CHAPTER- II

INFORMATION NEEDS AND GATHERING HABITS OF SCHOOL CHILDREN IN DIGITAL ENVIRONMENT: A REVIEW OF RELATED LITERATURE

2.1. INTRODUCTION:

Literature review is very important in the sense that the researcher reviews the literature not only to compare the results with the previous results but also to present new and perhaps with unique dimensions. This chapter presents the literature that has been reported on information needs and gathering habits of school children in digital environment.

2.2. METHODOLOGY AND SOURCES:

Various primary and secondary sources of information were consulted as listed below:

• Library and Information Science Abstracts (LISA) from 1969-2015.
• EBSCO’s Library, Information Science and Technology Abstracts (LISTA) online, 1970-2015.
• Shodha Ganga and Shodha Gangothri repositories of INFLIBNET available on http://shodhganga.inflibnet.ac.in/ and http://shodhgangotri.inflibnet.ac.in/
• Full text journals from publisher site at www.emeraldinsight.com

Efforts have been made to identify the existing relevant literature on the problem by scanning, browsing and reading the original documents and consulting abstracting sources. Appropriate notes were taken and wherever the original documents were not available, the relevant information has been culled out from the abstracts for the preparation of the review.
2.3. STRUCTURE OF LITERATURE REVIEW:

For convenience, the literature review has been categorized into two sections—Worldwide and Indian. Again under each section it is further divided into subsections. An attempt has been made in this chapter to review the important findings of the previous studies related to the topic.

2.4. WORLDWIDE LITERATURE:

2.4.1 Information Needs:

Kohlthau (1988) discussed the possible benefits of basing library media programs on the information need exhibited in different developmental stages of childhood and adolescence. Fourie and Kruger (1995) have identified the basic and developmental information needs of secondary school pupils by examining the contexts within which they arise. Fourie (1999) described the educational and vocational needs of high school learners viewed against the background of social and educational factors and in relation to other types of information needs, classifies learners' educational and vocational information needs. Frances and Limberg (2003) examined the relationship between information seeking, use and learning in a school context. Abeyrathna and Zainab (2004) analyzed the status of reading habits and interests among secondary school children in Sri Lanka. Shenton (2004) has discussed the issues of information needs emerging from school assignments. He has focused on information needs of school students and used data from a qualitative source to consider information needs implications on information-seeking.

Shenton (2004) has also identified the problems faced by researchers in finding out the information needs of children and young people. Shenton (2007) has conducted another study which found the interest-related information needs of teenagers in an English high school. Current information was especially important to the participants. Lundh (2008) described the information practices of children in an elementary school. Shenton (2008) analyzed that children often considered information to be a material that met a need, covered particular territory or was associated with action by an individual. Spencer (2008) has described the information seeking Behaviour of Maori secondary school students.

Arnone (2009) analyzed the effect of early adolescents’ psychological needs satisfaction upon their perceived competence in information skills and intrinsic motivation for research. This study investigated the extent to which context factors inherent to the school library influence students' perceived competence in the domain.
of information skills (PCIS) and their intrinsic motivation for research (IMR). Beautyman and Shenton (2009) have discussed the information seeking behaviour of elementary school children in response to curriculum-instigated inquiries.

Mnubi-Mchombu and Mostert’s (2009) study of the orphans and vulnerable children showed that they preferred oral and interpersonal communication and used relatives, teachers and friends as their main sources of information. Television, books, radio, newspapers and church leaders were also popular information channels. Caregivers preferred interpersonal communication and use social workers and relatives as their main sources of information. Nicholas and Paul (2009) assessed the information-seeking behaviour of students’ in a digital scholarly environment. It also compared students’ information-seeking behaviour with that of other academic communities and in some cases, for practitioners.

Udofia (2012) depicted the information needs of rural secondary school adolescents in Nigeria, from a sample population of 800 rural secondary school students spread through six of the Eastern states of Nigeria. The survey findings revealed high influence of parents’ occupation in information generation among the students’. Watson (2014) investigated the behaviour of secondary school students who undertook information search tasks. Research questions focused on students' criteria for assessing the relevance and reliability of information. Otoide (2015) analyzed the information needs of secondary school students in selected schools in Abaraka Community. The study found that the secondary school students need information on academic, health, entertainment, friendship, religious, family care, societal values and future career choice.

2.4.2 Information Gathering Habits:

Perzylo and Oliver (1992) investigated children's use of a multimedia CD-ROM product for information retrieval. Twelve-year-old, elementary level students were observed in a classroom setting using the National Geographic Society's Mammals Multimedia Encyclopedia (1990) as a source of information for an independent project. All students found the program easy to use and had little trouble navigating through the levels to find specific information. Borgman and Hirsh (1995) observed children's searching behaviour on browsing and keyword online catalogs. Marjorie (1995) discussed the use of electronic encyclopedias as research in the information-gathering process of students. Hanna and Theo (2008) observed that
research has to go beyond examining search strategies used with existing search interfaces by examining children’s cognitive processes during information-seeking.

2.4.3 Information Seeking Behaviour:

Fidel and Davies (1999) analyzed the Web searching behaviour of high school students for homework assignments through field observations. They performed focused searching and progressed through searches swiftly and flexibly. Hirsh’s (1999) study explored the relevance criteria and search strategies adopted by elementary school children when they searched for information related to a class assignment in a school library setting. Dania and Joe (2001) analyzed and compared the overall patterns of children's and graduate students' Web activities, including searching moves, browsing moves, backtracking moves, looping moves, screen scrolling, target location and deviation moves and the time they took to complete the task. Results were based on 14 children's Web sessions and nine graduate students' sessions. Similarities and differences in information seeking were found between the two groups.

Bilal (2005) analyzed children's information seeking and the design of digital interfaces in the affective paradigm. Heinstrom (2006) argued for creating an awareness of underlying factors behind information seeking habits. Students with different study approaches tended to focus on different information seeking aspects in addition to shared commonalities. Heinstrom (2006) discussed whether differences in middle and high school students' information seeking may relate to their approaches to studying. Williamson (2006) reported phase 1 of a two-year study that focused on seeking and use of information by students at various stages of their secondary education, through observation of students.

Chung (2007) described the activities and strategies that 11th grade students with high academic abilities used during their information seeking and use to complete class projects in a persuasive speech class. Shenton (2007) discussed the results of a study on the information-seeking behaviour of teenagers attending the county high school in the north of England. Shenton (2008) described the information-seeking problems of English high schoolers responding to academic information need. Shenton (2011) described a model which is sufficiently simple to be employed in information literacy sessions with secondary school pupils. Shenton (2011) synthesized a model that portrays the information-seeking behaviour of children and young people.
Lundh (2012) revealed how the activity of seeking pictures is shaped by the assumption that pictures are different from facts and information; pictures are seen primarily as having decorative functions. It revealed the need for developing methods for enhancing children's possibilities to critically examine and learn from visual material, such as pictures. Sherry (2015) addressed the experiences in the lives of upper elementary-aged children that foster an intrinsic motivation to seek information. The findings indicated that the dominant motivation pattern of the students was the same as that of the students in the Colorado Springs study (high to low: Identified, Intrinsic, Introjected and Extrinsic).

2.4.4 Information Sources:

Madden (2007) studied the information-seeking habits of children at an English secondary school. Data from two different research exercises were collected in order to provide an insight into how students perceived and used a range of information resources. Students were asked to report, throughout the school year, on the resources they used to complete homework and assignments. The results gave an insight into how different information resources were used for different subjects. They also provide evidence of the fact that students' reliance on other people as an information source begins to decline as they get older and there is a corresponding increase in their use of books and electronic information sources. Majid and Kanagasabai (2007) who investigated the type of information sources used by primary school students for project work, their preferred information formats and the importance and reasons for using certain information sources, found that the Internet was the most preferred information source for project work, followed by public and school libraries. Similarly, digital information sources were preferred over print and audio-visual materials. Among published information sources, the respondents considered the Internet and reference sources more important for their project work.

Dukic (2007) tested a new model for teaching information literacy skills to primary school children. The model combines literary activities with information literacy skills instruction and is presented in the form of an Internet workshop. The empirical evidence collected during the research process included data generated by students, a short questionnaire for students, teachers' feedback and observation of students' behaviour during the workshop. Van Der Walt and Cloete (2007) this article reports on the design of an information literacy instruction programme for upper elementary children for use in the public library, in South Africa. Nwezech (2008)
described the results of a survey of information sources used by secondary school students in Ife Central and Ife East Local Government Areas of Osun State, Nigeria for knowledge and attitudes towards HIV/AIDS. The mass media was identified as the leading information sources in the survey.

Shenton (2011) recommends for the integrated approach to information literacy teaching in schools. Batool and Mahmood (2012) presents results of a study conducted to measure perceptions of teachers of about their 3rd grade students' information literacy (IL) skills. Three private schools of Lahore city of Pakistan selected through purposive sampling methods, the respondents perceived their students to be good or adequate in various IL skills. Lin Ching and Yu-Pin (2013) developed an information literacy assessment for 2nd-grade students in an elementary school located in Southern Taiwan and evaluated their performance. The results showed that the test and portfolio assessment had good validity and reliability. Students performed well in the process of the Super3 model, only in the Plan Phase, they still needed teachers’ help to pose inquiry questions.

2.4.5 Reading Habits:

Karim (2004) emphasized the need to promote reading habits among children in Pakistan. They should be guided to utilize reading material to improve their own personality and social environment. Ulla and Pekka (2004) this study investigated the trajectories of preschool and first-grade children's development of reading skills, as well as the cognitive and social antecedents of that development. Data included measures of reading ability and its cognitive and social antecedents, which were analyzed using Simplex and Piecewise Growth Curve Modeling. The results showed that during the preschool year individual differences in reading grew larger and that this growth was faster among those who entered preschool with well-developed skills. However, during the first grade individual differences in reading diminished. The results suggest that systematic reading instruction in primary school education is more beneficial for children with less developed literacy skills, whereas children with more developed reading skills gain relatively less from reading instruction in the first grade.

Tella and Akande (2007) examined children’s reading habits and the availability of books in Botswana primary schools and considers its implications on the achievement of quality basic education in the country. It was found that the students depend largely on the notes given by their teachers as the major source of reading material based on inadequate availability of books. Majid and Tan Venus (2007)
investigated the reading habits and preferences of children, motivations behind reading and their attitudes towards reading in Singapore. It was found that reading was the third most preferred leisure activity after hobbies and playing on computer or the internet.

Hussain and Munshi (2011) discussed the result of a study conducted with the main purpose of identifying reading preferences of secondary school students and their related issues. Secondary school students preferred to read books, magazines, poetry and other reading materials to get pleasure through edutainment, kill their leisure time during holidays and at weekends and for their emotional gratification. The students preferred to read books on religion, literature, novels, magazines and story books. They faced problems in reading and setting their reading preferences like high costs of the books, context and circumstances, availability of books, time and examinations, academic work load, lack of guidance, personal interest and their study circles or groups.

Igbokwe and Obidike (2012) described the influence of electronic media on reading ability of school children. Igwesi and Chimah (2012) looked at the use of information and communication technologies and audio-visual resources in developing children's reading culture in Nigeria. It was found that most children in Nigeria have very poor reading culture as reading is not associated with pleasure. Cox (2013) reveals the efforts of U.S. school librarians to encourage students to take part in summer reading programs. Dike (2013) adopting a descriptive survey design, examined the use of social media by students in six secondary schools in Enugu state, Nigeria. Major benefits of social media use related to developing new skills, gaining access to information and extending social contacts.

Summers (2013) examined the existing studies and theories about gender differences in the reading preferences of children, adolescents and adults, presented a study of the reading preferences of a sample of adult men and women. Anderson (2015) described a project linking libraries with primary schools, which targeted the reading skills of six- to nine-year-old children, aimed to encourage them to read for pleasure, to build their reading confidence and to improve their literacy skills.

### 2.4.6 Information Literacy:

Allen (2007) discussed the results of a quantitative study that assessed students' information literacy skills in order to ascertain if schools were teaching the necessary skills and whether teacher-librarians had an agreed-upon best practice model. The
results indicated that high school students are let loose to search for information, use applications and develop presentations. Chu (2011) investigated the effect of combining a collaborative teaching approach with inquiry project-based learning on the development of primary students' information literacy and IT skills. Results indicated that this program had a positive impact on the development of different dimensions of the students' information literacy and IT skills.

Nielsen and Borlund (2011) reported a study of 12 Danish high school students' perceptions of public libraries' role in learning, user education, information literacy and librarians' information competencies. The high school students viewed public librarians as very competent and as good at helping them to develop their information needs, identify sources and support the students in the information search processes. The high school students show rather good critical skills, but poor information need developing skills. The study also showed that concepts of information literacy and lifelong learning are not very well understood by the users, i.e. the high school students.

Rodney-Wellington (2014) assessed the impact of information literacy (IL) instruction on grade six students' information-seeking skills and recommended the greater emphasis should be placed on IL instruction at the primary level in Jamaica in order for students to be more efficient information-seekers. Shaheen (2014) examined Singapore secondary school student’s skills in searching, evaluating and using information. Varlejs (2014) discussed the factors affecting students’ information literacy as they transition from high school to college.

2.4.7 Use of Internet:

Schacter (1998) examined the effects of task structure on elementary school student’s information seeking on the Internet. It was found that children were interactive information seekers, preferring to browse rather than plan or employ systematic analytic-based searching strategies. Fidel (1999) analyzed web searching behaviour for homework assignments of high school students through field observations in class and at the terminal with students thinking aloud and through interviews with various participants, including the teacher and librarian. Students performed focused searching and progressed through a search swiftly and flexibly. Large and Beheshti (1999) reported on preliminary quantitative research into the information seeking habits of primary school children conducted under operational
conditions. Online help was ignored and the children demonstrate a very high level of interactivity with the interface at the expense of thinking, planning and evaluating.

Dania (2002) presented the third part of a research project that investigated the information-seeking behaviour and success of seventh-grade science children in using the Yahooligans! Web search engine/directory. It was found that children were more successful when they browsed than when they searched by keyword on the three tasks. Conradson and Pedro (2004) investigated one particular aspect of cheating particularly how they exploit Internet for plagiarizing school work within secondary education and some implications for measuring academic achievement. It was found that students’ technology fluency is forcing educators to revisit conventional assessment methods.

Mclelland (2004) investigated ICT usage by school children and teachers in a secondary school in a deprived area of Glasgow. It was observed that there was need for an integrated information literacy/ICT skills training strategy linking secondary and tertiary education. Cooper (2005) found that developmental level of child information seekers affects their ability to interact with digital technology as a means to satisfy their information needs. Enochsson (2005) investigated the development of children’s Web-searching skills: to determine the various skills necessary for seeking information on the Internet in educational settings. The students regard six different skills as fundamental: language, knowledge about the technology, knowledge about different ways of information seeking, how search engines work, setting goals and being critical.

Jansen (2005) focused on two popular sites students use in school projects about native Americans and ancient Egypt. Students and teachers readily accept them as valid sources of information. But, they are not even close to being authoritative or accurate. It was found that one is authored by a gentleman who posts no qualifications, does not cite his sources and asks children to send him money for his work. The other is by a woman whose site appears valid, but contains no in text citation or bibliography and she claims to be a psychic and has been visited by aliens. Books, magazine articles and other sources went through rigorous editing processes, after which the library media specialist carefully evaluated the source for the collection based on positive reviews, reputations of the publisher or author and its relevance to the curriculum. Classroom teachers and library media specialists will want to introduce students to resources available through the library media center
(books, audiovisual materials and subscription databases), as well as those on the Internet.

Large and Beheshti found that (2005) children seek information in order to complete school projects on a wide variety of topics, as well as to support their various leisure activities. Such information can found in print documents, but increasingly young people are turning to the Web to meet their information needs. In order to exploit this resource, however, children must be able to search or browse digital information through the intermediation of an interface. In particular they must use Web-based portals that in most cases have been designed for adult users. Guidelines for interface design are not hard to find, but typically they also postulate adult rather than juvenile users. Madden and Miller (2006) analyzed children’s use of the Internet for information-seeking. It was found that a child’s ability to search successfully appeared to be: the amount of experience the child had of using the internet; the amount of guidance, both from adults and from peers; and the child’s ability to explore the virtual environment and to use the tools available for so doing.

Takahira and Ando (2007) focused on whether Internet use improves skills for practical use of information, which is termed information literacy in Japan. It was found that greater use of the Internet led to higher information literacy in the whole-scale measure of practical use of information. Gerjets and Hellenthal-Schorr (2008) described the development and empirical evaluation of web training for pupils which aims to convey prerequisite knowledge and skills that are necessary for a competent search for information on the web. The web training focuses on competent information handling and is based on two theoretical analyses. First, a conceptual analysis of information search from the perspective of media literacy research and information retrieval research was conducted and yielded a set of five pivotal content aspects that need to be covered by web training. Each of these content aspects is characterized by declarative and procedural knowledge components which are necessary for the pursuit of a competent search for information on the web. Second, we conducted a task analysis which conceptualizes the search for information on the web as a problem-solving process and which allows to systematically distinguish between different types of information problems.

Jason and Robins (2008) discussed that children’s' use of a new educational Web portal was evaluated with particular emphasis on searching and browsing strategies. Results suggest that while students prefer a search-box strategy, it is by no means the
only way they search for information. Students experienced difficulty in trying to de-aggregate the results of a federated search engine. These findings have implications for information literacy and library instruction. Merkley, Cari (2008) stated that high school students struggle to find school-related information on the web, based on a study of their search on the web.

Olatokun (2008) investigated the patterns of use of the Internet among secondary school students in Ibadan, a Nigerian municipality with a view to determining how widespread Internet use and to examine the activities the students adopt the Internet for. It was found that majority of the respondents used the Internet for leisure rather than for educational purposes. O’Reilly and O’Neill (2008) analyzed Ireland's primary school children's Internet usage and the associated safety implications it carries. It identifies the potential risks associated with primary school and evaluates the level of understanding of Internet safety that children have. It identifies what children use the Internet for and what information they are willing to reveal while online. Singh (2008) examined parents awareness of online dangers and if they were doing enough to protect their children online. Some parents were not aware of certain online dangers and as a result did not take adequate measures to protect their children online. One of the main findings was that parents and children were not adequately equipped to be Internet safe. Wole (2008) investigated the use and patterns of use of the Internet among secondary school students in Ibadan, a Nigerian municipality. It was revealed that majority of respondents use the Internet for leisure rather than for educational purposes.

Maynard (2010) reported on a pilot study which aimed to consider the e-book reading experiences of young children and their families, with currently available portable e-reader devices. When asked whether they prefer printed or electronic books, all of the adults chose printed books, whilst the children were more ambivalent, with half preferring electronic books. Spink (2010) reported findings from an exploratory study investigating the web interactions and techno literacy of children in the early childhood years. The study explored the Google web searching and techno literacy of young children who are enrolled in a “preparatory classroom” or kindergarten. Inamullah and Ansari (2012) explored internet browsing habit of school children and compared the habit of students of both school systems. It was found that Google and Yahoo are the most used search engines. Wakimoto (2013) found that children display seven distinct roles when searching online at home. These
are developing, domain-specific, power, non-motivated, distracted, rule-bound and visual, with each search role being delineated by specific behaviour and/or abilities. Waseem and Ashfaq (2013) examined the usage of media as compared to printed material by school children.

2.5. INDIAN LITERATURE:

2.5.1 Information Needs:

Kulkarni and Tadasad (2014) investigated the information needs and gathering habits among the school children in two selected schools. Based on the survey of 120 students it was found that majority of the school children preferred class notes to update their knowledge and more number of students consult internet based sources for various academic activities.

Panigrahi and Panda (1996-97) observed the reading interests of school children and information sources used by their through a case study of two English medium schools of Rourkela, India. Chacko (1997) analyzed the reading habits of school students of Loyala High School, Pune in relation to social status. It was found that socio economic status, habits and hobbies have an impacting factor on reading habit. Kumar and Soma Raju (1997-98) discussed the need and methods of developing reading habits among children, in view of the large number of the electronic gadgets, which provide diversions.

Bhaskar and Soma Raju (1999) examined the role of librarian in promoting reading habit and developing an inquisitive mind. Specifies the role of teachers in extending the work of classroom by co-relating it with the work in the library supplemented by the AV media. Humayoon (2003) analyzed the reading habits of government high school students in Thiruvananthapuram district. It was found that newspapers are preferred most, followed by subject text books. Devendra and Ansari (2010) assessed the reading habits of senior secondary students at Allahabad city, U.P, India.

2.5.2 Use of Internet:

Kaveri and Patricia (2001) discussed the impact of home computer use on the development of children and adolescents. Anwar (2014) examined the prevalence of internet addiction among secondary school children studying in class IX and X and its relationship with their academic achievements. Kulkarni and Tadasad (2014) assessed the use of Internet by the school children in Vijayapura district. The study mainly focused on the awareness and use of internet, location of access to internet, average
time spent on internet usage, source of awareness, learn to use, purpose of use, problems faced while accessing e-information resources, benefits for use of internet, preferred browsers for accessing internet. Midhula and Pillai (2015) investigated the awareness and usage of internet resources among visually challenged students in Thiruvananthapuram district, Kerala. Internet usage was very less among the computer literates due to the lack of proper training. Among the respondents, a good number of students are aware of assistive technologies, even though many of them are not using them.

Kulkarni and Tadasad (2015) investigated the awareness and use of internet based e-information resources among school children in two selected schools of Vijayapura district of Karnataka state. Based on a survey of 120 students, the study emphasized the awareness and use of e-information sources. It assesses and analyzes the acquaintance of school children with IT, awareness and use of internet, problems encountered awareness about searching e-information sources, types of sources preferred, reasons for not using e-information sources, channels preferred and ability of them to use e-information sources.

### 2.5.3 Outreach Services:


### 2.6. CONCLUSION:

It can be observed from the reviewed literature that a huge amount of literature is available on various aspects of information needs and gathering habits of school children in the world context. As far as Indian literature is concerned the topic has not received much attention by the researcher and very few isolated studies have been reported which are piece meal in nature. It can be concluded that the research in the Indian context on the topic is still in infancy stage and there is a wide scope to conduct investigative studies in various settings.
2.7. REFERENCES:


Barbara, Jansen (2005). I found it on the internet, so it must be true: guiding children to reputable resources, *Library Media Connection, 23*(6), 35.


Fourie, J. A. (1999). Educational and vocational information needs of high school
learners: implications for youth information services in South Africa. *Mousaion*, 17(2), 66-81.


services in libraries, 2(1), 51-57.


Tella, Adenyinka., and Akande, Samson (2007). Children reading habits and


