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Challenges Faced by School Teachers when Seeking Information: How Barriers be Addressed

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Abstract

The present study explored the challenges faced by school teachers when seeking information for teaching purposes and made suggestions to overcome these challenges. The study used a mixed-method approach, comprising a questionnaire survey and focus groups discussions. The data collected through the questionnaires were mainly quantitative and were analysed using the SPSS (21.0) while the qualitative data from the focus group discussions were analysed using thematic content analysis. For the quantitative approach, 318 school teachers were sampled in questionnaires survey where the descriptive statistics were used for analysis. The study found a variety of barriers that influenced teachers' information seeking process either the problems with the library resources, school environment barriers or personal barriers. The study recommended that school libraries should be improved and expanded with library resources while providing better information technology facilities within the school environment and also should provide more support and training to school teachers with information literacy skills to empower them to face these challenges.

Keywords: Information seeking, Challenges, Recommendations, School teacher, Teaching, Sri Lanka

1. Introduction

Information seeking is described as a conscious effort to acquire information in response to a need or gap in one's knowledge (Case, 2002). Most of the time, the information seeking behaviour of teachers involves active or purposeful information seeking as a result of the need to impart knowledge onto students, prepare for class lessons, seminars, workshops, conferences and many more. For instance, if a teacher needs to complete his or her lesson/teaching notes, this need will drive the teacher to do everything possible to obtain the right information that will satisfy that need. After the need is met he/she returns to a more passive state of information seeking regarding the "object of his/her earlier curiosity" making the demand for information an elastic one (Case, 2012).

Knowledge of information seeking behaviour of teachers, the kind of information which is used by the teachers in teaching, how the teachers obtain the information they use to teach, the role of libraries in information delivery in the schools, the use of information technology available and accessible to the teachers and the problems encountered by the teachers while seeking information for teaching would be of significant benefit to the teaching profession. This is because it will help information providers to improve upon existing information to meet the information needs of teachers. Having a better understanding of teachers' information needs, and problems faced in seeking information is the first step in being able to develop better information provided to teachers that may result in the better learning environment and educational success for learners too.

On the other hand, it is believed that teachers are the key players in successful education and their teaching and learning can be enhanced by providing required information sources to fulfil their information needs. Therefore it is a prime necessity to examine school teachers' information seeking activities and problems they faced when seeking information. The findings are intended to help identify factors that hinder teachers to fulfill their professional information needs. Consequently, corrective necessary measures should emerge, capable of improving the overall educational environment in the county.

Moreover, it was found that no studies have yet been conducted in Sri Lanka to study information seeking pattern of school teachers concerning the challenges faced by them when seeking information. Therefore the present study will be the pioneer study in Sri Lanka bridging the gap of literature on challenges faced by school teachers when seeking information. This study certainly will be a guide for policymakers availing better and effective ways that information can be provided and upgrade information services to meet school teachers' information needs that required for quality education in a country.

2. Objectives

The main purpose of this study was to explore the challenges that school teachers face when seeking information and how these challenges might be overcome. The specific objectives of the study are as follows:

1. To examine the challenges do the teachers encounter when seeking information
2. To make recommendations to overcome these challenges

3. Methodology

This study used a mixed-method approach which was supplemented by methodological triangulation. A combination of quantitative and qualitative approaches can be used to provide a better understanding of the research problem (Creswell & Plano-Clark, 2007) as well as ensuring corroboration, facilitation and complementarities (Dixon-Woods *et al.*, 2004). The survey research method was used to determine the characteristics, opinions, actions and previous experiences of the population. Besides, focus group discussions were conducted with groups of teachers, to obtain further information about problems faced and suggestions to overcome the problems.

The study population was in-service graduate school teachers in the government schools in Sri Lanka and the participants who took part in this study were graduate teachers who followed postgraduate courses at the University of Peradeniya which is one of the main higher educational institutes in Kandy district that was created a considerable limitation for the study. The total population of graduate school teachers who work in government schools in Sri Lanka is 106,756. (Statistical Abstract, 2017) As suggested by Krejcie and Morgan (1970) in their statistical table

to determine the sample size from a given population, for a population of 106,756, sampling size is 382 which were determined as the study sample. However, a self-administered questionnaire (print version) specifically designed for the study was distributed randomly among 400 participants in early September 2018. The collected data were analysed using the SPSS software package (version 21.0).

With regarding the focus group discussion, four group discussions were conducted with 32 teachers who liked to participate and discussions were conducted during June and July 2019 which lasted between 50 to 60 minutes. Qualitative data were analysed employing content analysis and a procedure designed to extract themes and typical responses from a large amount of textual data. This study used the content analysis strategy to analyse the qualitative data collected from the focus group discussions.

4. Data analysis

In this study, the data analysis is divided into qualitative analysis and quantitative analysis and quantitative data were collected from the questionnaire will be analysed at the first.

4.1 Quantitative Data Analysis

4.1.1 Demographic and professional characteristics of the respondents

Out of 440 questionnaires were distributed, 318 returned were used in the data analysis and this gives a response rate of 72.27%. As it can be gleaned from the table 1, the majority of the sample (89 %,) was female and male comprised only 11%. With regard, the age of the respondents 57.5% of respondents were 31-40 years of age, with the remainder being 20-30 (20%,) or 41-50 (19.5%,). It is further evident more than 50% reported having been teaching profession for 1-5 years. Teachers who had been in the profession for 6-10 years made up 23.6% of the sample, followed by those who had been in the profession for more than ten years (23.9%). About the area of the school located, most of the respondents, 125 (39%) indicated that their schools were situated in a suburb area followed by 35% in the rural area and 24% in the central city. The schools where the respondents teach were located thus fairly representative of town area as well as rural areas.

Table 1: Demographic and professional characteristics of the respondents

1	Gender	Frequency	Percentage
	Male	39	12.3
	Female	279	87.7
	Total	318	100
2	Age	Frequency	Percentage
	20-30 years	65	20.4
	31-40 years	183	57.5
	41-50 years	62	19.5
	More than 50	8	2.5
	Total	318	100
3	Work experience	Frequency	Percentage
	Less than 1 year	2	0.6
	1-5 years	165	51.9
	6-10 years	75	23.6
	More than 10	76	23.9
	Total	318	100.0
4	Location of school	Frequency	Percentage
1)	Central city	75	23.6
2)	Suburb	125	39.3
3)	Rural	110	34.6
4)	No response	8	2.5
	Total	318	100

Source: Survey data

4.1.2 Barriers Encounter when Seeking Information

In order to examine the barriers, the respondents were asked to indicate the problems they encountered when seeking information. The study revealed that the teachers mentioned variation of barriers that influenced their information-seeking either the problems with the library resources, school environment barriers or personal barriers. Table 2 presents the library-related barriers encountered by the teachers when seeking information.

4.1.2.1 School Library Related Barriers

Table 2 lists the top most twelve school library-related barriers encountered by the teachers when seeking information are shown in Table 2. The majority mentioned the lack of relevant materials in the library, followed by the lack of information on available resources (80%) and the non-availability of e-resources (78%) as main problems they faced. Moreover, more than 75% of the

respondents mentioned the library collection consisted of outdated materials and just over three third indicated that it was difficult to find relevant materials from the existing library collection.

Table 2: Descriptive Statistics of Library Related Barriers

	Library related barrier	Frequency	Percentage
1	Lack of relevant materials in the school's library	274	86.2
2	Lack of information about available sources	254	79.9
3	Non availability of electronic resource (e-journals)	248	78.0
4	Required materials are not available	244	76.7
5	Latest information sources are not available/ outdated material	240	75.5
6	Difficult in finding from existing resources	215	67.6
7	Information is scattered in too many sources	164	51.6
8	Lack of support from library staff	141	44.3
9	Library staff is incompetent or not well-trained	140	44.0
11	Lack of knowledge in using the library	121	38.1

Source: Survey data

4.1.2.2 Personal and School-Related Barriers

Table 3 reflects the personal and school-related problems experienced by the teachers when seeking information. The top identified hindrance to information seeking was lack of internet access. Seventy-seven percent of the respondents mentioned that the lack of access to the internet as a personal barrier they encounter while seeking information for professional needs. The second most frequent hindrance was lack of time to search for information. More than 75% of the respondents said that they did not have enough time in their day time to search for information. The next most frequent hindrance was related to the cost. Teachers felt that resources were expensive, more than 70% agreed on that. The fourth most frequently mentioned hindrance was the lack of skills in using ICT facilities available at school. More than 65%

mentioned the lack of ICT skills as one of the major hindrances they faced when seeking information

Table 3: Descriptive Statistics of Personal and School Related Barriers

Personal barrier		Frequency	Percentage
1	Lack of access to the internet	245	77.0
2	Lack of time to search information	240	75.5
3	Information sources are very expensive	225	70.8
4	Lack of skills in using ICT facilities	208	65.4
School related barriers		Frequency	Percentage
1	Lack of computer hardware & software	244	76.4
2	Lack of computers in the ICT laboratory	243	76.1
3	Lack of technical support	192	60.4
4	Too many classes or administrative work	162	50.9

Source: Survey data

When it comes to school-related barriers, the lack of hardware and software and computers available in the school IT laboratory were reported as the topmost hindrances that encounter by the majority. The next most frequent hindrance was lack of technical support received from the school. More than 60% mentioned that the school has not provided adequate technical support to perform information searching effectively and more than 50% identified that too many classes or administrative work as a most significant hindrance that had an impact for their information seeking activities. In order to examine whether any relationship between the problems (personal and school-related) and school location, cross-tabulation was conducted and data are presented in Table 4 below.

Table 4: Cross Tabulation of Barriers and School Location

s/n	Problem	Central city	Suburb	Rural area	Total
		Frq.(%)	Frq.(%)	Frq.(%)	
1	Lack of access to the	58(21.5%)	98(33.5%)	86(29.8%)	242

	internet				
2	Lack of time to search information	61(22.8%)	92(34.3%)	84(31.3%)	237
3	Information sources are very expensive	62(23%)	89(33.1%)	74(27.5%)	225
4	Lack of skills in using ICT facilities	48(18.1%)	82(30.9%)	75(28.3%)	205
5	Lack of computer hardware & software	60(20.8%)	102(35.4%)	78(27.1%)	240
6	Lack of computers in the ICT laboratory	62(21.5%)	91(31.6%)	86(29.9%)	239
7	Lack of technical support	47(16.9%)	85(30.6%)	57(20.5%)	189
8	Too many classes or administrative work	45(16.1%)	62(22.2%)	52(18.6%)	159

Source: Survey data

As it can be gleaned from the table 4, 34% of suburb school teachers and 30% of rural school teachers mentioned the lack of time to search information and lack of internet access as problems they encounter when seeking information. Same vein, 35% respondents who work in suburb schools faced the problem with the high cost of information sources and 30% of them were lack of skills in using ICT facilities which are essential for effective information searching. Moreover, just over one-third of the respondents who were in suburb schools and 27% of rural school teachers mentioned that the lack of computer hardware and software as a problem they faced when information seeking. In general, a lesser percentage of teachers who work in city schools faced problem than teachers in suburb schools and rural area schools.

4.2 Qualitative Analysis

4.2.1. Barriers that affect the Teachers' Information Seeking

The focus group participants were asked to mention any library-related problems faced by them when seeking information. Views on the library-related problems that hinder for the participant's information seeking process are discussed in the subsequent sections.

4.2.1.1. Library-related barriers Faced by the Teachers

The vast majority of focus group participants, however, cited at least one specific library-related barrier which had an impact on their information seeking. Mainly two types of barriers could be

identified from their responses: inadequate resources; and problems with the arrangement of library resources.

4.2.1.1.1 Inadequate Resources in the Library

As noted in the previous section, many respondents felt that the library provides an inadequate level of resources to meet their needs. The lack of up-to-date collection was regarded as a major problem mentioned by numerous focus group participants and was cited as the main library-related barrier that affects their information seeking process.

“Most of the print resources, especially books available at the school library are very old and not relevant for the subjects either. So the library should purchase current and relevant resources.”

“I know the library purchase books at the end of the year. They want to spend the money allocated for the year anyhow. So, they purchase books without considering user needs”

“Most of the information resources in the library are out of date. I need current materials for my subject.”

“Our school library collection is very old and not relevant to the school curriculum because most of the books were received as donations. So, I am not using the library collection at all.”

“Lack of resources in the library is the major factor that restricts me from information seeking activities. “

4.2.1.1.2 Poor Arrangement of Library Materials

Another significant barrier that hinders of effective information searching was the poor organization of library resources that were endorsed by the group participants given below:

“I have to spend more time finding a book in the library because they were not kept in the right places.”

“The library collection is kept in open shelves. So sometimes the resources aren't checked out and but they are not in their location. “

“I encountered difficulty in locating some resources from the library because they are not at their appropriate place. “

“The absence of the book at their place is making me tired and facing a problem. I think this is happening because the student changes the location of the book. “

“I always have a hard time when locating some resources, because they are not in their places, so our library needs better organizing.“

“The personnel working in the library are also not helpful. They are not supported for locating library materials.“

“Our library staff is not competent to provide good service. They don't know how to organize the library collection properly. “

“Our library has not a permanent librarian or library staff for providing library service. Therefore, the library should be managed by professional staff. “

4.2.1.2. Non-Library-Related Barriers

The research participants were also asked to mention the non-library related barriers that they encountered when seeking information. Technological limitations, lack of adequate time for searching for information, language barriers and lack of training were identified as the main problems they faced when seeking information.

4.2.1.2.1 Technological Limitations

The lack of adequate computer facilities available in the school was cited as a barrier for effective information seeking by a significant number of focus group respondents.

“No computers or any IT facilities for the teachers at school. “

“My school has no computer lab. “

“There is no suitable environment for using the computers at school. Computers were kept in the principal's office. So we are reluctant to go there for using computers. The computers should be kept in the library, and then we can easily use them for information searching.”

“Lack of infrastructure facilities is the main problem. Without having basic infrastructure facilities, no use of computers at all, for example, if no electricity in the school, how to use computers”

“Unavailability of basic infrastructure facilities at school is a problem. “

“Lack of ICT facilities at a school is the main problem when searching for information.”

“Technical support received from the school for the teachers is not adequate.”

Slow or inadequate internet connections were identified as one of the main technological limitations that affect negatively for teachers’ information seeking process. A considerable number of focus group participants commented on various ways in which poor access to the internet, either in terms of speed or coverage, has a negative impact on their information seeking.

“Our school has no internet connection. “

“The speed of the internet makes the process of searching more difficult and in some cases makes us quit the searching process. “

“Due to the slow speed of the internet, the search for information is taken much time and in many times I give up the search.”

“Normally I use the internet because it has new information, available anytime and can be searched very easily. However, the most significant problem annoying me is that the internet is very slow. It takes most of our time to do one search. “

“Internet coverage is very poor in school. “

4.2.1.2.2 Lack of Time for Searching Information

The other most commonly cited non-library related barrier to information seeking was the lack of sufficient time for information searching due to respondents' teaching commitments.

“The time for searching for information is lacking. We spend most of our time in teaching and preparation for the teaching. “

“We are very busy with teaching and other administrative works at school and there is not enough time to search for information. The teaching load should be reduced. “

“I have 40 periods per week for teaching. There is no single free period for searching for information. “

“At least more than 38 periods should be assigned for the teachers. Otherwise, the approval for the timetables has not been granted by the regional office of the department of education. So, all the teachers have to work more than 38 periods per week. “

“I have to attend more extracurricular activities at school other than teaching. So, I have no time for searching for information. “

“My main problem is insufficient time. I usually look for information during the weekend. There is no free time for information searching at school. “

4.2.1.2.3 Language Barriers

Language factors also cited as barriers for information seeking by the focus group participants. Number of respondents noted the difficulty that sources in their subject area were published in English, and, since they were weak in this language, there was often a need to have these translated.

“Most of the publications in our subjects are in the English language and as I mentioned earlier, my English is very poor, so this is a serious barrier.“

“Most of the time we use teachers’ guide for the preparation of lesson plans particularly when assigned a new topic or new subject for teaching. But the problem is we get teachers to guide 5 or 6 months after the syllabus revision. As you know, most of the information available on the internet is in English, so it is a major barrier for me because my English is very poor. “

4.2.1.2.4 Lack of Training for the Teachers

A considerable number of focus group participants expanded on the issue of lack of training and they urged proper training on how to search for information. They expressed various views on the training as follows:

“No proper in-service training on information searching for teachers. “

“No training in information literacy is badly affected by teachers’ information seeking activities.”

“Training programs conducted for the teachers are not relevant. “

“Lack of skills in internet searching and using the internet is affecting our information seeking process. More training on IT and internet searching should be conducted for the teachers.”

“Most of the training programs arranged in the city. So, it is difficult to attend”

“There is no training program or seminar before introducing a new subject or new topic for teaching. “

“Most of the training programs were arranged for the teachers is very boring. No new knowledge is given. Same resource persons conduct all the programs. “

4.3 How Barriers Might be Addressed

The focus group respondents were asked their suggestions to overcome the various problems they faced when seeking information. The respondents’ suggestions were reported under the three main categories; improving and expanding library resources, providing better Information Technology facilities and providing more support and training to users.

4.3.1 Improving and Expanding Information Resources.

Most of the focus group participants made suggestions for ways in which the library's collection could be developed and they indicated a demand for more up-to-date materials by taking into the consideration of user requirements. A number of respondents further suggested having clearly-defined selection process for library collection development.

“The library should enrich its collection with current reading materials that relevant for school syllabus. “

“There should be a collection development policy guide for library acquisitions. “

“List of recommended readings for every subject should come along with the new syllabuses and the selection of library materials should be based on that list of recommendations. “

“Library should provide electronic resources and internet access for the users. It may be a good opportunity for the teachers to search for information quickly. “

“Appointing of qualified and trained staff for the library is essential for providing good service for users. “

“Establish a special unit for each educational zone/ division to supervise school libraries.”

“Preparation some guidelines for purchasing books and periodicals for the library are a must. User requirements should consider and incorporate when selecting library materials. “

“There should be some mechanism for purchasing current and relevant library resources with collaboration of the regional office of education and school library. “

4.3.2 Improving Information Technology Services

Numerous respondents expressed a need for a faster internet connection since it would improve their ability to search efficiently and enhance their ability to get current information that they required.

“The school should provide a speedy internet connection with wide coverage because it is very slow. “

“School should provide a good environment for internet users with speed connectivity. “

“Assigning computers and providing internet access for the teachers is essential. The access facility should be given from the school IT lab or the library. “

“The government should provide computers, laptops or internet connection for the teachers in subsidized price. “

“School should provide necessary ICT facilities and internet access for teachers from the school.“

“It should be provided with more technical assistance for teachers from the school.“

4.3.3 Providing Training on Information Seeking

When asked about the ways that improve their information seeking activities, most of the group participants indicated that more training programs, workshops and seminars would be beneficial to them.

“To overcome these barriers, workshops or training programs should be conducted on regular basis for improving language skills [English] and technical skills of the teachers. “

“We need some kind of training in information searching. We expect these workshops to be delivered by one of the experts in the field. “

“When introducing a new subject or a topic for teaching, training program or a seminar should be conducted by the expert in that particular subject, not regular resource persons. “

“Information literacy skills, Library skills and ICT skills should be incorporated for the pre-service training of the teachers. All these skills are essential to be a good teacher. “

“Providing further educational opportunities for the teachers will help for developing their information seeking skills. “

“Workshops or in-service training programs should be done subject wise. These programs should be conducted by a subject expert. Then only we can grasp in-depth knowledge on a particular subject. “

“Training programs or seminars must be conducted in an effective way. Providing current information by enriching up- to- date knowledge through the subject expert is needed. “

“Seminars or workshops have to be conducted according to the specific subject. These types of programs are very helpful. “

“Training opportunities should be given to all teachers. These opportunities should be equally distributed among the teachers. Some teachers attend all the programs, some are not. That should be changed. “

“When revising school curriculums, the ideas of the teachers who teach these subjects should be taken. At the same time, teachers should be well educated about the changes or additions to the curriculum in advance.“

4.3.4 Reduce of Work Load

Most of the participants mentioned the heavy workload in the school is badly affect for their information seeking activities. Some of the respondents commented on their views on how to overcome the problem of lack of time for seeking information.

“I have more than 38 periods per week for teaching, so I don’t have time for searching for information. There should be some mechanism to reduce the workload of the teachers and allow free time for information seeking activities. “

“Creating non-teaching staff cadre vacancies in the schools and appointing persons for these vacancies may reduce the working load of the teachers. Most of our time we spend on the various extra-curricular activities [non- teaching] in school, so no time for information seeking “

“Resources should be equally distributed among all the schools. Some rural schools have no teachers at all. Most of the teachers reluctant to go to these schools because there are no facilities. If the government provides necessary facilities and resources, especially human resources [teachers] for the schools, the workload of the teachers who work there may be reduced”

5. Discussions

The quantitative analysis of the study showed that the variation of barriers that influenced teachers' information seeking activates either the problems with the library resources, school environment barriers or personal barriers. Moreover, the lack of relevant materials in the school's library, unavailability of electronic resources, outdated library materials, difficult to find resources from the existing collection were identified as library-related barriers that encounter by the teachers when seeking information. In a qualitative point of view, the teachers identified two types of barriers mainly as library-related barriers such as inadequate resources and problems with the arrangement of library resources. These results were consistent with studies of Shanmugam (1999), Kakoma (1999) and Williams & Coles (2007) who found that the inadequate library facilities, unavailability and inaccessibility of information and inability to locate up-to-date information as problems faced by the teachers when seeking information. These findings are not different from the studies conducted by Johnson (2000) and Tachie-Donkor, and Dadzie (2017) who concluded that school teachers did not find the materials in their libraries relevant.

In respect of school-related barriers, the lack of hardware and software and computers available in the school IT laboratory, lack of technical support received from the school and heavy teaching load or administrative work were identified as the main barriers that encounter when seeking information by the majority of the survey respondents of the study. The focus group participants also noted that the lack of adequate computer facilities available in the school as technological limitations that hinder for the teachers' information seeking behaviour. These results are in line with Bitso (2012) who identified the heavy teaching loads and too many learners in a class that made it difficult to find time for exhaustive information seeking as problems were encountered by the teachers. A heavy workload on the teachers was also pointed out by Snyman and Heyns (2004) as a factor affecting the teachers' information seeking.

As revealed in the quantitative findings, the lack of internet access, lack of time to search information, cost of the sources and lack of skills in using ICT facilities available at school were identified as major challenges that hinder teachers' information seeking process. Moreover, the qualitative findings also noted that the lack of time for search information, low or inadequate internet connections and lack of training on how to search for information as the problems they

encountered when seeking information. This finding concurred with the previous studies done by Tenopir& King(2001), Line (2001) and Bitso (2011). These studies found that financial constraints, lack of time for searching for information and lack of ICT skills which are essential skills for effective searching were hindered for the teachers' information seeking activities.

6. Conclusion

The results revealed that school teachers encountered a variety of barriers that influenced their information seeking process either the problems with the library resources, school environment barriers or personal barriers. With regarding the library-related problems, the inadequate materials and unavailability of electronic resources in the school library were identified as the main problems encountered by the teachers when seeking information. In terms of personal barriers, the lack of access to the internet and lack of time to search for information identified as the main barriers they encounter while seeking information for professional needs. In respect of school-related barriers, lack of internet connectivity in the school IT laboratories, lack of access to the internet and the lack of hardware and software available in school IT laboratory were reported as the most hindrance that encounter by the majority of the respondents. The respondents' recommendations to overcome the problems were reported under the three main categories; improving and expanding library resources, providing better information technology facilities and providing more support and training to users.

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