

CHAPTER TWO

REVIEW OF LITERATURE

Introduction

This chapter presents the findings of literature search on information needs of children and other related terms, concepts and issues. The literature review is divided into subtopics. These sub topics include perspectives of various scholars and researchers on the term information, Maslow's needs hierarchy, children's relation to information, children's right to information, challenges faced by children of information age, and on information needs studies. This is followed by a review of past research findings on information needs of children, children's information needs and the role of libraries, and information needs of children noted by other information professionals.

The literature search of the aspects mentioned above is used in refining the research questions, outlining a clearer research design and to determine the scope of the data needed in this study. Various sources from academic libraries, public libraries, and Internet were consulted in carrying out literature review in this study.* Encyclopedias, Research reports, dictionaries, journals, monographs, on-line databases and homepages in the Internet were the main sources consulted in carrying out the literature review.

The necessary topics for the literature review were outlined before carrying out the search. The relevant materials for the literature review then were obtained using various search strategies. Thesaurus, LISA, ERIC, Dissertation Abstracts International, and Internet search engines were used to identify the necessary materials. Obtaining the materials followed this. Finally the literature obtained were reviewed following the format outlined below.

Definition of the term 'Information'

Many different definitions abound in literature have for the term 'information'. This term has been given different definitions in different contexts. In the broadest sense, Norman (1986) has defined an information as factual data, ideas, and other knowledge emanating from any segment of society that are identified as being value-based, sometimes gathered on a regular basis, organized in some fashion, transmitted to others, and used in some meaningful fashion. Levitan (1980) stated that within the context of user studies, the term 'information' has been used to denote factual data or advice or opinion, a physical object, such as a book or a journal, or the channel through which a message is conveyed by means of oral or written communication.

Webster (1976) defines information as “ the communication or reception of knowledge or intelligence; something obtained or received through informing, and the process by which the form of an object of knowledge is impressed upon the apprehending mind so as to bring about the status of knowing.” Davis (1974) has defined information as “ data that has been processed into a form that is meaningful to

the recipient, and is of real perceived value in current or prospective decisions.” Krikelas (1983) briefly defined information as “ any stimulus that reduces uncertainty.”

In the field of Library and Information science, Ford (1977) defined information as “ the structure (or orders) any text which is capable of changing the image structure of a recipient.” From the field of Information Resource Management, Robertson (1996) defined information as any piece of text or data, document report, book, collection, knowledge, market intelligence, link, association, perception, rumor, hunch or simple idea held in any medium.

Rohde (1986) stated the association of the word 'information' with 'needs' implies a basic need similar to other basic human needs, divided by psychologist into three categories: Physiological, affective and cognitive needs. These three categories of needs are interrelated in that one type of need may trigger another of these needs as any individual may seek information.

Information Needs

There are many definition of the term ‘Information Needs’ based on the contexts in which of is used. However Line(1974) has outlined a comprehensive definition including a framework on characteristics of information need. Line stated that characteristics of information needs comprise subject, nature, function, viewpoint, authority, quantity, quality, place of origin, speed of delivery, and processing and

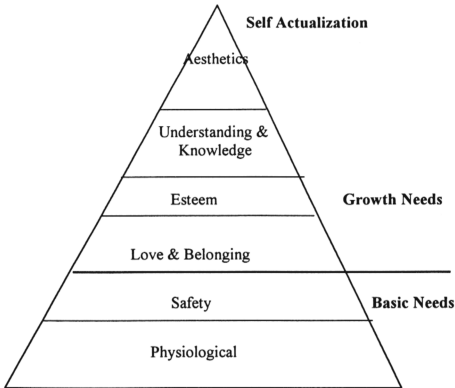
packaging. Line also noted that there are many obstacles stand in the way of people meeting their information needs. He categorizes those obstacles into five aspects. These include training, time, resources, access, and information overload.

Maslow's Hierarchy of Needs

Information needs of various groups have been associated with the hierarchy of human needs formulated by Maslow as identified by a number of information need studies. For example, in a study by Usherwood (1993) on South African's community information need, the researcher associated the information needs with Maslow's five level of human needs. In the research conducted by Walter (1994), the findings were found to have information needs pattern, similar to Maslow's hierarchy of human needs. Both these studies have also indicated that information needs are very much influenced by human needs. The information needs fulfill five levels of human needs outlined by Maslow.

Maslow's theory of human needs was developed in the 1970's. This theory explains that human needs were hierarchical in nature. This human needs have great implication on the information needs of people. Maslow set up a hierarchical theory of needs in which all the basic needs are at the bottom, and the needs concerned with man's highest potential are at the top. The hierarchic theory is often represented as a pyramid with the larger, lower levels representing the lower needs, and the upper point representing the need for self actualization (figure 1) ¹

Figure 1 : Maslow's Hierarchy of Needs



(Source : <http://snycorva.cortland.edu/~ANDERSMD/MASLOW/HIER.HTML>)

Each level of the pyramid is dependent on the previous level. For example, a person does not feel the second need until the demands of the first have been satisfied.

The various needs as illustrated in figure 1 are:

¹ Maslow's hierarchy of needs has been reprinted in hundreds of psychology and management texts, but its original explication can be found in Abraham H.Maslow, *Motivation and Personality*, 2d ed. (New York, Harper & Row, 1970).

Physiological Needs : These are biological needs and consist of the needs for oxygen, food , and water. These needs are stronger because if deprived, the person would die.

Safety Needs: Except in times of emergency or period of disorganization in the social structure, adults do not experience their security needs. Children, however often display sign of insecurity and their need to be safe.

Social Needs: People are concerned with the need to belong, to be accepted and to be able to participate in social activities.

Esteem Needs: People need a stable, firmly based, high level of self-respect, and respect from others in order to feel satisfied, self confident and valuable. If these needs are not met, the person feel inferior, weak, helpless and worthless.

Self-Actualization Needs: This is a person's need to be and do that which that person was born to do. "If these needs are not met, the person feels restless, on edge, tense, and often lack something in the life. Self-actualization needs is a desire for self improvement (Georgen, 1997).

Maslow indicated that hindrances like excellence in education placed by society would prevent people move through the needs to self-actualization. Maslow has also indicated that educational process could promote personal growth. Some of the educational steps that can contribute to personal growth are;

- (i) teaching people to be aware of their inner selves.
- (ii) teaching people to transcend their own cultural conditioning, and become world citizens.
- (iii) teaching people to be good choosers They must be given practice in making choices, first between one goody and another (Georgen, 1997)

The educational steps indicated by Maslow, have direct implication on information needs of people. The educational process mentioned here is related to information. It is thus obvious that Maslow has indicated, information is needed by people for their personal growth. The term 'people' indicated by Maslow can be interpreted as inclusive of children.

Children and Information Need

The concern about children, their care and their needs, has grown to such proportion that it is a major topic of interest even at national level. The state of the world for children is changing drastically. The changing family structure, culture, social practices have great impact on children's lives. Scholars to poets have expressed their thoughts in relation to children and factors affecting their growth and life. One such expression that captured the minds of many is the poem by famous Dorothy Law

Nolte. She has expressed beautifully in her poem, the impact of environment on children's learning. She said,

If children live with criticism,
 They learn to condemn.
If children live with hostility,
 They learn to fight.
If children live with ridicule,
 They learn to be shy.
If children live with jealousy,
 They learn what envy is.
If children live with shame,
 They learn to feel guilty.
If children live with encouragement,
 They learn to be confidence.
If children live with tolerance,
 They learn to be patient
If children live with praise,
 They learn to be appreciative.
If children live with acceptance,
 They learn to love.
If children live with approval,
 They learn to like themselves.
If children live with recognition,
 They learn it is good to have goals.
If children live with honesty and fairness,
 They learn what truth and justice are.
If children live with security,
 They learn to have faith in themselves and in those about them
If children live with friendliness,

They learn the world is a nice place to live.

If children live with

(Source: <http://www.lvm.com/mine/kepoem.htm>)

The poem recited by Law Nolte clearly explained that children's development is very much determined by the surrounding factors they live in. If a child lives in a positive surrounding than the child will develop all the positive aspects of life. On the contrary when a child is brought up in negative surroundings as mentioned in the poem, than that child would possess most of the negative qualities in life. We can infer number of aspects from the poem, research findings and views expressed by other researchers and philosophers mentioned in the literature review. They are,

- (i) a child's developmental process is influenced by the factors surrounding them.
- (ii) fulfillment of information needs of the child also seems to have direct implication on his or her mental development. For example, a child who is provided with rich and quality information would lead a happy, mentally secured and positive life compared to a child who is deprived of all those.

There are many other professionals including information professionals who have stressed the importance of information to children. Anuar (1979), the Director of National Library of Singapore at that time for example had mentioned about South East Asian children's information needs and services. She stressed that the information needs of the child become more numerous and varied as the child progress

from first year of school at the age of five or six to the last year of school as an adolescent of fifteen or sixteen or younger if drop-out.

Children's right to information

The right of the child to information is necessarily related to a child's development, the processes involved in seeking information, the availability and accessibility of sources of information and the relevant legal protection. Information plays an indispensable role in the child's developmental process.

Parents are the main source of information for the child. As both verbal and non-verbal modes of information from parents are limited, the example set by parents cannot be underestimated and is crucial to the child's development (Koren , 1997). New sources of information are accessible to the child when he comes into contact with others outside the family environment; peers and adults in school, in clubs or in the street.

According to Koren (1996), "The United Nations (UN) convention on the right of the child has explicitly formulated the child's right to the freedom of expression and his right to access to information. Among other provisions, the first is the role of information in the upbringing by parents; second the right to information supporting the development of the child's personality; third the right to information which supports his social participation. The convention also stressed that all these rights should be applied in library services."

The convention clearly highlights the importance of information to children just like this to adults. However, a search through literature showed that children on most countries are not getting all the information they need. Children in third world countries are generally information poor. It's also clear that not much emphasis is given on the study of information needs of children. This has led to poor knowledge base that is devoted to the information needs of children.

Challenges Faced by Children of the Present Information Age

Most people viewed information as power that helps build the knowledge in any individual. Many scholars and researchers in their literary works have stressed upon this aspects of information. Curras (1987) have mentioned that :

“Information plays the role of the vital element for the development of humanity and the universe”

(Curras, 1987 : 150)

He also stressed that knowledge is attained through information. In children information is vital for their physical and intellectual development. However, the information needs of children in the past few decades were not as demanding as in the present information age. Locke (1987) has clearly indicated this in her study. She had reviewed the changing aspects of children in the past (1960's), present and the future. It's quite clear that the information need of children has grown along with the changes in family structure, social, economic, and political elements.

Locke (1987) explained that children of today experience a prolonged dependence on the family. At the same time they are placed in the midst of many challenges. AIDS, drug abuse, child abuse, child abduction, and diseases are some of the problems the society is engulfed with where the children live today. Besides these, children are also involved in schools, living among other races, traffic, working parents, and nanny as they are undergoing the process of education and socialization. In Malaysia for example, child abuse cases is on the rise. In 1996 alone about 360 child abuse cases reported (The Star, 1997).

Rowley (1978) stated that to add to the present complex status of life the growth of population and the disproportionate growth of science had resulted in the information explosion. He further stressed that those changes, developments, and phenomenon have made children's life more challenging than ever before. In order to survive in the midst of all challenges, children should be well trained with knowledge and skills. The foundation to all the knowledge and skills is undoubtedly, by providing rich and the right information to children.

Just like numerous challenges, there are also numerous channels available for children to fulfill their information needs today. Channels available to children are like books, magazines, news papers, films, sound recordings, video-tapes, computer, Internet, radio, and television, to name a few. However, before they could use those channels they should be trained on the usage of those channels. Overmyer (1995) expressed her concern on increasing sophistication of information tool for children by

stressing that children had to be given enough exposure on these tools. She has warned that children may be left behind if concerned parties do not take this issue seriously.

Information needs studies

Information need has been focused in the studies of users, use and uses for long. These studies form one of the most extensive and amorphous area of research in the Library and Information Science over the past four decades (Rohde,1986). However, there was little focus given on information need studies in 60's.

In mid 1970's about half a dozen studies had been done on information need of general public (Dervin et al., 1976). Research literature of information needs and uses constitutes approximately 8 percent of the total research literature of Library and Information Science (Jarvelin,1990). However, there have been significant developments in the study of user needs during the last twenty years. Most research on information needs and uses were focused in science and technology. In 1980's the focus was on work related information needs mainly conducted to device a better guidelines for system design (Rohde,1986).

There have been too many studies of adult and specific client group information needs. Very few studies on information needs of children have been conducted till today. One participatory interesting study on information needs of children and library service to children is by Walter (1994) in the United States. However, such studies seems to be alien in our country as there is none. As such, most

part of this literature review is based on research findings, surveys, and other documents from developed countries. Internet sources have also been referred to which could shed some light on my research here.

Past research on information needs of children

As mentioned earlier there were few research and surveys done in United States on the area of information needs of children.. Walter has carried out a few research studies in this area. She has pointed out in her writings that

“ very little is known, however, about either the information needs of children in general or the techniques that would be used to determine the information needs of children in a particular community.”

(Walter, 1994: 113)

In one of her studies which was used as the main reference in the present study, Walter tried to find out the information needs of children at age ten in Southern California. The findings in this study revealed that a hierarchy of children's information needs began to emerge that resembled Maslow's model of human needs. Adults have given great stress to the items at the lower rungs of Maslow's hierarchy.

Physiological and safety needs were the two categories of needs mentioned most often and given the most stress in terms of their importance for children. AIDS for example was mentioned as a critical information needs by many adults. Among other critical information needs the basic health, nutrition, house-hold emergency

procedures have emerged prominently. A few have stressed love and belonging, interpersonal skills and self esteem as important information needs of children.

On the question on information sources for children the study has identified that, many adults or the informants identified the parents, family members, teachers and helping professionals of all kinds as the main source of information to children. However, the findings noted that many of these information providers do not have accurate information or the ability to communicate it effectively to children.

The study has also revealed that many children were often misinformed. Many of children's questions go unanswered. Many respondents have identified a number of barriers that stop children getting information they wanted. One reason that was highlighted in this study was the low social status of children. Second the ineffectiveness in communication of the information providers. In conclusion the literature revealed that most children seem to be information poor.

Another study that has some implication on this study is the research on children's information seeking behavior carried out by Kulthau (1993). In her research, she conceptualized the relationship of information-seeking behavior to stages of cognitive and affective development among adolescents. Besides finding relationship between the two variables the researcher has also demonstrated how uncertainty about defining or articulating an information need could cloud the initiation of the research process.

A study by Moore and Alison (1991) on children as information seekers in New Zealand have also showed that there is a close relationship between the information seeking and information needs. The study which involved grade six children revealed that the students involved in this study do face difficulty in retrieving the right information to fulfil a given test (assignment). Evaluation of the information located by these students showed the grade six children were found to reject some relevant information and accept some which was irrelevant to their information need. The findings of this study again shows that most children are unable to define clearly their information need.

Walter and Borgman (1991) conducted a study under the Science Library Catalog Project in University of California on information retrieval by children in electronic environment. This study found that as recognition memory develops before recall memory, children are more likely to be able to recognize a search term that is relevant to their inquiry than to be able to generate an appropriate search term independently. This findings assert that children would also have difficulty articulating an information need but might be able to recognize one if it were suggested to them by others, like adults.

When these studies were compared with the study by Walter on information needs of children, it's clear that most children are given access to information determined by adults. Second children will become information poor if not given the

right information on the right time at the right place. As such it's very important that information providers acquire enough knowledge on information needs of children.

Children's Need and Role of Libraries

A document prepared for the Second White House Conference on Activities Relating to Library and Information Service to Children (Mathews., et al, 1990) has highlighted some important facts that are useful to the present study. The document which was intended for school and public libraries has listed important needs of children besides suggesting activities and roles that can be played by both school and public libraries in meeting those needs. This is a very comprehensive list of the important needs of children and the library role in fulfilling those needs. Thus, it is important to review all the relevant ideas prepared for the conference. Among other important needs of children suggested in the document are ;

- (i) Children need the belief in worthwhile future and understand their responsibility and contribution to the future. The conference committee suggested that both school and public libraries can offer resources on social issues to encourage children learn the democratic process and in finding societal solutions. The committee further suggested that libraries can also offer resources that help youth think about and plan their future.

- (ii) Children need a positive sense of self-worth. Libraries could provide both resources and activities for children and young adults that lend perspective to their place in history, race, ethnic groups, and family in achieving these needs.
- (iii) Children need the ability to locate and use information and an awareness of this ability is essential key to self realization in the information age. Libraries could help in achieving those needs by teaching children and young adults the skills needed to search for information both within library and outside it, and the use of reference sources, including databases, computers, fax machine, and other technologies that can be used to store, transmit and locate information. Libraries can also maintain an up-to-date community resource file for children and young adults that contains information about community services that assist youth with personal and family issues as well as information on clubs and activities for youth.
- (iv) Children need preparation to use present day technology and to adapt to a changing technological world. This can be achieved by providing free public access to computers with an array of software by those libraries. In addition to that, libraries can also offer opportunities to use a variety of information technologies that store, transmit, and retrieve information.

- (v) Children need equal access to the marketplace of ideas and information, libraries are suggested to provide equal access to all children and youth to all library service and to all information resources.

- (vi) Children need the ability to think critically in order to solve problems. The committee suggested that libraries can both provide resources that enable children and young adults to explore issues of importance to them and offer options for personal decision making. Provision of developmentally appropriate resources for children and young adults as they progress in their ability to think critically is another step that these libraries can take to achieve the above needs of children.

- (vii) Children need the ability to communicate effectively to listen, to speak and to write. Libraries can provide activities such as language experiences in listening, talking, and playing with words and word associations for even the youngest children, building a foundation for story telling, book-talking, viewing, and reading aloud to older children and young adults. The other related activity suggested is that library provide opportunities for youth to practice reading and communication skills through Summer reading programs, “lap-sit” programs, story-times, book discussion clubs, contests, peer tutoring, debates, and book and music reviews to share with peers.

- (viii) Children need preparation to live in a multicultural world and to respect the rights and dignity of all people. The role of library in fulfilling these needs are by offering resources to young children that show people of varied ethical and racial backgrounds and cultures and life situations in order to broaden their understanding of other people. Libraries can also provide multilingual resources and staff who can communicate with the different populations in the community. Libraries can also create intergenerational experience using library resources and programs that help youth and older adults better understand and value each other.
- (ix) Children need the desire and ability to become lifelong learners. Library can promote curiosity and questions that help children and young adults find answers, highlighting the delight of finding out and knowing. Libraries can also provide safe, welcoming places for children and young adults to gather with friends to enjoy library resources or to be alone to pursue personal interests, to achieve those needs.
- (x) Children need creative ability to dream a better world. The convention suggested that this can be done by exposing children and young adults to a wide variety of ideas, concepts and experiences through a diverse collection of resources, speakers, exhibits, and events that broaden their view of the world. Besides these libraries can also stimulate

imaginations with stories, dramatic plays, music, puppets, craft, projects and resource people.

The highlights of this document clearly stress the variety of needs of children. Most of these needs are important for their mental and social development. The committee has clearly suggested many activities that can be carried out by both school and public library in fulfilling children's need. Even though this document does not touch on information needs of children directly, there are number of hints given on what the important information needs of children are. For example in relation to the first needs of children it has clearly explained that children should be provided with information on social issues which will enable them to work on societal solutions. It also stressed here that children should be provided with information on history, race, ethnic, culture, modern technology like computers, library skills, problem solving issues, language skills, safety and art.

This document has also clearly explained that children and young adults should be provided with wealthy information resources and given proper guidance in accessing those resources. The suggestions made by this committee, also prove that children will not be able to identify and choose information they need by themselves. Other parties need to guide children in obtaining the information needed by them.

Children's Information Needs from Other Documents

Other than the research and committee documents, many other literature in the form of opinion articles and non-research papers were also consulted. These literature would also help in developing a deeper understanding of this research. Michigan Parents Teachers Association for example has outlined some important points related to this research in the World Wide Web.

This association has listed some important information that children need to know in relation to watching television. Michigan PTA (1997) stressed that children need to know that what they see on television is not always what they get. Second, what television says is good for children is not always good for them. Third, the way people act on television is not always the way they act in real life. Fourth, children need to know that they do not do other fun things and duties when too much of their time is taken for watching television. The association feels that children need to be furnished with all these essential information so as to act on some alarming findings. It has been found that a child may see 20,000 advertisements in America. More than half of these is for food high in sugar, salt or fat.

Donnelly (1991) expressed the importance of safety related information to children and parents by giving list of books and other materials available to them. Among other book titles that she quoted were 'Play Safe', 'Close to Home', 'We can say No', and 'Safety when alone'. In addition, she has also mentioned sexual abuse information suitable to children and parents.

The other pressing information needs of children which is given great emphasis is the computer related information. The importance of this information is clearly expressed in a paper written by Abernethy way back in 1984. According to her more and more people are willing to accept Alvin Toffler's prediction that the impact of computer technology on the society will be so pervasive and profound it will equal, if not exceed, the impact of industrial revolution. As mentioned by Abernethy, it has indeed brought very real changes in people's expectations and attitudes , causing upheavals in the economic, political and social settings.

She further asserted that computers would become common place to children as television was to their parents. If children are to be comfortable with their technology, they must start now. The second reason for the importance of computer information to children is that a wealth of excellent software are available in the market today. Children can reinforce the pre-reading skills of memory building and shape recognition; for older children, there are introductory programming packages, and other educational related software, which could benefit them in learning process. What Abernethy said in 80s was also stressed in Malaysian education policy today. The "Smart School" concept clearly explains the important of information on computers to children in our Malaysia.

The importance of technology in storing and retrieving vast amount of information to people including children have also been stressed and highlighted by many more researchers and information professionals. Durrance (1989) and Scammell (1996) have also stressed this fact in their research conclusions.

Walter (1997) went one step further and suggested that libraries could engage young people in the creation of authoritative digital information resources on topics of local interest such as community information for children, neighborhood maps, and safe places for kids. A number of other librarians and information providers have also stressed the importance of other information to children in their scholarly writings. Cummins (1997) for example, stated that books are one magic ingredient that can fulfill children's expectations, goals and dreams. She also stressed that to navigate the future kids need to set sail for new people, ideas and books today.

Petermen (1997) indicated that to achieve literacy, kids need to feel supported in an appealing, child-friendly and comfortable environment. Thomas (1997) has stressed that kids need to build their self-esteem. A personal judgement of worthiness that individuals express through the attitudes they hold about themselves, self-esteem is essential to personal happiness and effective functioning. She also stressed that literature, which demonstrates the universality of human emotions, motives and experiences, offers kids some of the vicarious experiences they need at different stages of their growth.

Metz (1996) expressed the importance of Internet as one of the main source of information to children. He pointed out that many library directors fail to understand how kids and young adults can use the Net to help them succeed in school to find lots of valuable information about their hobbies and interest or to communicate with other kids. On the aspects of information sources, Anuar (1979) has explained that the first and most important information source to children is their family. Gradually, it extends to other people like playmates, neighbours, shopkeepers and teachers when they start schooling. Maclean (1995) highlighted the importance of libraries to children by saying that children have a right to libraries as vital resources to support both their educational and personal development. He further explained that the role of libraries in empowering young people with knowledge and experience, and in helping to create a literature free thinking society should not be overlooked.

Review of the past literary works and other documents have provided a lot of ideas on information environment of children. We can infer a number of aspects from the literature review. First, we can infer that children do have numerous information needs, which are important in their developmental process. Second, the information needs of children is very much determined by the developmental stage and the environment of the children. Third, there seems to be a close relationship between information needs of children and human needs as stated in the Maslow's hierarchy of needs. Fourth, libraries and individuals in the children's life have the responsibility in providing all the necessary information needed by children. In the following chapter, the research methodology used to operationalize the research questions is discussed.