowledge and skills required to locate and use information contained in various formats, including job applications, payroll forms, transportation schedules, maps tables and graphics.

Quantitative literacy: the knowledge and literacy skills required to apply arithmetic operations, either alone or sequentially, to numbers embedded in printed materials, such as balancing a chequebook, figuring out a trip, completing an order form or determining the amount of interest on a loan from an advertisement. (*Literacy Skills for the Knowledge Society* 2002b)

It also defines five broad levels of literacy ranging from level one to five. Level one indicates very low literacy skills where as level five indicates increasingly higher literacy skills requiring the ability to integrate several sources of information or solve more complex problems. It is the level five literacy of a country's population, which should be targeted at, through the education system.

Role of the Teacher Librarian in the Knowledge Society

As the contemporary schools change their structure and pedagogical methods to encourage active learning instead of passive learning, dependency on resources other than the classroom teaching will increase. This will change radically the role played by the teacher librarian so far.

Resource based learning will require more resources than what is available in the school library. This will call for the librarian to move out of the library building especially through information technology in search of relevant information.

The librarian will not only have to search for information but train the teachers as well as the students in searching, evaluating and retrieving information contained in a variety of formats.

In order to encourage lifelong learning and learning to learn, schools will be using more participative learning strategies. Teachers will be planning self-study projects to a greater extent for students and the teacher librarian will have to collaborate with the teachers and school administrators in satisfying the information needs of the students.

When students are encouraged to use resources increasingly, they will have to be educated on copyright laws and plagiarism. Teacher librarian will be the one who has to be responsible for this task.

The teacher librarian will have a responsibility not only in locating information but also ensuring that such information is used in a productive manner. Application of information to generate new knowledge has to be facilitated by the teacher librarian.

With the changing role of the school library, the librarian will face more management challenges. Resources will be scarce and the requirements unlimited, hence careful budgetary control will be needed. Different modes of information retrieval and delivery will require constant training and retraining of the staff. More work in a complex environment will require time management skills. Above all the librarian will have to be adept in connecting the information resources available globally and the users together through the efficient exploitation of information and communications technology.

Education System in Sri Lanka

Sri Lanka recognizes education as a universal human right, in conformity with the Charter of the United Nations. Sri Lanka has endorsed the UN convention on the Rights of the Child and sanctioned the World Declaration on "Education for all" which seeks to universalise elementary education. Eradication of illiteracy is a guiding principal of the state policy. Universal free education has been in practice in Sri Lanka since 1945 as a result of this policy.

However an objective analysis of the achievements of the past six decades indicated that the results are unassuming. Didactic teaching and rote method of learning characterized the education system of Sri Lanka. Acquiring knowledge, skills and attitudes necessary for successful living is not accentuated. Studies have indicated that the efficiency of present education system is at a low level. Output has failed to fit into the work opportunities that are available. There is a significant mismatch between education and employment. (National Education Commission 1997).

The failure of the output from the education system to fit into the work opportunities available in the country and their unrealistic ambitions in looking for white-collar employment has resulted in high levels of unemployment and underemployment among the educated youth.

This condition worsened when the government policy changed from state sector dominated economy to a private sector dominated economy. This change of policy has shifted the employment opportunities from the state sector to private sector.

The qualities and attributes that are most sought after by the present labour market, other than book knowledge are versatility and adaptability, confidence to face challenges, a positive work ethics, productivity and discipline, leadership and team work and most importantly communication skills. These qualities, the prerequisites of the knowledge society are reported to be lacking in many students who complete the current educational programmes (Central Bank of Sri Lanka 2001)

"It is a lack of investment in human capital, not a lack of investment in physical capital that prevents poor countries from catching up with rich ones. Educational attainment and public spending on education are co-related positively to economic growth." (Barro and Sal-i-Martin 1995).

Recognising the shortcomings of the education system of Sri Lanka and the inevitability of investing in human capital, National Education Commission was entrusted with the task of formulating a National Policy on Education in 1991. General Education reforms which is being implemented currently in Sri Lanka took into consideration these deficiencies and necessities in the national education system. Accordingly it concentrated on improving the quality of education as well as on co-curricular activities, value education and education for national integrity.

School Libraries in Sri Lanka

According to a survey carried out by the Ministry of education in 1995, out of about 8,000 public schools in the country (excluding North & East province), 70% had no library

facilities at all, 19% had identified spaces within the school, which had a small collection in a cupboard. Only 11% possessed a permanent library. An Assistant Secretary School Services from the Ministry of Education looked after school library sub-sector on a part-time basis.

A few international schools, public national schools and a few private schools have good libraries, but even in those schools where libraries are available, the basic collections and their organisation are deficient.

Very little budget allocations are being made therefore most of the books are out dated. Most of these libraries are not staffed with qualified librarians, but by teachers, volunteers or others on part time basis. Out of about 2000 personnel serving in the libraries only about 17.5% have acquired any qualification in library studies.

Little or no emphasis was given in the curriculum for the use of library resources. Most of the students are not even aware of the library. The person in charge of the library or the principal has to compensate for the lost books and this contributes to the fact that the students are not allowed to use them. Teachers, through lack of knowledge and lack of experience in using libraries as students, do not encourage students to read.

Second General Education Project

Policy makers realized the significance of empowering the nation's human resource in order to achieve the expected standards of development. As a consequence, initiatives were taken to improve the education system. Education reforms, encompassing all areas of primary, secondary and tertiary education have been introduced with the broad objective of enhancing learning achievements at all levels, in line with the needs of the market driven economy. General Education Project (GEP) was designed to support the government's national education policy reforms. The second phase of this project (GEP2) was to be effective from January 1998 with the aid of the International Development Agency of the World Bank.

This project had six components; Curriculum development, Textbooks and educational publications, School facilities rationalization, Quality inputs, Libraries and reading habits, Education management and planning.

Several major issues, which had to be addressed, were raised under the libraries component in the World Bank report (World Bank 1997):

- Lack of a defined library policy on libraries for educational institutions
- Inadequate management infrastructure to administer public and school libraries, and no designated senior official within the Ministry with librarianship qualifications or experience to be responsible for school libraries.
- Poorly trained or non-existent library personnel at all levels in the library and information services sector, and the inadequate emphasis given to reading and books in school curricula.
- Extremely limited space and facilities in schools for books to be obtained, stored (in permanent school libraries or temporary class libraries) and used appropriately, especially in rural areas.
- Books in school libraries are often out of date and irrelevant and not in languages spoken in the locality.

- Limited use by libraries of available telecommunications infrastructure to modernize libraries as information technology centres.
- Schools do not have regular budget allocations for libraries.
- Teachers have not been trained in library studies and current teacher librarian training is brief and inadequate
- The image of the librarian and teacher librarian is poor and hence there is little motivation for principals and teachers to support libraries and encourage reading habits.

The main objective therefore, of this component, is to support and stimulate an activity-based curriculum and to encourage the reading habit in the school and community by expanding, professionalizing and strengthening the management of the school library sector. Establishing school libraries according to school size, providing adequate books, furniture, and trained librarians, strengthening the management of the library sector, and establishing the National Institute of Library and Information Science (NILIS) to take over the staff development activities.

Under the Project 2000 existing and 2000 new school libraries will be developed and 4000 teachers with five years experience in teaching have been selected to be trained as teacher librarians. Twenty-five selected schools throughout the country will receive an Information Technology package for the benefit of the school communities.

Establishment of NILIS

National Institute of Library and Information Science (NILIS) was established in 1999 with the support of World Bank with the primary objective of educating the school librarians. It will cater to the 4000 teachers selected to become Teacher Librarians (TLs) and also to the personnel in public, industrial, commercial and academic libraries.

NILIS is an autonomous institution within the University of Colombo and its objectives are:

- To develop manpower resources equipped with appropriate professional knowledge, skills and competence capable of contributing effectively in
 - Planning, organization, management operation and development of library services, systems, centres and programmes.
 - Teaching and research in the field of Library and Information Sciences.
- To promote professional advancement of those already in the LIS service by organizing and conducting continuing educational programmes for their training and retraining.
- To conduct research and to disseminate the results of such research through publications, seminars, workshops and extension services.
- To liaise with and establish co-operation and link programmes with other national and international institutes having similar objectives and allied interests.

The institute was named as the National Institute because it is expected to serve the whole nation. It was agreed that the World Bank would provide funding for the construction of the building, equipment, furniture, foreign consultants, library materials and human resources development, while the University Grants Commission would provide funds for the recruitment of staff and maintenance.

Training of Teacher Librarians by NILIS

Having rich information collections, state-of-the-art physical structures or advanced information and communication facilities are not the hallmark of the school library, but its actions and evidence that show that it makes a real difference to student learning, that it contributes in tangible and significant ways to the development of human understanding, meaning making and constructing knowledge. The school library is about empowerment, connectivity, engagement, interactivity and its outcome is knowledge construction. (Todd 2001).

According to this philosophy, merely developing the school library infrastructure and providing theoretical knowledge to its staff will not be sufficient to achieve the knowledge society. The school library will have to expand its traditional service of providing books to the school community to encompass the variety of formats in which information is presented, and technology is used to access the information. Research has proved that good school libraries have a positive effect on academic achievements of the students. It is also proven that higher the instructional role of the school librarian higher the academic achievements of the students (Lance 1994 and Manzo 2000).

NILIS in planning its education and training programmes for the Teacher Librarians, recognizes the IFLA/UNESCO's mission statement of the school library that, "The school library provides information and ideas that are fundamental to functioning successfully in today's information and knowledge-based society. The school library equips students with life-long learning skills and develops the imagination, enabling them to live as responsible citizens" (IFLA/UNESCO 2000).

NILIS acknowledges the following goals of the school library proposed by IFLA/UNESCO manifesto.

- Supporting and enhancing educational goals as outlined in the school's mission and curriculum;
- Developing and sustaining in children the habit and enjoyment of reading and learning, and the use of libraries throughout their lives;
- Offering opportunities for experiences in creating and using information for knowledge, understanding, imagination and enjoyment;
- Supporting all students in learning and practicing skills for evaluating and using information, regardless of form, format or medium, including sensitivity to the modes of communication within the community;
- Providing access to local, regional, national and global resources and opportunities that expose learners to diverse ideas, experiences and opinions;
- Organizing activities that encourage cultural and social awareness and sensitivity;
- Working with students, teachers, administrators and parents to achieve the mission of the school;
- Proclaiming the concept that intellectual freedom and access to information are essential to effective and responsible citizenship and participation in a democracy;

- Promoting reading and the resources and services of the school library to the whole school community and beyond.

Courses planned by NILIS vary from certificate to postgraduate diploma level for teacher librarians and from 2003 it will offer higher degrees as well. In addition it will conduct a multiplicity of workshops for teachers, principals and other educational administrators on collaborative partnership of learning.

The 4000 teachers identified to be trained as teacher librarians, will be responsible for the development of school libraries, not in the sense of the traditional library, but in conformity with the IFLA/UNESCO manifesto. They will be expected to collaborate with the teachers and administrators in developing resource based learning projects, identifying information needs of the school community and necessary resources, maintaining the schools media centre, to promote use of information technology and Internet within the school community.

The Implementation Model of the Knowledge Skills Programme

NILIS recognizing the teacher librarian's role in the path towards a knowledge society, has designed a conceptual model to be superimposed on its proposed education programmes in order to introduce an inquiry based learning, which supports the inculcation of knowledge skills in teacher librarians. Thereby we expect to empower the teacher librarians so that they can play an instructional and supportive role for the school community to encourage them to develop their information skills and utilize the information in the process of knowledge construction. In turn it is expected that the students will become members of the knowledge society with an emphasis of learning to learn and contextual application of knowledge.

In addition, knowledge skills programme will be offered to the teachers of the National Colleges of Education through our formal education programmes. In turn They will be able to influence the school children through the schoolteachers and teacher librarians trained by them.

Knowledge society cannot be achieved by only empowering the school community. Many others who do not belong to the school community will be excluded from this program. To rectify this, NILIS plans to introduce information and knowledge skills to a plethora of other professionals through short-term programmes, workshops and seminars. Initially the postgraduate students of the Faculty of Education will be selected for this because they are already schoolteachers and administrators. Once they get back to education system they are expected to contribute to the empowering of school children. Bachelor of Education students will also be drawn in to the programme because they are the next significant group who can cater to the school community through their employment in the education system.

However teacher librarians will not be able to carry out their empowering role unless the principals, administrators and policy makers provide opportunities for inquiry-based learning and evaluate their students' knowledge augmentation appropriately. A collaborative partnership of all stakeholders is essential to provide knowledge construction opportunities

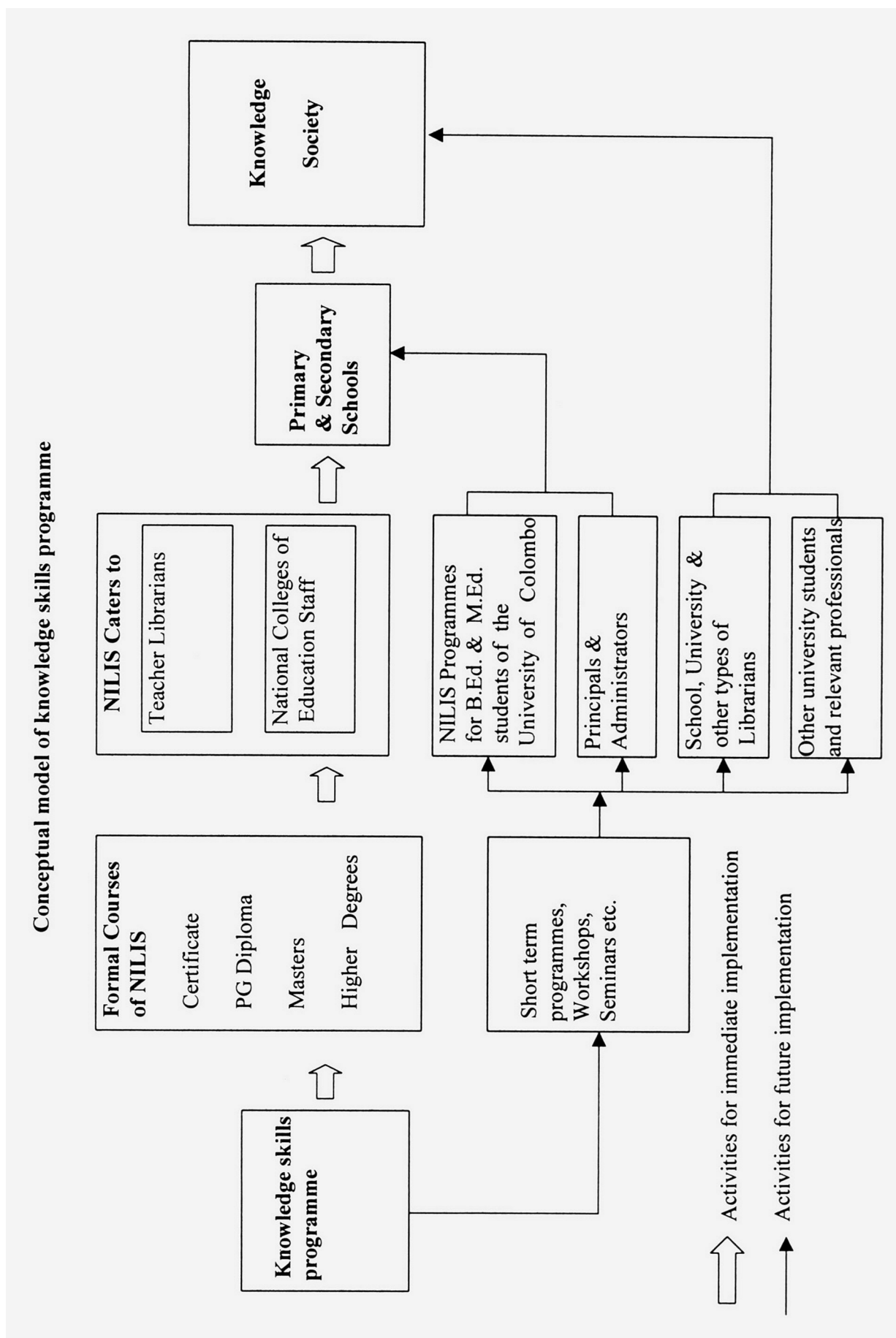
for school children, and it is vital for the success of the school library development project of Sri Lanka.

To establish such collaborative partnership and enlighten these groups of professionals, NILIS will offer the short-term programmes. These programmes will stress the significance of knowledge society, inquiry-based learning opportunities, and the necessity of collaborative partnerships for the empowerment of students. They will also provide an introduction to information and knowledge skills.

A knowledge society cannot be achieved only by empowering the current education system. Those who have completed their formal education will not be catered for, by the school system. Taking this into consideration this program will be extended to the other undergraduates of the University of Colombo. It is expected that exposure to our knowledge skills programme will enhance their capabilities in using, applying and creating new knowledge. However this will need the co-operation of the relevant Deans.

Students of the other universities will be drawn in through extending the programme to university librarians and teachers. They will be the future teachers, parents and employees with knowledge construction abilities. In this manner NILIS will implement its knowledge skills program encompassing all educational sectors within its purview.

The following figure depicts the proposed conceptual model.



Model of the Knowledge Skills Programme

This knowledge skills programme is designed to suit the current needs of the country and based on the present levels of awareness of the target groups. Therefore in the international context it will appear different or sometimes even strange. We have emphasised three major aspects, which seemed significant in the Sri Lankan context; Introduction to knowledge related concepts, knowledge management skills, and knowledge application skills.

In designing the first two aspects the, "skills for knowledge management" specified by the LIC/TFPL research (1999) was adopted to a certain extent and for the knowledge application skills aspect, PLUS model (Herring 1997) of information skills provision was adopted. The main principle criterion for selection of PLUS model was its simplicity and self-explanatory nature in contrast to the other models. Since NILIS and its courses as well as the target student groups are new to teacher librarianship, information literacy and knowledge society progressing from simple to complex was vital.

Introduction to knowledge related concepts

Our target group students and course participants have had limited opportunities to be exposed to the knowledge related concepts. Hence the concepts of knowledge including knowledge society, value, context and dynamics of knowledge and information will be introduced. Learning / intelligent organisations and knowledged / ignorant countries will be introduced. Different types of knowledge (tacit/explicit and external/internal) and different types of knowledge containers will be introduced. The level of introduction will vary according to the level course on which the knowledge skills programme is superimposed. Pedagogical method for this section will be introductory lectures and demonstrations

Knowledge management skills

The teacher librarians especially will have to act as knowledge managers within the schools stepping beyond the boundaries of the traditional library. In this endeavour, they need to possess the necessary skills. Communication, ability to work in teams, negotiation and sharing will be introduced through lectures and demonstrations. Practical experience will be provided through guided assignments in formal courses. Priority will be given to the introduction of web-based knowledge content, as current Sri Lankan content is scanty in the web. Effective use of ICT in the knowledge environment will be specially emphasised. Organisation of all types of knowledge will be introduced to teacher librarians.

Knowledge application skills

PLUS model will be specifically used here. Through practice assignments and self-study formal course participants will be trained in defining the Purpose, Location, Use and Self-evaluation of information. As this model is well known it will not require any further description here. The significance of knowledge application will be promoted among the School Principals and Administrators through seminars. Practical aspect will be promoted through purpose designed information skills workshops for different types of librarians and university students.

Success of the Programme Implementation

A major constraint for the successful implementation of the knowledge skills programme is the lack of a critical mass of teachers. Knowledge concepts or information literacy concepts have not been the buzzwords in Sri Lanka therefore awareness among

practicing librarians and the teachers is less. At the initial stages a handful of teachers will have to learn through self-study while a formal training is received perhaps through distance learning.

Negative attitudes towards "libraries" will be a drawback when arranging seminars for non-library educators and administrators. In this instance support from the Ministry of Education is vital to encourage participation through incentives.

Retaining the interest and dedication of the teacher librarians is imperative for the achievement of knowledge society through empowering the school children. They need to take an interest in promoting knowledge skills in the schools with a cascading effect to reap the full benefits of their training. To motivate the teacher librarians and to keep them abreast of global developments in teacher librarianship and to help their life long learning a professional association is essential. This may be considered by 2003 when a considerable number of teacher librarians are trained by NILIS.

References

- Barrow, R. and Sala-I-Martin, X. (1995). Economic growth.
www.ineser.cucea.udg.mx/subdepartamentos/workingpapers/Bibliografia.htm
- Central Bank of Sri Lanka (2001). Annual report 2000. Colombo. Central Bank of Sri Lanka.
- Drucker, Peter F. (1994). Knowledge work and knowledge society: the social transformation of the century.
<http://www.ksg.harvard.edu/ifactory/ksgpress/www/ksg-news/transcripts/drucklec.htm>
- Dunlap, Isaac Hunter (1995). Specialization in a "knowledge based" society.
<http://www.wiu.edu/users/mfind/research/drucker/acaessay.html>
- Forsay, D. and Lundvall, B.A. (1996). Employment and growth in knowledge-based economy. Paris. OECD.
- IFLA/UNESCO (1995). School library manifesto.
<http://www.ifla.org/VII/s11/pubs/manifest.htm>
- ILO (2001). Essential prerequisites for the information society: education, learning and training. IN World development report 2001: life at work in the information economy. Geneva. ILO. Pp.61-74.
- Lance, Keith Curry (1994). The impact of school library media centres on academic achievement. ERIC Digest. Syracuse, NY. ERIC Clearinghouse on Information & Technology (ED 372 759).
- Literacy skills for the knowledge society (2000a).
<http://www.nald.ca/nls/ials/ialsreps/ialsrpt2/ials2/high1e.htm>

Literacy skills for the knowledge society (2000b).

<http://www.nald.ca/nls/ials/ialsreps/ialsrpt2/ials2/high2e.htm>

Manzo, K.K. (2000). Study shows rise in test scores tied to school library resources. "Education week on the web".

<http://www.edweek.org/ew/ewstory.cfm?slug=28libe.h19>

National Education Commission (1997). Reforms in general education. Colombo. National Education Commission.

World Bank (1997). Sri Lanka: Second General education project. Project implementation plan for component 5: Libraries and reading habit. Unpublished.

Todd, Ross (2001). Transition for preferred futures of school libraries: knowledge space not information place, Connections not Collections, Actions not Positions, Evidence not Advocacy. <http://www.iasl-slo.org/virtualpaper2001.html>