

## Information Overload and the Role of Librarians in Information Dissemination in Tertiary Institutions in Cross River State, Nigeria

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### Abstract

*The advancement in “technology” has brought with it an information explosion causing excessive information everywhere. Hence, there is a huge amount of information resulting in information overload. Information overload is being experienced everywhere, in public and private organizations, institutions, government officers, information users, individuals and so on. This study, therefore, attempts to examine the causes of information overload and the role of librarians in information dissemination in tertiary institutions in Cross River State, Nigeria. Seventy-two (72) librarians from tertiary institutions in the state were used as the population for the study. A structured questionnaire was developed by the researchers for data collection. Data collected was analyzed using mean and standard deviation. The result revealed that receiving repetitive messages, an explosion in the volume of information sources, and the advent of technological innovation, among others, are the major causes of information overload. The study also revealed that SDI, e-SDI, referral services, and CAS are the major ways through which librarians can disseminate information promptly to users. The study further revealed that information filtering, and information withdrawal, among others, are the major strategies used by librarians in Cross River state to improve and remedy information overload. Based on the findings, it was recommended, among others, that librarians and information professionals should provide effective and innovative ways/strategies for tackling the problem of information overload.*

**Keywords:** *Academic libraries, Information dissemination, Information overload, Information, Role of librarians.*

### Introduction

With the advent of new technological innovations, the rate of information production has accelerated rapidly. Consequently, the exponential growth of information in our society today has given rise to information overload, and the ability of information users to be able to be accessed prompt, relevant and reliable information for daily use is a major issue in the information process. Information overload is the difficulty a person faces when

taking a decision in the presence of excessive information. Information is seen everywhere, on social media platforms, the internet and so on. The creation of new ideas necessitates the documentation of those ideas. People have been recording their thoughts, actions, ideas, and expressions in numerous ways. Thus, with the spread of literacy and the invention of new methods of recording one's thoughts and ideas, the body of knowledge created and accumulated by human beings started to expand slowly. Especially, as information about almost

anything is merely a click away. People are bombarded with tweets, texts, whats App, blogs, emails, reports, streams of articles on Facebook, TV and many more with the help of devices such as smartphones, tablets, laptops and so on [1]. [2] maintained that the rise in paper documentation has created the need for the development of information retrieval systems. Hence, information is easily created, disseminated, and shared with others, and this started putting pressure on people's limited resources and time. People are now faced with the problem of how to choose the information that best meets their needs. The inability of information users to manage and process information and decide on what kind of information they require, and get it as quickly as possible to solve their information needs has resulted in information overload.

Different authors, however, have given different definitions to define the term information overload. [3] states that there is no universally agreed definition of information overload – it can mean several things to different people, such as having more relevant information than one can assimilate, or it might mean being burdened with a large supply of unsolicited information.

Generally, information overload refers to a situation when the information user fails to process any more information because of its enormity in size and volume. [4] and [5] maintained that Information overload is having too much amount of information which is offered within a short time and is difficult to comprehend and solve. Information overload occurs when the nature of the information is unspecific, vague, new, complicated, or compressed. Also, [6] noted that Information overload is the state of stress experienced when the amount of information given exceeds the limit of the user's information processing capacity. [2] saw information overload as an overabundance of relevant information that cannot be assimilated or being burdened with large quantities of unsolicited information

which may be beneficial. In the same vein, Mayer sees information overload as a state that exceeds the limited human information-processing capacity. While [7] observed that, information overload is usually taken to represent a state of affairs where an individual's efficiency in using the information in their work is hampered by the amount of relevant and potentially useful information available to them.

The issues of information overload are multiple and complex. Hence, it is difficult to provide a simple "quick fix" solution. However, according to [8] there is no simple solution to information overload. Various solutions have been proposed to mitigate information overload. According to them, there includes the filtering strategy and the withdrawal strategy. The filtering strategy attempts to eliminate useless information from the source. Information is extracted to meet the interest of the person. While the withdrawal strategy minimizes the number of daily information sources to protect oneself from the bombardment of information from multiple sources. In the same vein, skimming or scanning in place of careful reading was seen by [9] as a strategy to cope with information overload. It is the duty of the librarian to see to it that only relevant and useful information is being made available to users, in that way, users will be able to get the exact information needed to solve their information needs. The librarians carry out these roles bearing in mind the interest of the information user, who is the focal point in information dissemination. Therefore, this study examined information overload and the role of librarians in information dissemination in tertiary institutions in Cross River State, Nigeria.

## **Literature Review**

[1] observed that, various studies have been conducted on information overload over the years to see the development of the field as well as to study the scholar behaviour towards the

influence of information overload. According to them, the problem of information overload has been receiving increasing attention. However, because we live in an information age where information is growing exponentially, media revolution has changed the world, not only in terms of access but also in the way and manner in which information is produced using different channels and mediums. Thus, people from all walks of life make their thoughts and ideas known through social media, thereby leaving the social space with different kinds of information. [8] saw information overload from a system point of view, according to them, information overload takes place when the amount of input to a system exceeds its processing capacity. In other words, information overload occurs when one is presented with an amount of information that exceeds one's cognitive capacity, and according to them, the term information overload is also known as infobesity or information anxiety. However, from a system point of view, information overload takes place when the amount of input to a system exceeds its processing capacity. It can also be perceived as when the flow of information is more than what we can be able to manage effectively. Thus, information overload occurs when one is presented with an amount of information that we cannot manage.

### **Causes of Information Overload**

The root problem of information overload is the dilemmas people face in the face of indecision, although computer processing and memory is increasing all the time, the people that must use the information are not getting faster. Information overload is an increasing problem both in the workplace and in life generally. Information overload is when you are trying to deal with more information than you are able to process and absorb. The result is either that you delay making decisions, or that you make the wrong decisions. It is a symptom of the high-tech age, which is too much

information for one person to absorb in an expanding world of technology. It comes from all sources, including TV, newspapers, and magazines as well as wanted and unwanted, regular mails, e-mails and faxes. The symptoms of overload are growth of incoming information, including electronic mail, an explosion in the volume of information sources and so on. [10] explained that there is information overload because more and more information is published every year, and this creates a problem for both users and managers of information. According to [11], the scenario of abundant or over-abundance of information could be traced to the 17th and 19th century when information became an important input to any human activity. In view of the need to send information compactly, the American Military during the Second World War resorted to the use of pictures through which a lot of information could be sent at a time with short notes than long prose. It was this approach that introduced visuals and audio into the information packaging system. However, [12] stressed that information overload has become a 'fashionable' problem today largely due to the way information and communication technologies have made it easier and easier to transfer information from one person to another and make available ever-increasing information resources in almost every field. The technologies include e-mail, voice mail, mobile phones, the internet, and organizational intranets and so on.

Also, [13] argued that the development of all kinds of communication support devices and software, such as Skype, Twitter, LinkedIn, Facebook, YouTube, iPhones, and iPads, provides additional sources of communication leading to information overload as well as the general openness of Web communication poses a problem for all information seekers, who face the task of looking for valuable facts in a vast sea of information. Hence, the lack of coordination in information technology planning is one of the problems resulting to

information overload. Although these issues are to a certain extent, being addressed at the technological level, [12] argued that technology development must go hand-in-hand with information policy. Stating that information policy is not a technological policy but a policy for information content, its management, its life cycle, and its relationship to the information needs of those working in the organization. Affirming this fact, authors like [14] and [15] focus on reducing information overload using different technologies. Hence, technology is blamed for causing information overload. They argued that technology merely provides the channels and mechanisms through which information is distributed or accessed. Affirming this view, [12] argued that the root cause of information overload is the stress created by modern management practices, which put peoples' job under threat, or which increase the general workload or otherwise create defensive behaviour. This leads to information behaviour that creates an overload on the individual. Confirming this, [8] pointed that the main sources of information overload are the internet, wireless communication technologies, TV, and newspaper. [16] also explains that there is information overload because more and more information is published every year, and this creates a problem for both users and managers of information.

One method for addressing the problem of information overload, according to [17] is through e-Selective Dissemination of Information (e-SDI). Accordingly, it is a system that attempts to facilitate users' information retrieval and filtering. The primary purpose, according to them, is to provide researchers with the latest publications on a specified topic. It is the information alerting service designed to keep individuals informed of new developments in their particular fields of interest by providing at regular intervals a listing of citations. The goal of this method is to deliver new information to users via library blog, library website, social media, text

messaging, emailing and so on. Also, O'Neil, (2001) noted that e-SDI could give great benefit to users like saving the users time and effort and allowing them to concentrate on the specific information which relates to their interests. However, [17] suggested that e-SDI could give great benefit to users like saving the users time and effort and allowing them to concentrate on the specific information which relates to their interests. In the same vein, [19] emphasized the importance of this method to the librarian which will help solve the problems of information seekers by providing specific information that is needed. Accordingly, he outlined some objectives which include:

1. Providing current information about a predetermined area of discipline.
2. Receiving, scanning, and providing the right users the information at the right time.
3. Notifying users of the current information relevant to users' interest.
4. Using various resources to locate relevant information published elsewhere in the world.
5. Scanning current materials such as journals, current awareness bulletins and other significant resources.
6. Saving users' time.
7. Selecting relevant documents in the users' notice.

[20] noted that librarians should be more proactive in providing access to users using (CAS) current awareness services by keeping them aware of the current trends and development in their areas. Furthermore, [21] explained the importance of CAS to users. He maintained that CAS is a system of service which ensures that all the current information likely to be of interest to users is made available to them at the right time and in a convenient form. Also, the use of (SDI) selective dissemination of information in providing specific information to information seekers is a good method of getting information across to users. Consequently, [22] stated that, in this technological era, the role of information center

and information specialists has changed because of the rapid advancement of technology where users can access information anywhere and anytime. [23] noted that SDI strives to provide users with updated information that is related and applicable to their field of specialization. Nonetheless, [24] observed that Selective Dissemination of Information (SDI) was considered a specific information service used to overcome information overload in the 70s but in the 90s, with the emergence of the internet, the problem of overload began to be seen as a major problem.

### Objectives of the study

The objective of this study is to examine the role librarians play in information dissemination in tertiary institutions in Cross River State, Nigeria. Specifically, the study seeks to:

1. Examine the major causes of information overload in tertiary institutions in Cross River State, Nigeria.
2. Ascertain ways through which librarians can improve information dissemination in the midst of overload.
3. Suggest strategies used by librarians to improve and remedy information overload.

### Research Questions

The following research questions were raised to guide this study:

1. What are the major causes of information overload?

2. What are the ways through which librarians can disseminate information promptly in the midst of overload?
3. What are the strategies used by librarians to improve and remedy information overload?

### Methodology

The design adopted for this study was a survey research design. The population of the study consists of 33 librarians from the University of Calabar, 14 from Cross River University of Technology, 5 from the college of Education Akampa, 13 from Federal College of Education Obudu (FCE), 5 from college of Health Technology and 2 from Institute of Technology and management Ugep bringing the total population to 72 (seventy-two) librarians. The census approach was used due to the small size of the population. Data was collected using a questionnaire instrument, and the collected data was analyzed using descriptive statistics (mean and standard deviation). The questionnaires consist of two sections; sections A and B. Section A was designed to collect information on the demographic data of the respondents, such as age, sex, qualification, institution, and years of service. At the same time, section B consists of items answering the research questions. Modified 4-point likert-type scale responses of Strongly Agree (SA) Agree (A), Disagree (D) and Strongly Disagree (SD), respectively was used. 72 items were distributed, but only 69 items were returned and found usable.

**Table 1.** Population Distribution of Librarians in Tertiary Institutions in Cross River State

S.N\o	Name of Institutions	Institution's location	No of library staff
1	University of Calabar library	Calabar	33
2	Cross River University of Technology library	Calabar	14
3	Federal College of Education library	Obudu	13
4	College of Health Technology library	Calabar	5
5	Institute of Technology and Management library	Ugep	2
6	College of Education library	Akamkpa	5
<b>Total</b>			72

Source: From the librarian's office of the various institutions (2021)

## Results and Discussions

The results of the study were obtained from the research question answered.

### Research Question 1

What are the major causes of information overload?

**Table 2.** Mean response and standard deviation of respondents on the major causes of information overload

S/N	Item	Total	N	$\bar{x}$	C.M	SD	Remark
1	The difficulty in processing the right information needed per time	224	69	3.24	2.5	1.02	SA
2	Inability to decide which information to use and manage	87	69	1.26	2.5	0.85	D
3	Receiving repetitive messages	258	69	3.73	2.5	1.06	SA
4	Explosion in the volume of information sources	235	69	3.40	2.5	1.03	SA
5	The advent of technological innovations	248	69	3.59	2.5	1.04	SA
6	Inability to process and absorb information quickly	174	69	2.52 AV=2.93	2.5	0.92	D

Where:

- N = number of respondents
- $\bar{x}$  = mean
- C.M = criterion mean
- SD = standard deviation
- AV = average mean

The result in Table 2 shows that a greater percent of respondents Strongly Agreed that they receive repetitive messages, with a mean value of (3.73) which is greater than the Criterion mean of 2.5 on a four-point scale and the standard deviation of 1.06. The result implies that receiving repetitive messages is a cause of information overload. The result also revealed that the advent of technological innovations, difficulty in processing the right information per time and inability to process and absorb information are causes of information overload with the mean scores of (3.59), (3.40), (1.04), (1.03) and (1.02) respectively. The study further revealed that

only one area of the causes of information overload received a low mean score of (1.26) which was below the criterion mean value of (2.5) with a standard deviation of (0.85). This implies that a fewer number of respondents Disagree that inability to decide which information to use and manage is a cause of information overload.

However, judging from the average of 2.95, which is greater than the criterion mean value of 2.5, it implies that all these variables causes information overload in tertiary institutions in Cross River State, Nigeria. Also, the standard deviation of the respondent ranges from (0.85) to (1.06). Hence, the respondents were not too far from each other in their responses.

### Research Question 2

What are the ways through which librarians can disseminate information promptly in the midst of overload?

**Table 3.** Mean Response and Standard Deviation of Respondents on the Ways Librarians can Disseminate Information Promptly

S/N	Item	Total	N	$\bar{x}$	C.M	SD	Remark
7	Through the use of Current Awareness Service (CAS)	208	69	3.01	2.5	1.01	SA
8	Through the use of referral services	223	69	3.23	2.5	1.02	SA
9	With the help of Selective Dissemination of Information (SDI)	241	69	3.49	2.5	1.03	SA
10	Through abstracting and indexing current periodicals	154	69	2.23	2.5	0.91	D
11	By organizing and arranging bibliographies.	168	69	2.43	2.5	0.92	D
12	Through electronic Selective Dissemination of Information (e-SDI)	222	69	3.21	2.5	1.01	SA
				AV= 2.93			

Where:

- N = number of respondents
- $\bar{x}$  = mean
- C.M = criterion mean
- SD = standard deviation
- AV = average mean

Table 3 explained the ways through which librarians can disseminate information promptly in the midst of overload. The result revealed that a greater number of respondents strongly agreed that SDI, e-SDI, referral services, and CAS are the major ways through which librarians can disseminate information promptly, with the mean score of (3.49), (3.21), (3.23) and (3.01) respectively. This result revealed that the calculated mean value is greater than the Criterion means the value of 2.5. This implies that librarians in Cross River state disseminate information through the SDI, e-SDI, CAS, and referral services. Also, their standard deviation scores which range from

(0.91) to (1.03) shows that the respondents were not too far from each other in their responses. Although, a few number of respondents Disagreed to the fact that abstracting and indexing current periodicals and organizing and arranging of bibliographies are not part of the ways through which librarians in Cross River state disseminate information promptly, with the mean score of (2.43) and (2.23), which is below the cut-off point of (2.5). However, given that the average mean of (2.93) is greater than the criterion means, the value of 2.5. The result indicated that librarians in tertiary institutions in Cross River state used the above-mentioned ways in disseminating information promptly to users.

### Research Question 3

What strategies are used by librarians to improve and remedy information overload?

**Table 4.** Mean Response and Standard Deviation of Respondents on the Strategies by Librarians to Improve and Remedy Information

S/N	Item	Total	N	$\bar{x}$	C.M	SD	Remark
13	I can get the information I need using the filtering strategy	210	69	3.04	2.5	1.01	SA
14	I use the withdrawal strategy to process information	196	69	2.84	2.5	0.95	A
15	I only extract and process information I need per day.	242	69	3.50	2.5	1.05	SA
16	I process and manage only relevant information for users	252	69	3.65	2.5	1.08	SA
17	I use search engines to get the information I need.	247	69	3.57	2.5	1.05	SA
18	I use the catalogue method to get information	154	69	2.27	2.5	0.84	D
				AV=3.15			

Where:

N = number of respondents

$\bar{x}$  = mean

C.M = criterion mean

SD = standard deviation

AV = average mean

Table 4 presents the possible strategies used by librarians to improve and remedy information overload. From the result in table 4, it shows 5 strategies used by librarians to improve and remedy information overload with a mean rating between (2.84) and (3.65) which is above the criterion mean value of (2.5) on a four-point scale. The result revealed that information filtering, information withdrawal, information extraction, processing of relevant information and the use of search engines are the major strategies used by librarians in Cross River state to improve and remedy information overload.

The result also showed that the use of the catalogue method to get information to users had a low response rate with a mean score of (2.27) which is below the criterion mean of (2.5). This indicates that, librarians in Cross River state do not use catalogue methods as a strategy to improve and remedy information overload.

The result further revealed that the average mean score of (3.15) is greater than the criterion score of (2.5). This indicates that the strategies used by librarians in tertiary institutions in Cross River state are significant. Also, the standard deviation that ranges from 0.84 to 1.08 indicated that respondents were not too far from each other in their responses.

## Discussion of Result

Based on the result of the study, it was revealed that the role of librarians in information dissemination using various ways and strategies in disseminating information to users is significant.

Research question one sought to examine the causes of information overload in tertiary institutions in the Cross River States. The result showed that the receiving repetitive messages, an explosion in the volume of information sources, the advent of technological innovation, difficulty in process information and inability to process and absorb information are the major causes of information overload. Given the average mean of 2.95, which is greater than the criterion means value of 2.5, the result revealed that all the variables cause information overload in tertiary institutions in Cross River State, Nigeria. This finding is in line with the studies



of [8] who observed that the main sources of information overload are the internet, wireless communication technologies, TV, and newspaper.

The result on research question two sought to ascertain the ways through which librarians can disseminate information promptly in the midst of overload in tertiary institutions in the Cross River States. The result revealed that a greater number of respondents strongly agreed that SDI, e-SDI, referral services, and CAS are the major ways through which librarians can disseminate information promptly in tertiary institutions in Cross River State. The findings confirm with the studies of [17], who observed that is through e-Selective Dissemination of Information (e-SDI) is a way of addressing information overload, and [20] noted that librarians should be more proactive in providing access to users using (CAS) current awareness services, by keeping them aware of the current trends and development in their areas. Research question three sought to determine the strategies used by librarians to improve and remedy information overload. The result revealed that information filtering, information withdrawal, information extraction, processing of relevant information and the use of search engines are the major strategies used by librarians in Cross River state to improve and remedy information overload. This implies that the strategies used by librarians to improve and remedy information overload are significant, judging from the average mean score of (3.15), which is greater than the criterion mean score of (2.5). This indicates that the strategies used by librarians in tertiary institutions in Cross River state are significant. This study is in line with the study of [8], who proposed a simple solution to information overload, using the filtering strategy and the withdrawal strategy.

## **Conclusion**

The rapid advancement in global information resources and technology has made information

growth an impossible task to control. Information overload is seen and experienced in every organization in Nigeria. Based on the result of the study, it was revealed that the major causes of information overload are receiving repetitive messages, explosion of information sources, advent of technological innovations among others. The result also revealed that librarians used various ways to disseminate information promptly in the midst of overload. The study further revealed that librarians in tertiary institutions in Cross River State uses various strategies to improve and remedy information overload. However, to face the challenges of information overload, librarians and information professionals have to enhance their skills on managerial, technical and electronic media to provide flexibility, ease of use and access. Also, it is the role of a librarian to provide effective ways for information users to be able to access information effectively and efficiently. The role of librarian is to integrate information systems and services using the most appropriate resources, ways and strategies through which users can access information promptly.

## **Recommendation**

The following recommendations were made:

1. Librarians and information professionals should provide effective and innovative ways/strategies for tackling the problem of information overload.
2. Librarians should filter out extraneous information and only focus on the critical information which will be relevant for their users.
3. Librarians should be equipped with key skills and competencies which will help them strategized ways of disseminating information to users promptly.

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## Conflict of Interest

There is no conflict of interest.

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