CHAPTER TWO

LITERATURE REVIEW

2.1   Introduction

This chapter aims to identify various user education programmes used in academic and school libraries reported in published literature. The *ERIC* database, *Library and information science abstract* and *Dissertation abstracts on disc (DAO)* were consulted to obtain the literature. The Internet was also explored to obtain current information on user education programmes and activities in schools worldwide.

2.2. User Education Programmes

2.2.1 Academic Libraries

Academic libraries support the teaching, learning and research needs of the institutions they serve. The libraries are responsible for ensuring maximum use of its information sources and resources as well as provide the relevant information skills to benefit their users. The information skills are usually provided in the user education programmes.

Fleming (1990) defined user education programmes as "various programmes of instruction, education and exploration provided by libraries to users to enable them to be more effective, efficient and make independent use of information sources and services to which these libraries provide access". An evaluation of user education programmes literature revealed that user education programme was not only important in academic but also helped to improve users knowledge as well as increase their use of the library.

Mews (1992) argued that programmes in the use of information sources should be integrated within the schools curriculum. There was a need for instruction in the use of libraries and information services. Mews saw user education programmes as a continuous process, which should cover the use of the catalogue, abstracts, bibliographies, reference books and other library tools. Library users should be given knowledge about method of searching in manual and electronic environment.

Foss (1994) stressed that, user education programmes should be organized at different information levels to ensure that the needs of all users were met. Foss outlined the application of these different levels at the fourth Bay College's (Sierra Leone) user education programme. The first stage provided a general introduction to the library, followed by users exposure to subject and bibliographic materials and instructions to catered for the needs of advance and research students. Foss (1994) based his user education programmes on different information levels recommended by the Ministry of Education in China (China, 1995). The first level was library orientation programme for new students. The second level comprised bibliographic instruction for juniors and seniors and the third level was involved the sorting, summarising of documentation, studying and analysing of information for all graduate students.

Rice (1991) categorised user education programmes under three broad behavioural approaches. The affective approaches were concerned with the feelings and attitudes of the readers and were thought to be of long-term importance. After undertaking the library user education programmes, the user would have developed a positive attitude towards the library and its staff and felt more confident about using the library. This cognitive

approach stressed on the understanding of concepts and ideas, which can be either abstract or concrete. After the library user education programmes, students should be familiar with the holdings of the library and be aware of specialised library services (such as the CD-ROMs databases made available). They would have learnt certain information skills such as how to conduct a literature search. The third approach proposed was psychomotor-based. This referred to the activities such as retrieving books from the shelf. The student would be familiar with the physical layout of the library.

Foss (1994) noted that in South Africa, Australia and the Netherlands, issues related to information access and use were becoming an increasing concern and, therefore, concept of user education and information literacy were being incorporated in their schools and higher education curriculum.

Fjallbrant (1984) proposed that the library should organise two types of user education programmes:

    a) Orientation information programmes,

    b) Instruction skills programmes.

Orientation programmes information included:

    a) General information such as the library's telephone numbers;

    b) More specific information about the library holdings and services ;

    c) Maps showing the students where subject and services are located;

    d) Instructional material about the library location; and

    e) Information about the library organization itself.

The orientation programmes were often short term and instructional programmes were sometimes integrated with the subject curriculum. The scope of the instructional programmes were wider than the orientation programmes.

Instructional skills programmes involved:

a) Carrying out a literature search;

b) Appreciating the distinction between abstracts and indexes; and

c) Using sources of information other than books and journals, such as conference proceedings, theses, government publications and patents.

2.2.2. Schools libraries

Price (1999) described the key factors for effective library education programmes in schools and this included; professional leadership, shared vision as well as goals and a good learning environment. Concentration was given to teaching and learning, purposeful teaching, high expectation, positive reinforcement, monitoring progress, pupil rights and responsibilities, home-school partnership and a learning organization. Price stressed that the correct management and good school environment influenced school user education programmes. A partnership between the school library, the principals, teachers, students and parents is also very important.

The characteristics of the user education progrmmes recommended by Guthrie (1999) in school libraries were as follows.

a) The content should be interesting and relevant;

b) There should be collaboration with teachers at the various grade levels;

c) Student should learn how to gather appropriate materials that lend themselves to hands-on activities;

d) The location of appropriate resources that children can use; and

e) Incorporation of plans into teaching modules.

The implementation of the library programmes in schools can be in various ways. Deusen and Tallman (1994) suggested that,

a) Collaborative planning of the school librarian and classroom teacher who shared the responsibility for planning both content and process goals for the programmes;

b) Cursory informal and brief planning between the school librarian and teachers for school library involvement;

c) The classroom teachers planned their own curriculum and instructional unit for their own classrooms with little regular involvement from other teachers; and

d) Team planning where classroom teachers met to plan instructional units. Teams could be organised around grade levels or content area. Team planning required the team to meet on some regular basis, weekly or at least monthly.

Whichever method is adopted for implementing the process, the plan would include the following.

a) The teacher librarian isolates materials by theme or instructional unit based on a teacher's request;

b) The teacher librarian and classroom teacher collaboratively plan instructional objectives for a unit including information skills objectives;

c) The teacher librarian and the classroom teachers collaboratively decide what they and the students would actually do;

d) The teacher librarian and the teacher share responsibility for direct instruction in the content and information skills areas and for assisting and monitoring students;

e) The teacher librarian inserts an isolated lesson or series of lessons into the unit and this is followed up by instructions provided by the teacher;

f) The teacher librarian and the teachers review or evaluate the unit and identify changes they would make for the next time; and

g) The teacher librarian participates in evaluating the student's product, process and providing feedback to the students.

Finally, Sam (2000) categorized the components of school library skills as follows:

a) Citizenship and general knowledge;

b) Locational skills (general, reference)

c) Information retrieval skills (Automation system, Boolean Login, Internet, Online resource)

d) Research and report writing skills (Note taking, writing a paper, mind-mapping and application)

e) Computer skills (General keyboarding, word processing, multimedia and presentation, spreadsheets, databases. operating system)

f) Interpretation skills (Evaluation and selection techniques, Listening and viewing skills, Literature application)

2.3. School Libraries and User Education Programmes in Sri Lanka

2.3.1. School Libraries

Yapa (1998) described the history of school libraries in Sri Lanka. The early school libraries were in private schools. These libraries now hold the best school library collections in the country. They also received additional support from trust funds and endowments. In addition, the government- assisted private schools also received library grants. Records indicated that public schools also received library grants from the government. The introductions of free education as well as the change of medium of instructions have resulted in the rapid increase in Sinhala and Tamil reading materials. This development helped support the development of libraries in government schools. Yapa also pointed out that in the 1960, the Department of Education sent a circular letter to all principals of government, central and senior schools regarding the setting up of school libraries. The National Education Commission, established in 1961 had also recommended the setting up of school libraries. In 1969, 100 schools libraries were established, and 200 hundred school librarians were trained in Sri Lanka. As a result, the Ministry of Education has established a cadre of school librarians in the early 1970s.

The Second General Education Project implementation plan (World Bank, 1997) revealed that, "In 1995, excluding schools in the north east province, only 11 percent of schools possessed a permanent library. Another 19 percent identified spaces within the

school, which contained books in a small portion of one or more rooms in a book cupboard or on bookshelves. Thus, out 8,179 schools in the country excluding the north-east, 5,719 schools (70 percent) contain no library facilities".

2.3.2. School Librarians

Yapa (1998) describes the situation of school libraries and teacher librarians in schools. In Sri Lanka, the term school librarian refers to the person in change of a school library, irrespective of whether he or she is a qualified librarian, a teacher, a clerk, or a volunteer. According to Yapa, school librarians are not teachers and they do not have the same status as teachers. Their salaries are lower than those of teachers. Those who have been recruited by the Ministry of Education are paid according to their qualifications and experiences. Teachers who look after the library are not paid extra allowances for their services. The individual schools pay others who work in libraries, with the help of school development fund or parents and alumni associations. The Ministry of Education in Sri Lanka identifies three types of school librarians and these are professional librarians, para-professionals and teacher librarians. The policy recommends that professional librarians be appointed for all large schools and trained teacher librarians and para-professionals be appointed to other schools according to their requirements.

2.3.3.School Library Programmes

In 1989 the Asian Development Bank recommended the necessity of the school library programmes. Its recommendation also consisted of plans to improve students reading skills. Students needed to be given more time and attention to reading under the guidance

of trained teachers. The report also recommended the strengthening of school libraries to enrich the teacher and students' requirements.

Yapa (1998) also indicated that the subject of information seeking skills has been introduce into the primary school curriculum through the social science context which is taught in the classroom. However, the teachers still found it difficult to understand the relevance of the school library in the process, especially when they themselves were not taught   library and information skills during their teacher training period. Yapa (1998) proposed that the entire school curriculum be revised to introduce more student-based learning, and steps needed to taken to introduce literacy into the new school curriculum as well as into the teacher-training curriculum.

2.4. The Teacher Librarian   and the School Curriculum

Deusen (1993) pointed out that the focus of the school library user education programmes was to develop skills, attitudes and prepare students to be learners in an information-rich society. The library programme provided a setting for learning with access to resources. The modified flexible scheduled programme provided learners with selected and organized resources that enhanced the curriculum. Blocks of time were scheduled based on planned   curriculum needs. Individuals and small groups of students have some access to the library during and outside their instructional activities. Deusen proposed that the school library should organize the library user education programmes in relation with the curriculum and the class teachers.

Deusen described the user education programmes developed at a community school in Iowa, United States. He described the integration of the library user education programmes in the schools curriculum and the integration of library skills. The user education programmes could either be fixed or flexible. In the fixed schedule, each class visits the library once each week for a period of instruction. In flexible scheduling class, visits to the library depended upon their instructional needs. In a fixed scheduling arrangement, the teacher librarian has a sequence of lessons that is taught week by week. In a flexible scheduling arrangement, the teacher librarian may teach a class a sequence of lessons daily for a given number of days, and then did not meet that class again until their activity requires another sequence of information skills instructions.

Deusen's study provided answers to the following questions:

a. Do library user education programmes with flexible scheduling provide more curriculum involvement than those with fixed schedules?

b. Do library user education programmes with flexible scheduling provide more integration of library skills instruction into curricular content than those with fixed schedules?

This study categorised the sample into two groups, the first group was based on the scheduling pattern that instituted instructions in school library, and the second group included the teacher librarians who employed a fixed schedule for their classes. The teacher and teacher librarian negotiate class-meeting times according to the needs of the classroom curriculum.

The reference of the two groups, were compared to determine whether either group exhibited greater frequencies of performance on the following five tasks as indicators of curriculum involvement.

a) Gathering resources for classroom teachers to use in instructions;

b) Cooperating with classroom teachers to identify objectives for instructions;

c) Collaborating with classroom teachers to develop teaching/learning activities;

d) Participating in the delivery of instruction; and

e) Evaluating the unit.

Deusen's study identified teacher, teacher librarian and curriculum interaction in user education programmes in school. Gathering instructional materials required the least amount of collaborative work between teachers and teacher librarian. Deusen also mentioned that teacher librarians were involved with class teachers for team teaching. When schools produce user education programmes, it must be organized as an integrated function between class teachers and teacher librarians.

Putnam (1996) examined the instructional consultant role of the school teacher librarians. The results suggested that school librarian must be informed of curriculum changes and teaching models. School librarian, who used a flexible pattern of scheduling, practiced the instructional consultant role.

Kester (1994) discussed the need to establish a collaborative effort by teachers and teacher librarians in providing library skills education to school students. Kester's report

showed a significant gap between the number of students being taught library skills by librarians (57%), the number taught by teachers (11%), and the number taught by both (16%). This may in part explain their poor retention of these skills, and their lack of ability to apply them in college. Another research that suggested that library skills instruction should be included in the school curriculum was Nofsinger (1989). Nofsinger's study proposed that guidelines needed to be set for minimum competency in library skills with teacher and teacher librarians involved. Kwong (1990) and Turner and Hendrix (1996) proposed that library instruction programmes should incorporate classroom-content objectives and information-access skills. It involved the joint effort of the classroom teacher and the teacher librarian and demonstrated how cooperative planning improved user education programmes. As such the lesson activity and school information skills activities must be inter-related to the curriculum, the same as the cooperation between the teachers and teacher librarians.

Herring (1996) discussed the theory and practice of library user training into a framework for teaching information skills in school libraries. He suggested that users instruction programmes must be organized in an integrated framework, which combined teachers and teacher librarians. Michael (1990) described a study of thirty-nine Texas public elementary schools that highlighted the cooperation between teachers and school librarians. Michael found evidence that effective schools are significantly more disposed to choose the teacher librarian for cooperation as instructors. The teacher librarian and teachers worked together to make a richer contribution to the instructional programmes of the schools.

31

Kuhlthau (1998) stressed the need for information mediators and teachers to comprehend the information skills, and recognised the perceptions of users like school students, in order to better understand their questions and requests. She also emphasized the importance of providing feedback throughout the programme's process. Continuous joint programmes of instruction, feedback, and encouragement would enable school librarian and teachers to impart to their students with lasting library skills.

Gniewak (2000) studied the methods used to improve student's information skills in school and proposed that subject teachers or class teachers and school librarians could play a significant role. The study found that, when a teacher and teacher librarian collaborated on creating an information skills programmes the skills were learnt better. After the programmes, the students learned how to find the materials on the shelves, how to use the indexes and how to skim and scan for information.

2.5. Resources Based User Education Programmes

Kuhlthau (1998) pointed out that school students should achieve an awareness of the variety of materials available to them beyond the monographs. Besides an understanding of how to retrieve these materials effectively, they should also develop a search method that enabled them to be more critical of their resources. Kuhlthau mentioned that practical knowledge was very important to the retrieval of information within the school environment. Resources available provided the students with reading materials and life-long learning. Library materials should be cataloged, inventoried, and disseminated through the library and be made available to all users. These materials should be current

and in good repair. The materials should include print, software, and electronic materials. Outdated and worn materials should be regularly discarded.

Another study that surveyed the relationship between library resources, instructional programmes and information skills was conducted by Morrison (1998). Students who received information skills instructions could use library facilities and resources effectively. The programme began in year 2 with story time sessions. In year 2 the librarian developed the building blocks of information used by introducing the use of basic dictionaries and index ordering skills. In consultation with teachers, this was achieved in the context of real library use that is linked to work developed such as constructing books and folders based on the information collected and learned to develop basic skills like note taking. Morrison found that library programmes should be an integrated effort between resources and the teaching learning process.

Yan, et al (1998) also presented the results of studying resource-based, statistical research projects for Canadian grade 9 students to developed information skills programmes at the Merivale High School (Carleton). This study focused on the resources based information skills programmes and how to apply library resources to the school's user education programme.

Standard is also an issue in information skills programmes. Simpson (1999) suggested that the school library must be planned to include new national standards and accommodate new technologies, teaching methods and resources. Space should be

allocated for a circulation area, online catalogue, electronic reference area, and librarian's office workroom and programme activities area. He described the resource planning used in user education programmes.

Kirschenman (1998) provided suggestions on how the school library can be used for resources-based programmes. The teacher librarian could bring students to the library for individual research projects; used the library resources for activities in the classroom; used books, magazines, or videos to springboard creative projects; set up learning stations in the library or the classroom; and used skills-based activities that are completed in the library to help teach content. This type of programmes were important in giving information skills to student within a short period.

Enujioke's (1994) doctoral dissertation at Georgia State University was a comparative study of school children's use of school libraries in DeKalb County, Georgia, United States during the fall and winter quarters of 1993/94. The study showed that students preferred public libraries over school libraries, because they could find what they were looking for in public libraries (57.8% of the time compared to 21.6%.) The students also felt that the public library had greater number of resources for their purposes, including reference books and computers. More than fifty percent of the students used the following resources when visiting the library; reference books, non-fiction books, fiction, and magazines. Less than twenty percent used audio/video or other resources.

Library Power (1999) indicated that a large amount of funding has allowed schools to purchase collections that match the curriculum and make independent learning possible. New or innovative library facilities invite students to discover new ideas and information on their own. Technology and electronic resources have taken a prominent place as integral components of the library programme. Bay (1991) argued that adequate resources must support the success of the library user education programmes.

2.6. Teacher Librarians Role and User Education Programmes

Association for Teacher Librarianship in Canada (1998) described the role of the teacher-librarians as instructional consultants in schools. They were involved with all grades, in all subjects and brought a unique perspective to curriculum development. They became coordinators of activities, events and curriculum because they brought connections between grades and subject areas with their expertise with information resources, they assisted teachers to explore curriculum topics and help them locate the materials they needed. As instructional leaders, they helped to create resource-based learning activities with a team of teachers in the schools, using a variety of teaching methods.

The teacher-librarian's position would be an important factor in achieving the "adaptive dimension' by assisting teachers in planning a variety of instructional strategies to accommodate individual differences in abilities and learning styles (Saskatchewan education indicators,1998). Technology could provide a variety of resources for varying cognitive, language abilities, interests and experiences. The teacher-librarian could help teachers to adjustments in approved educational programmes to accommodate student's

learning needs. The Saskatchewan report also outlined the teacher librarian's role in the school environment in implementing the user education programmes.

The teacher librarian's worked with educators to design learning strategies to meet the needs of individual students (Farmer,1999). Teachers and teacher-librarians need to work more closely than ever before.

"They need to design meaningful activities, to incorporate thoughtful processing time throughout the experience, and to modify their instruction. In a way, this approach means more work but it can be intellectually stimulating, learning can be richer and more original"

Turner (1991) argued that the teacher librarian's instructional consultation role could optimize the impact of information skills and proposed that the choice of skills be dictated by:

    a. The cognitive requirements of the lesson;

    b. The teachers' instructional design decisions; and

    c. The learning characteristics of the students.

McIntosh (1994) confirmed three roles of the school teacher-librarian as information specialist, teacher, and instructional consultant. Investigating a random sample of 30 percent of all schools in Arizona, Pickard (1993) studied how important the teacher librarian in DeKalb County Public Schools in Georgia perceived teacher-librarian's role. Instructional role of designing and consultation and to what extent the roles were

practiced. Pickard found that although the school   teacher-librarians perceived their instructional role to be important, they seemed to view this role as supportive

The instructional consultant role was considered important in a literature-based reading programme and a resource-based learning setting. Bishop and Blazek (1994) studied the role of the school- teacher librarian in an elementary school in Florida and found that the teacher librarian played important roles as information specialist, teacher, and instructional consultant in the initiation and implementation of literature-based programmes.

The school librarian's role in resource-base learning was also investigated by Yetter (1994). Yetter investigated resource-based learning in five elementary school libraries and two junior high school libraries, and identified important personal characteristics of the school teacher librarian in a resource-based learning setting.

Based on a national sample of teacher librarians, Person (1993) concluded that the extent to which teacher librarian performed the instructional consultants role was less than the extent to which they would ideally have liked to perform the role. Some of the research has tried to define variables that affected the practice of the instructional role. In her study of public high schools in Alabama, Florida, and North Carolina, Ruffin (1989) found a statistically significant relationship between the importance attached to instructional development activities by the teacher librarian and the amount of time school teacher-librarian spent on these activities.

As outlined by the American Association of School Librarian in *Information Power* (1998) the school librarian's role are as follows:

a. Participating in school, district, departmental, and grade level curriculum design and assessment projects;

b. Helping teachers develop instructional activities;

c. Providing expertise in the selection, evaluation, and use of materials and emerging technologies for the delivery of information and instruction; and

d. Translating curriculum needs into school library media programme goals and objectives.

Functioning as an instructional consultant, the teacher librarian planned partnerships with teachers to improve their schools user education programmes. Miller and Shontz (1991) found that while school teacher-librarians at all levels reported participating in informal planning, there was little involvement in formal planning with teachers. They described the teacher librarian in school environment as participants in formal planning to activate schools information skills programmes.

Turner and Martin (1979) observed that rigid scheduling could prevent school teacher-librarian from working with teachers. In two studies, Deusen (1993) found that flexible scheduling related positively to the occurrence of instructional consultation. In one study she found that the teacher librarian were most likely to be involved in curriculum planning. Deusen and Tallman (1994) found that more consultation occurred between teachers and teacher librarian in schools with flexible scheduling.

Teacher-librarians should also have a broad knowledge of resources, hardware, networks and trends in technology (Harrington, 1997). They troubleshoot hardware problems, such as laser printers and VCR's, and served on technology committees. Baule (1999) noticed that teacher librarians "who have embraced technology can be key leaders in integrating technology into the instructional programmes of their schools" Hancock (1997) mentioned an ongoing professional in-service programme was important in order for teacher librarians to better perform their role and "contribute their expertise to the design and delivery of technology enhanced programmes". They need to become technical leaders in their schools and assist user education programmes.

Association for Teacher-Librarianship in Canada (1998) listed the following as professional competencies for teacher-librarians:

a) Places priority on staff relationships and leadership in the implementation of change;

b) Provides leadership in collaborative programme planning and teaching to ensure both physical and intellectual access to information and commitment to voluntary reading;

c) Knows curriculum programmes mandated by the province, district and school;

d) Understand students and their social, emotional and intellectual needs;

e) Has expert knowledge in evaluating learning resources in different formats and media, both on-site and remote, to support the instructional programme;

f) Develops and promotes the effective use of informational and imaginative resources in all formats through cooperative professional activities;

g) Provides appropriate information, resources or instruction to satisfy the needs of individuals and groups;

h) Uses appropriate information technology to acquire, organize and disseminate information; and

i) Manages library programmes, services and staff to support the stated goals of the school.

Haycock and Jopson's (1999) research indicated that an integrated library programs impact positively on collaboration, leadership and student achievement, especially when the teacher-librarian has experience as a classroom teacher, qualifications in teacher librarianship or information studies, knowledge in resources management, and works collaboratively with teachers in flexible scheduled programmes to integrate information problem solving skills and ongoing instructional plans.

2.7. Technology Base User Education Programmes

The use of technology in user education programme is becoming commonplace. As such, user education programmes often include module on technology literacy. Saskatchewan Education indicators (1992) states the goals of technological literacy as follows.

a) To develop a contemporary view of technology;

b) To develop an understanding that technology both shapes and is shaped by society;

c) To develop students' appreciation of the value and limitations of technology within society; and

d) To provide opportunities for students' active involvement in decision-making related to technological developments.

These goals relate to the use of the computer as a tool and to developing positive attitudes and values towards technology. The report mentioned the school library skills programmes and its integration with technology.

Elsenberg (1996) proposed that computer skills instruction need to focus on curriculum and classroom assignments, planned and taught by both teachers and teacher librarians. The American Association of School Librarians (1998) proposed the computer skills instruction to the school user education programmes which encompass three major aspects. These are, information literacy, independent learning, and social responsibility. The report suggested the technology-assisted programmes must be developed in a school library environment to give the above competencies.

Ellen (1996) indicated that educational technology has affected student's attitudes toward learning and on student self-concepts. Students who felt more successful in school, were more motivated to learn, and had increased self-confidence, self-esteem when using computer-based instruction. Becker (1994) also remarked on the necessity of computer-based programmes in school. He also described that students can learn information skills successfully in computer-based programmes.

McIsaac and Blocher (1998) mentioned the use of print materials, broadcast radio, broadcast television, computer conferencing, electronic mail, interactive video, satellite telecommunications and multimedia computer technology-based user education

programmes in school libraries. According to Gray (1998), Berge (1998), Gillini (1998), Jonsion (1998) and Khan (1998) Internet and web based instruction helped improve the delivery of instruction programmes. Students' attitudes towards computer based user education programmes were positive at all levels of elementary, junior and high schools. Loertsher (2000) placed the development of user education programmes as a partnership between teacher-librarians, teachers, students and administrators.

The use of online and electronic sources has improved user education programmes in schools (Craver 1994). Librarians therefore, look more to online and other electronic sources to meet the information needs of students and teachers by giving access to information via CD-ROM, Internet and online databases. Craver emphasized the necessity of teaching staff and students to operate in an electronic environment.

Brewster (1996) described techniques of incorporating teaching technology in classroom instruction, where students reacted positively to technology-based education programmes. Grant (2000) indicated that overall, the students are satisfied with multimedia instructions and have favourable attitudes towards teacher librarian and subject teachers in an environment using this instruction programmes.

Newton and Dixon (1999) suggested appropriate strategies for developing effective information skills in Scottish libraries. Results revealed that there was considerable divergence between libraries on the strategies that they adapted for the acquisition of skills for network access and in the attitude of teacher librarians to the relative priority that should be given to this area. The results suggested that new technologies in user education programmes play a key role for successful acquisition of information skills.

Danley (1999) surveyed 126 school librarians in 18 countries, representing 131 schools serving more than 113,260 students. The study described the user education programmes and techniques they used to facilitate information literacy, their perceptions of their functions in the development of independent learners, and the training they received. The survey data revealed that the respondents related information skills instruction to students' interests, worked with other teachers to place information-seeking skills within the context of students' course work, and encourage students to share ideas and skills with each other as they build their own search strategies. Another study by Erazo (1997) addressed the universal themes within the library community, including technology and user education programmes

Technology based user education programmes must be organized to develop technological knowledge in students (Tenopir, 1997). This strategy would help reduce errors occurring when using the online catalogue, or the Internet. These included erroneous input, term choice, and concepts, Boolean logic errors, and errors due to difficulties with divergent interfaces as well as the failure to read on-screen instructions. Systems can and must solve the trivial errors automatically, but the more complex problems must be solved with the help of the librarians. Tenopir observed that the lack of technology knowledge increased errors in library.

Heaviside's (1994) study indicated that in 71% of libraries, computer resources were heavily to moderately used by students. He also observed that library skills instruction often did not include adequate computer training. This finding is similar to that of Kester (1994). Kester proclaimed that technological knowledge must be given in technology-

based information skills programmes. Previous studies have also examined the use of new technologies in user education programmes and argued that the new technology was necessary to acquire new learning skills (Apeji, 1999; Wolcott, 1994).

2.8. Problems of Implementing User Education Programmes

Information power (1998), indicated that the barrier faced by school librarians were lack of time, including lack of time to plan with teachers; lack of adequate funding; lack of interest and support of classroom teachers; use of a fixed schedule; and lack of clerical staff. Research also indicated that, despite the positive impact of the teacher librarians, Hortin (1989); Ceperley (1991) indicated that many education professionals do not have a clear understanding of the teacher librarian's role. Principals, teachers, and teacher librarian's themselves shared many misconceptions about their roles. This situation directly influenced the development of user education programmes in schools. Furthermore, the studies proposed that the teacher librarian, teachers, principals and education authorities must have a clear picture about this situation and clear understanding and relationship among them.

Teachers are expected to be involved with their students' learning activities, problem-solving and critical thinking, and to provide students with a variety of instructional materials (Kentucky Department of Education, 1993). Adequate library resources and the expertise of well-prepared school teacher-librarians are basic to the success of school user education programmes. Michael's (1990) study found the following situation in schools.

a. Low levels of instructional cooperation in general between teacher librarian and classroom teachers.

b. The lack of the school co-operation between classroom teachers with instructional programmes.

Johnson (1993) studied teacher librarians in Southern Illinois rural public schools and found that the teacher librarians did not perceive their instructional consultant role as highly important and that they were not practicing the tasks representative of the instructional design and consultant role. Burks (1996) investigated the time spent and proportion of individual student, group, and departmental use of the library. He found that more than half of the students in their junior and senior high schools sampled did not use their school library. Burks found that:

a) More than 50 percent of students used the photocopy machine when they visited the school library and many of those students preferred to copy materials rather than check them out, particularly reference materials,

b) More than 40 percent of students used the library only during a class visit whose purpose was almost always to use materials;

c) Students were not always aware that there were magazines and other non-book materials circulated and there were many non-book materials could be used only in the school library, and;

d) Students were not always aware that some reference books were circulated.

The percentage of non-users of the library has increased in the school environment. This implies that, information skills and instruction must be given to the students from schools and it must be a planned programme.

2.9. Summary

This section has presented the literature review in seven sections. This includes: (a) General discussion on user Education programmes in school libraries, (b) The environment of Sri Lankan school libraries, (c) Teacher librarian's role and the school curriculum, (d) Resource-base user education programmes, (e) Teacher librarian's role and user education programmes, (f) Technology-base user education programmes, and (g) The problems in implementing user education programmes.

The literature examined indicated that the research focus on the relationship between the teacher librarians and school teachers, the relationship of the curriculum and information skills, the necessity of the resources based school environment, the necessity of providing technology education to the school children, teacher librarian's role, their managerial responsibility and curriculum of the school user education programmes.