



Information Needs of Teachers in Second Cycle Institutions in Ghana: A Case of the Lower-Manya Krobo Municipality

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Authors' contributions

This work was carried out in collaboration between all authors. Author HFA designed the study, performed the statistical analysis, wrote the protocol and wrote the first draft of the manuscript. Authors HA and GTB managed the analyses of the study. Author GTB managed the literature searches. All authors read and approved the final manuscript.

Article Information

DOI: 10.9734/JESBS/2020/v33i1030260

Editor(s):

(1) Dr. Shao-I Chiu, Da-Yeh University, Taiwan.

Reviewers:

(1) Ieda Harumi Higarashi, Maringá State University, Brazil.

(2) Gustavo Eduardo Toledo Lara, University Camilo José Cela, Spain.

Complete Peer review History: <http://www.sdiarticle4.com/review-history/61715>

Original Research Article

Received 04 July 2020

Accepted 10 October 2020

Published 23 October 2020

ABSTRACT

This paper seeks to examine the information needs of teachers in second cycle institutions in the Lower Manya Krobo Municipality in Ghana. It adopted the mixed method approach with a population of three hundred and three (303). Questionnaire and interview guide were used to collect data for the study. The quantitative data was analysed using IBM SPSS Version 22.0 and the qualitative data was also analysed thematically. The study discovered that second cycle institution teachers need information for teaching, learning and for research. Also, teachers rely on information from several sources to plan their lessons, write their teaching notes and update themselves on the subject matter of what they teach. Considering the role teachers play in the lives of students and the community as a whole, they need relevant information which must be timely, accurate and reliable. Therefore, the government, Ministry of Education (MOE), Ghana Education Service (GES), Heads of second cycle schools, and all Stakeholders are to ensure that proper information as well as information sources are made available to them to make the process of imparting knowledge more efficient.

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Keywords: Information; information needs; information behaviour; teachers; second cycle institutions; Lower Manya Krobo; Municipality; Ghana.

1. INTRODUCTION

Information plays a very important role in every aspect of life. Information is used at all times, irrespective of the situation and circumstance. The ability of teachers to teach effectively depends on their ability to have access to the right information and also use it to effect change in their students. According to Choo [1], information is used mostly by people to create knowledge, but not just in the sense of data and facts but in the form of representations that provide meaning and context for purposive action. In general, information can be defined as knowledge given or received of some facts or circumstances [2]. This knowledge may consist of statements made by individuals or concepts that have been accepted by society.

According to Bates [3], the ways in which people interact with information, especially the means through which people try to find and use information is described as information behaviour. Ingwersen and Järvelin [4], defined information behaviour as the human behaviour that deals with generation, communication and use of information and other activities concerned with information such as information-seeking and information retrieval. Information seeking behaviour in education can be described as the ways in which teachers and students try to look for information in order to use it to teach, learn and conduct research. Information seeking by teachers can be formal or informal. Teachers rely on information obtained from several sources including text books, the internet, observations, journals, radio, and television among others to prepare their teaching notes, re-structure their teaching methodologies and also make informed decisions concerning their students. Teachers are found at every level of the educational system. Thus, at the basic level, secondary level and tertiary level, with the sole aim of imparting knowledge to students.

Considering the role teachers play in the lives of students and the community, there is the need to provide infrastructure to help them access the right information since they need relevant information which must be timely, accurate and reliable. Teachers can obtain relevant information in the classroom by observation and oral questioning. The technique of observation helps teachers gather data which enhances other

assessment modes in declaring the status of students' performance. Oral questioning of students may reveal the need to review instructional packages. Thus, when a teacher questions student, their responses could reveal the extent of understanding gained. This helps teachers to place students in right curricula tracks. This therefore means that teachers need to be well versed in the domains of knowledge as proposed by Shulman [5]. Teachers need to have the content knowledge of various subject areas. They need to have command over the subject matter that they teach; have knowledge about the structure of the subject matter; the changes occurring in the field of study as well the as intellectual skills and attitudes needed to learn more about the subject. This can only be achieved when they have access to relevant information. Access to quality information by teachers is key so as to prevent the delivery of mediocre information to students.

1.1 What is the Problem?

Information has a pragmatic value for teachers in the discharge of their duties. According to Karunaratna [6], teaching and learning are linked to information handling. Effective teaching depends on the teachers' ability to access information and use it strategically to advance knowledge and skills. It has been observed that teachers in second cycle institutions in the Lower Manya Krobo Municipality are highly challenged because they have the responsibility of imparting knowledge to students as well as preparing them for tertiary education, yet they do not have adequate information infrastructure at their disposal.

An informal interaction with some of the teachers revealed that they operated with limited information resources such as books, computers and e-resources among others. Hence, they are faced with the challenge of composing and constructing lesson/teaching notes. Also, they have difficulty in updating their teaching/lesson notes despite their responsibility of preparing students for the future.

An informal interaction with some of the teachers revealed that they operated with limited information resources such as books and journals among others. As a result, they have difficulty in composing and constructing

lesson/teaching notes. Also, they have difficulty in updating their teaching/lesson notes despite their responsibility of preparing students for the future. All these are happening in an era of information explosion. This is an indication of challenges being faced by teachers in an attempt to obtain adequate information for teaching. It is against this backdrop that this paper intends to

1. explore the information needs of teachers in the second cycle institutions in the Lower Manya Krobo Municipality in Ghana.
2. investigate the reasons for the need for information by teachers in the institutions investigated.

2. LITERATURE REVIEW

2.1 Theoretical Perspective

The theoretical framework employed for this study was the Wilson's 1999 Model of Information Behaviour. The model explained that information seeking behaviour is an act of actively seeking information in order to answer a specific query. This model according to Niedzwiedzka [7], presents a full range of influencing factors and mechanism affecting information use. This includes cognitive, social and environmental factors. Wilson [8] model provides a good framework for thinking about the processes of acquiring and the use of information

by teachers in second cycle schools. The diagram as in Figure 1 below illustrates Wilson's 1999 information behaviour Model.

2.2 Information Needs

According to Mai [9], information needs are situation or condition dependent. The need of a person is situated within a context. It is influenced by the role the person plays at work or environment in which they find themselves. The environmental factors could be social, political, cultural, economic, and technological.

Personal characteristics also have an impact on the choice and hierarchy of needs. Kuhlthau [10] posited that, information needs of an individual stem from the social role that person plays in society. We can therefore infer that, the information needs of a doctor, teacher, lawyer, engineer and many others will definitely be different from each other. This is because their position, job description as well as working environments are different. Literature indicates that, among same jobs, there are variations in their information needs. According to Kumar [11], teachers' information needs vary. Some wish to have information in order to gain mastery in their curriculum content as well as structured behaviour that is needed in their classrooms for a diverse range of learners.

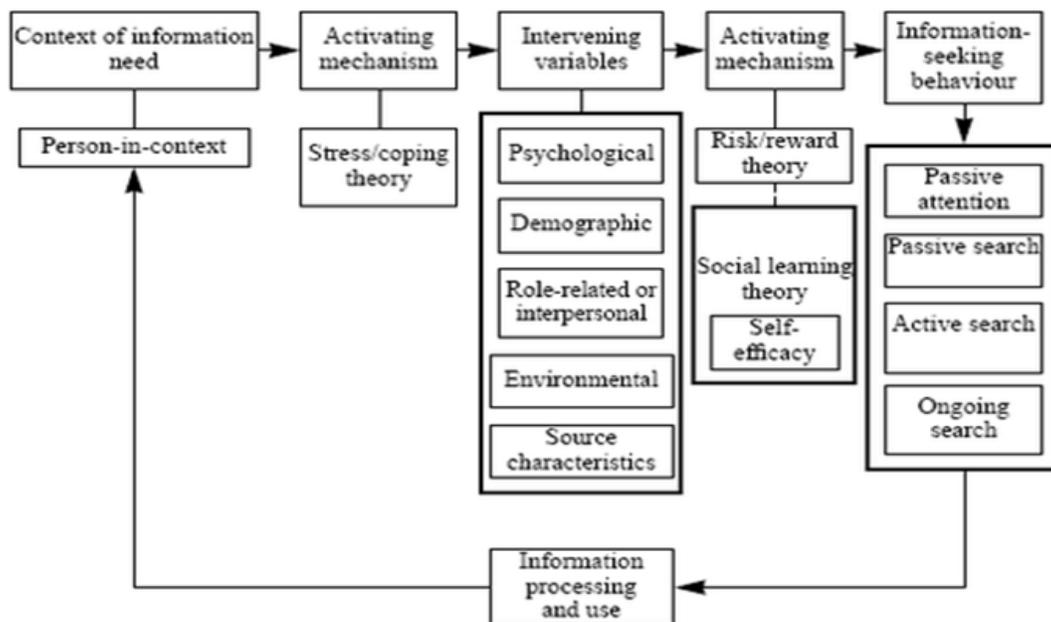


Fig. 1. Wilson (1999) model of information behaviour

Also, the environment within which information users find themselves, conditions their information needs. In analysing the users' environment, attention should be paid to the following factors:

- a. Socio-political and economic systems of the country or institution (macro-environment),
- b. the regional environment, local community, a particular city (meso-environment)
- c. single environment (micro-environment)

All these factors influenced the information needs of the users. In providing the information needs of every group of people, it is very important to identify their background characteristics. These include their educational level and experience gained in their various organizations or institutions. It is also necessary to find out the functions they perform in their various workplaces and the factors that affect their work.

2.3 Factors Affecting Information Needs

Niedzwiedzka [7] was of the view that, contextual factors such as the individual, professional role of the person, and the environment do not only influence the occurrence and determine the kind of information needs but also affect the ways in which his or her information needs are satisfied. McKenzie [12] was also of the view that, factors conditioning information behaviour could be supportive or preventive to individual's information use. It is not all information needs that make people seek information. A person does not engage in information seeking if he or she is convinced that the possessed knowledge is sufficient to understand the situation and make decisions. In effect, if a person lacks the conviction of information seeking, the chances of the person making a mistake or not being able to meet the expectations of other people occur. Therefore, when people are really in need of information, it is then that they are motivated to look for the information. Various stages are considered when one is to access and use information.

2.4 Phase of Information Seeking

Information-seeking is part of information behaviour [9]. Information seeking behavior is the act of actively looking for information in order to solve a specific problem. This is done through some processes. These processes vary in time and space and depends on the one looking for

the information. Thus, the pattern of information seeking is greatly influenced by the nature of information need. Information seeking pattern and pattern of use is situation dependent. It cannot be separated from the conditions that created the need. Information seeking can be active or passive [13]. Passive information-seeking occurs when people decide what information they do not want to seek, or they may be unaware of the fact that they might need information. On the other hand, active information-seeking takes place when people do everything in their power to seek information.

Fourie [13] was in support of Courtright [14] as he differentiates passive information behavior, passive search, active search and ongoing search as modes of obtaining information. According to him, passive information behavior occurs when the individual does not intend to seek for information. For example, watching television or listening to a radio advertisement without any intention to act on the information given. Passive search occurs when some kinds of behaviour enables an individual to obtain information that is relevant to them. Also, active search is the deliberate search for information to satisfy a particular information need. This is purposeful, because, the information seekers do everything in their power to get the needed information. This is exemplified by teachers searching for information to complete their lesson plans as well as their teaching notes. The last is the ongoing search which has to do with everyday search for information in order to broaden as well as update one's area of information.

2.5 Phase of Information Processing and Use

When individuals obtain information, it is processed, becomes an item of the person's knowledge, and is used. The use of this information could directly or indirectly influence the environment, which enables new information needs to evolve. Mental and physical information activities form a cyclic process [7]. Individual elements of the context determine a person's behavior at all stages and information that is acquired becomes a new element in a dynamic system [7].

The need for accurate information is important to teachers considering the fact that they are people who impart knowledge to students. This need for accurate information induces a

particular behaviour that will seek to satisfy that need. It is then that the information can be used. The study applied Wilson's 1999 Model of information behaviour because this theory does not only outline the processes of using information but also state the factors that initiates an information need, the seeking behaviour as well as the sources.

2.6 Information Needs of Teachers

The inflexible nature of information needs makes it difficult to deal with it [9]. This is because there has always been difficulty in identifying the context in which information needs investigations are carried out. This difficulty is as a result of the subjective nature of information needs, which only occurs in the mind of the person in need of the information and cannot be seen by others. However, this can be made known to others through the actions or behaviours of the person in need. Information needs arise in everyday life activities. There are information needs at home, the office, school, market, within relationships, and many others. It does not matter where an individual finds himself or herself, he or she needs to be equipped with the right information in order to be able to make correct, informed and accurate decisions.

According to Tahira and Ameen [15] an information need emerges when an individual observes a problematic situation or information gap, in which his or her own internal knowledge, beliefs and model of the environment, fail to suggest a path towards the satisfaction of his or her goals. Ingwersen and Järvelin [4] further viewed information need as a recognition of the fact that one's knowledge is inadequate to satisfy a goal that he/she has. Need arises when the existing level of knowledge is incapable of dealing with a new situation. That is, the information needs of individuals arise when they realise that they are handicapped with the right information to solve a particular problem or all attempts within their power to solve a particular problem proves futile.

According to Kuhlthau [10], information need is an actual, but unexpressed need for information, or ill-defined area of indecision which may be expressed in an ambiguous, rambling statement. [16] posited that, information need is the recognition of the existence of uncertainty in the personal or work-related life of the individual. In a study by Ingwersen and Järvelin [4], they asserted that, information needs indicate a consciously identified gap in the knowledge

available to an individual. Information needs may determine the seeking behaviour the individual has to adopt. This implies that, teachers may have some qualms that may grow to becoming information needs.

Nicholas [17], gave four general assumptions about the concept of need. He indicated that;

- a. Need is always instrumental. It involves reaching a desired goal. This desire puts one at, or closer to, an end state that he/she wants to achieve.
- b. Needs are usually contestable which sets it apart from want.
- c. Need is related to the concept of necessity.
- d. Need is not necessarily a state of mind and it is possible to be unaware of one's true need.

Shulman [18] asserts that teachers transform understanding, skills and desired dispositions into pedagogical representations and actions. Therefore, at a minimum, a knowledge base required for teaching includes content knowledge, general pedagogical knowledge and curriculum knowledge, knowledge of educational contexts and knowledge and characteristics of learners they teach. All these are considered to be very important information needs to teachers. The content knowledge has to do with knowledge about the subject matter to be taught. General pedagogy is about the knowledge on the teaching methodology for teaching the different subjects at the second cycle schools. Knowledge of educational contexts pertains to the goals and aims of education and the environment in which teaching and learning takes place as well as knowing the backgrounds of learners. Tahir, Mahmood [19] studied the information needs and information-seeking behaviour of Humanities faculty and concluded that the information needs of Humanities faculty members were diverse and they relied heavily on books and older material and there was also the lack of availability of required material in libraries which was a major problem in information seeking.

Literature indicates that even among teachers there is the tendency for variations in information needs. Some had specific information needs that could be related to gaining mastery in the curriculum content and the structured behaviour required in their classrooms or pedagogy for different range of learners [20]. In other words, there were variations in the information needs of teachers despite the fact that they all perform the same function of imparting knowledge onto

students. This means that, information needs are subjective because individuals who find themselves in the same jobs do not have the same information needs.

A study by Khan and Shafique [21] on information needs and information-seeking behaviour of college faculty revealed that college teachers mostly seek information for lecture preparation, improvement of their personal competencies and current awareness. In other words, college teachers' information needs are aimed at effective and efficient delivery of lessons. They mostly use books and monographs for seeking information. They also frequently consult their colleagues and friends in information seeking as an informal source of information. They further mentioned that they often acquire information resources from their institutional library as well as use their personal collection when they urgently need some information. Vega and Puente [22] also indicated that teachers do not only require sources of information on the curricular areas they teach, on pedagogy, didactics and information technology, but also on issues students face. A study by Lan and Chang [23] revealed that Biology teachers' information needs pertained to students, subject matter and pedagogical content knowledge, as well as knowing more about the students they teach. That is, their information needs include those that has to do with their students in addition to mastering the content of the subjects they teach. For example, the teachers' ability to help their students solve their academic and adjustment problems, and any other school related problems which would impede on their academic work.

2.6.1 Aims

This study aims at examining the information needs of teachers in second cycle institutions in Ghana and more specifically in Lower Manya Krobo Municipality. This study focused on responses from survey and interviews guides administered to teachers, Heads of Second cycle institutions and Librarians. The study presented results which were used as evidence-based data to make recommendations to policy makers, educational institution heads and librarians to guide them in their action plan.

2.6.2 Methods

This paper is the outcome of a study which combines both qualitative and quantitative

research approaches to data collection and analysis. The study adopted a descriptive research design. The mixed method approach was used. According to Creswell and Creswell [24], mixed method approach is the combination of both the qualitative and quantitative methods in a study. Although the mixed method approach was labour intensive, the study employed this method in order to widen the understanding or to use one approach to better understand, explain and build on the results from other approach. Also, it provides a better understanding of a research problem or issue and helps overcome deficiencies in one method only. This approach was relevant to this study to triangulate and corroborate findings from teachers, head teachers of the second cycle institutions and the officers in charge of the school's library.

2.6.3 Study setting

Ghana has sixteen (16) regions in Ghana. They are Greater Accra Region, Central Region, Bono Region, Ahafo Region, Bono East, Eastern Region, Ashanti Region, Oti Region, Savanna Region, Western Region, Western North, Upper East Region, Upper West Region, Volta Region, North East and the Northern Region. These regions have been sub-divided into districts, municipalities and in some cases, metropolis depending on the population of its inhabitants. For the purpose of this study, the Lower Manya Krobo Municipality in the Eastern Region was the study area.

The Eastern Region has twenty-six districts and municipalities of which Lower Manya Krobo is part. However, the study focused only on the Lower Manya Krobo Municipality because it is a newly created municipality and as a result, there are some challenges in the municipality. These include challenges teachers face with respect to information availability and accessibility. To bring to light these problems, the Municipality was selected as the case for this study. The public second cycle schools in the Municipality were considered for the study as against the private because they are older and better established and are funded by government. The public second cycle schools in the municipality include: Krobo Girls Senior High, Manya Krobo Senior High, Akuse Methodist Senior High and Akro Secondary Technical Senior High School.

This study was carried out among teachers in the four (4) public second cycle institutions at the Lower-Manya Krobo municipality. The schools

Table 1. Distribution of teachers, heads of schools and officers of school libraries

Name of School	Total number of teachers	Number of heads	Number of officers in charge of schools library	Total
Krobo Girls Senior High	82	1	1	84
Manya Krobo Senior High	75	1	1	77
Akuse Methodist Senior High	78	1	1	80
Akro Senior Technical High	60	1	1	62
Total	295	4	4	303

Source: School Administrators, 2019

that were considered for the study were Krobo Girls Secondary School (KROGISS), Manya-Krobo Secondary School (MAKROSEC), Akuse Methodist Secondary School (AMESS) and Akro Secondary Technical School (AKRO SECTECH). The total number of teachers in the schools were 295. The headmasters and headmistresses of the schools and the officers in charge of the schools' libraries were also interviewed. They were eight (8) in number. Thus, the target population considered for the study was 303. In order to achieve a closer representation of the real issues under investigation, the entire population of 303 was used for this study. This was informed by the views of Saunders, Lewis [25] who intimated that, a higher sample is better to reduce the margin of error and also to increase the possibility of a higher response rate since a one hundred percent response rate is not always achievable. Table 1 presents the distribution of participating schools and the number of teachers, heads of schools and officers of school libraries.

2.6.4 Instrument

To accomplish the purpose of this study, both primary and secondary data were collected. The instruments used to elicit relevant data for this study were questionnaire and interview guide. Questionnaire mostly have a definite purpose that is linked to the objectives of the study. The questionnaire had different sections, namely: Section A which discussed the background information of respondents and Section B interrogated the information needs of teachers

Additionally, the interview session was used to collect data from institutional heads and the officers in charge of the school library in the municipality. The institutional heads were interviewed because they had vital information on policy issues. The interview was conducted with a well-structured interview guide and issues on library-use by the teachers were investigated.

2.6.5 Phases of data collection

This section presents the step by step approach as to how data was collected for this study.

Phase 1: Meeting with the participating officers

The researchers met with the participating officers (Head teachers, teachers and librarians) and explained what the research was about to them. Through that, the participants were able to ask questions pertaining to the research. All questions asked were answered to clear any doubts in the minds of the respondents or participants. Also, on that same day, appointments were booked with the teachers as well as the head teachers of the institutions as to when they would be available for the data collection to start. Positive feedbacks were given and the days and dates were fixed for the collection to commence.

Phase 2: Distribution and Administration of questionnaire

Based on the approval by participants to participate in the study, a date was scheduled for the data collection to begin. On the scheduled date, the questionnaire was administered with the help of the heads of departments. This took a period of two (2) weeks. The first week was for Krobo Girls Senior High and Manya Krobo Senior High and the second (2) week was for Akro Secondary Technical and Akuse Methodist Senior High Schools respectively. The teachers were told to leave the completed questionnaires with their various heads of department.

Phase 3: Collection of the administered questionnaire

This third phase was when the administered questionnaires were collected from all the teacher respondents in the four (4) second cycle institutions. The collection of the questionnaire

was also done with the help of the heads of department as the teachers were told to leave the questionnaires with them. The researchers then picked the questionnaire up from the offices of the heads of the department.

Phase 4: Conducting the Interview

The face-to-face interview was also conducted using a well-structured interview guide. The interview was recorded by writing and audio/tape recording of the responses to the questions that were asked by the researchers. The introductory part of the interview was the explanation of the aims of the study to the participants. The interview was conducted in the offices of the participating officers. The participating officers for the interview were the four (4) heads of the selected institutions and the four (4) officers in charge of the libraries of the various institutions. They were eight (8) in number.

2.6.6 Data processing and analysis

The analysis was done in two parts. Data collected with questionnaire was coded and then entered into IBM SPSS Software. The data was subsequently analysed with the use of the Statistical Package for Social Sciences (SPSS) version 22.0 in conjunction with Microsoft Excel. The descriptive statistics in the form of percentages and frequency distribution tables were used. The Microsoft Excel also provided assistance in the generation of tables in frequencies and percentages. The frequency distribution percentage was also used to determine the proportion of respondents choosing the various responses. This was done for each group of items relating to the research questions. The proportion showed the diverse views of respondents on the issues raised in the questionnaires.

Secondly, the researchers were guided by principles for using thematic content analysis. The entire interview transcripts were reviewed and distinct units were identified, grouped and re-grouped. Similar and dissimilar units re-labelled. The categories or themes were then considered as a whole to render meaning to the highlighted texts given the topics. The researchers finally read through each theme separately and combined categories/themes for all interview transcripts and notes until he was satisfied with the themes. The recorded interview data were transcribed, analysed and coded into categories. The data were later compared with the

researchers notes taken during the interview process to scan for possible omissions or additions. The data were subsequently integrated using the thematic content analysis technique. Patterns were assessed to identify common attributes which by and large helped in making meaning out of the data. Data was organised under three (3) sections; personnel training and development, quality of teaching and information provision and acquisition policy and procedure.

3. RESULTS

3.1 Background Information of Respondents

Table 2 as below presents the background information of the respondents. It includes gender, length of period of teaching, age and educational background of the respondents. This survey had 288 respondents comprising 186(64.6%) male and 102(35.4%) female. Majority, 91(31.6%) had been in the teaching service for more than 10 years. Further, 75(26%) had been in the service for a period of 1-3 years, 68(23.6%) had been in the service for 7-9 years, 29 (10.1%) for a period of 4-6 years whilst 25(8.7%) of the respondents were in the service for only 0-11 months. Also, the study revealed that majority, totalling 105 (36.5%) respondents fell within the ages of 31-40 years, while 83(28.8%) fell within 41-50 years.

With respect to the educational background, a majority of 143(49.7%) respondents, had attained bachelor of education (B.Ed) degree, 86(29.9%) had attained non-professional teachers first degree, and 59 (20.4%), had attained master's degree. It can be deduced from the table that all the respondents were qualified.

3.2 Findings from Quantitative Analysis

3.2.1 Information needs of teachers

According to Mai [9], an information need is a recognition of the fact that one's knowledge is inadequate to satisfy his/her goals. It is for this reason that the study sought to establish the information needs of teachers in second cycle institutions in the Lower Manya Krobo municipality. The researcher in an attempt to understand respondents' need for information, posed questions to elicit information on the activities that motivated them to look for information. Respondents were asked to indicate the reasons for which they needed information.

Respondents were given the option to give more than one response. Table 3 depicts the responses given.

As shown in Table 3, one hundred and forty-three (143) respondents, representing 49.7% indicated that they needed information for teaching, one hundred 100 (34.7%) indicated they needed information for learning, 98 (34.0%) of the respondents indicated that they needed information for teaching, learning and research. Lastly, fifty-two (52) respondents representing 18.1% indicated teaching and research, as their reasons for needing information. From the table, it can be concluded that the respondents needed information mainly for teaching, learning, research and leisure respectively.

3.2.2 Period within teachers’ schedules when they source for information

Again, respondents were asked to indicate the point within their work schedules when they decided to source for information. Respondents were given the option to indicate more than one response. Table 4 presents the views of the respondents.

From Table 4, it can be seen that one hundred and nineteen (119), representing 41.3% of respondents indicated that they sourced for information when planning their lessons for students, one hundred and three (103), representing 35.8% of the respondents also indicated that they searched for information when

Table 2. Background information of the respondents

Parameters	Frequency	Percentages (%)
Total	288	100
Gender		
Male	186	64.6
Female	102	35.4
Length / period of Teaching		
0-11 Months	25	8.7
1-3 years	75	26
4-6 years	29	10.1
7-9 years	68	23.6
10 years and above	91	31.6
Age Range		
20-30 years	82	28.5
31-40 years	105	36.5
41-50 years	83	28.8
51-60 years	18	6.2
Educational background		
Degree (Non-Professional)	86	29.9
B. ED	143	49.7
M.ED/MA/MSc	59	20.4

Source: Field Data, 2019

Table 3. Reasons for the need of information

Reason for the need of information	Frequency	Percent (%)
For Teaching	143	49.7
For Research	35	12.2
For Learning	100	34.7
For Leisure	10	3.5
For Teaching, learning and research	98	34.0
For Research and learning	45	15.6
For Leisure, teaching and learning	68	23.6
For teaching and research	52	18.1

Source: Field Data, 2019

Table 4. Period within teachers schedules when they source for information

Period for sourcing information	Frequency	Percent
When planning lesson	119	41.3
When writing teaching notes	103	35.8
Updating oneself	66	22.9
When planning lesson, writing teaching notes and updating oneself	102	35.4
When planning lesson and updating oneself	78	27.1
When writing teaching notes and planning lesson	135	46.9
Updating oneself and when writing teaching notes	96	33.3

Source: Field Data, 2019

they needed to write their teaching notes, whilst sixty- six (66), representing 22.9% of the respondents indicated that they sourced for information when they wanted to update their knowledge. Also, one hundred and two (102) respondents, representing 35.4% indicated that they sourced for information when planning lessons, writing teaching notes and updating their knowledge. In addition, seventy eight (78), representing 27.1% of the respondents indicated that they sourced for information when planning lessons and updating their knowledge, one hundred and thirty five (135) respondents, representing 46.9% indicated writing teaching notes and planning lessons as the period in their work schedule when they sourced for information, whilst ninety six (96) respondents, representing 33.3% indicated that they sourced for information when they wanted to update their knowledge and when writing teaching notes.

3.3 Findings from Qualitative Analysis

The second part of the analysis has to do with the qualitative analyses of data gathered through interviews with heads of schools and officers in the library. It involved logical deductions instead of mathematical operations to decisively explain the data collected for the purpose of achieving the objectives of this study. This was done to gain in-depth understanding and to complement the views espoused by teachers on their information needs. This part has been organised into three (3) sections, namely; personnel training and development, quality of teaching and information provision and acquisition policy and procedure.

3.3.1 Personnel training and development

The findings revealed that none of the four officers of the school libraries who participated in the study had had any formal training in librarianship. It becomes difficult in a situation

like that to ensure an effective library management. They however mentioned that they had attended some workshops on library management. To ensure efficient information provision to teachers in second cycle schools, there should be well trained personnel to manage school libraries effectively. Training is among the management functions of human resource management and as a result, attention should be paid to it by every institution. The training of library personnel can be formal or informal. Even though training is not a major issue of the study.

3.3.2 Library use by teachers

The officers in charge of the various school libraries were also interviewed and the following were their responses. The officers of the libraries were asked whether the teachers did come to the library to look for information for their work. They responded positively by saying that: “yes, teachers did come to the library to look for information.”

As a follow up question, the officers were asked about the type of information the teachers came to look for. They said that: *the teachers came to look for information in relation to their subject areas.*

One of the officers responded that:

“The teachers came to the library mostly at the beginning of the term when they had to prepare notes for the new term. Others too came to obtain information to update what they had already and they basically seek for information that is in line with their subjects”

This means that the teachers visited the school library mainly to look for information that would help them teach and carry out their duties as teachers effectively.

3.3.3 Acquisition policy and procedure

According to the Shaw [26], an acquisition policy is the instrument which provides an institution with the direction for selecting and deselecting resources for a local collection. It is the backbone around which the institution can acquire materials in a systematic order. The policy thus, serves as a reference for staff when assessing potential acquisitions. The policy covers a whole range of issues that includes, acquiring materials, staff and capacity issues, funding, infrastructure and many others. The researchers sought to find out whether the schools under study had policies for acquiring books and other information materials in their school's library and to determine how the strategies under the policy were consistently applied. Interestingly, the officers in charge of the school libraries as well as the heads of the institutions under study said there was no such policy to guide the stocking of the school libraries. In the absence of such policies, the schools may not have the direction for acquiring materials for the libraries and this can result in the acquisition of materials that may not be relevant for the user community. The absence of acquisitions policies in all the schools provoked a follow up question as to what guided the stocking of the library.

Responses revealed that information materials for the school libraries were acquired based on the recommendations from teachers and heads of schools. These were usually books on high demand for teaching. They further stated that, they sometimes acquired some of the library materials from the Ghana Education Service (GES) through Ghana Education Trust (GETFUND), Non-Governmental Organisations (NGO's), and donations from philanthropists.

In order to ensure effective teaching and learning, there should be adequate budget to support information provision in the schools. Budgeting provides the means by which limited resources are utilised effectively. As a result, the heads of the schools under study were asked whether they had dedicated budget for acquiring the knowledge materials for their libraries. In response, all four (4) heads of the institutions under study said they did not have any special budget allocated for information materials. Materials needed by both teachers and students have to compete with other needs of the schools. This called for a follow up question as to how they were able to fund the purchasing of the information materials which were recommended.

Most of the heads were reluctant to answer the question. However, one headmaster willingly responded by indicating that:

"I rely on internally generated funds (IGF) for purchasing information materials that are recommended in consultation with the teachers".

4. DISCUSSION

The fundamental right of every teacher is to have access to information. Teachers produce, record, process, disseminate and utilize information for their teaching activities. Teachers play vital roles in shaping the destiny of students within their dispensation. It is therefore necessary for teachers to have access to every necessary information. This paper sought to find answers to the reasons for the need of information by teachers, the kind of information needed by teachers in order to adequately perform their duties and the point within their schedules when they decide to source for information.

Findings as shown in Table 3 revealed that teachers needed information for teaching (49.7%), for learning (34.7%) and for research (12.2%). The officers in charge of the school libraries also mentioned in the interview that the teachers were found looking for information usually at the beginning of the term when they had to plan and write their teaching notes. This re-emphasizes Mai [9] notion that the environment or social role a person plays drives his/her information need. The finding points to teachers' ability to recognize or identify their information needs in relation to curriculum contents. As a step in the right direction, teachers in second cycle institutions in the Lower Manya Krobo Municipality know when information is needed and thereby sourced for information to meet their varying needs (teaching, learning and research).

This affirms the findings of Bitso and Fourie [27] who attested to the fact that teachers had three major roles for which they often needed information. They were of the view that, teachers needed information for lesson planning, teaching methods, and students' evaluation. Mardis [20] in a similar study also mentioned that, the information needs of teachers were to gain the curriculum contents that were required in the classrooms. It can be said that teachers in the Lower Manya Krobo Municipality are up and doing in terms of information search in order to

improve upon their pedagogical content knowledge (PCK). This act will result in a better performance of teachers in the classroom and students can also learn effectively in order to attain good results.

It was further revealed that the point within teachers schedule when they sourced for information was when planning their lessons and when writing their teaching notes as indicated by 46.9% of teachers in Table 4. Surprisingly, only few teachers (22.9%) indicated that they sourced for information to update themselves. This was also attested to by the officers in charge of the school libraries. They mentioned that teachers mostly visited the library to source for information mostly at the beginning of the term when they were planning and writing their teaching notes. This finding implies that teachers in second cycle schools in the Lower Manya Krobo Municipality are very committed to finding factual information in the preparation of their lesson notes to teach. This confirms an earlier study by Khan and Shafique [21] who were of the view that college teachers mostly sourced information for lecture preparation, improvement of their personal competencies and current awareness. Passey [28] pointed out that within the total arena of knowledge handling, teachers were basically interested in subject knowledge and knowledge of the curriculum.

Similarly, Ahenkorah-Marfo, Teye [29] pointed out that faculty members of KNUST sought information for research work and for lecture preparation. This implies that teachers in the Lower Manya Krobo Municipality are very much interested in gaining knowledge and mastery in the various subjects they teach in order to be able to deliver. They have seen the need to look for more relevant information to update their teaching notes in the era of continuous technological change where information changes every second. So, when they realize that the information, they have is inadequate, they look for more relevant information to add up to what they already have. The finding points to the fact that teachers in the municipality under study understand the need to have access to information, produce, record, process, disseminate and utilize information for their teaching. It is for this reason that they try as much as possible to satisfy the basic responsibilities of teaching by going the extra mile to obtain every needed information that would ensure effective teaching. This confirms the observation by Julien [30] who viewed

information need as a recognition of the fact that one's knowledge is inadequate to satisfy a goal that he/she has. Consequently, the need then arises when the existing level of knowledge is incapable of dealing with a new situation.

This study is unique compared to other studies reported in the literature because by monitoring teachers' information needs over time, this study expands current research on the information needs of teachers in the second cycle institutions in Ghana using evidence-based data for improvements and decision-making. Considering the roles teachers and librarians play in the lives of students and the community as a whole, they need to be empowered with the right information.

5. CONCLUSION AND POLICY RECOMMENDATIONS

Information is seen as a very important resource to teachers since they impart knowledge to students. Considering the roles teachers play in the lives of students and the community as a whole, they need to be empowered with the right information. Teachers rely on information from several sources to plan their lessons, write their teaching notes, update themselves and many more. As a result, they do not need just any information but relevant information which must be timely, accurate and reliable. The paradox of the situation is that, the school system is unable to provide good quality and updated information for teachers. The information infrastructure needed to ensure access to information is unavailable. It is therefore incumbent on the government, the Ministry of Education (MOE), the Ghana Education Service (GES), second cycle school heads, and all stakeholders to ensure that proper information is made available to teachers since teachers can make and unmake an individual.

Conclusively, due to the unavailability of a common acquisition policy for the schools, each school should develop its acquisition policy since second cycle institutions are not uniform in terms of programmes. The policy can be developed by the information professional deployed to the school library, together with the head of the institution and the teachers. This will guide and direct the stocking of school's library. However, in the absence of an information professional, the heads of schools can contact the Ghana Library Association (GLA) and the Department of Information Studies, University of Ghana for direction.

Also, the heads of second cycle schools should make it a point to ensure that sufficient budgetary allocation is made for information materials so that the needed materials by the school library could be purchased. The heads of the second cycle institutions should incorporate in their annual budgets, funds allocated to information materials. The Ministry of Education should ensure that the funds allocated to information materials are used for their intended purposes. Conclusively, there should be provision of funds in the budgets to cater for seminars and workshops to train teachers on library use.

DISCLAIMER

Authors have declared that no competing interests exist. The products used for this research are commonly and predominantly used products in our area of research and country. There is absolutely no conflict of interest between the authors and producers of the products because we do not intend to use these products as an avenue for any litigation but for the advancement of knowledge. Also, the research was not funded by the producing company rather it was funded by personal efforts of the authors.

CONSENT AND ETHICAL APPROVAL

As per international standard or university standard guideline participant consent and ethical approval has been collected and preserved by the authors.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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Peer-review history:

*The peer review history for this paper can be accessed here:
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