

Information Overload: Causes, Symptoms, Consequences and Solutions

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Abstract - This paper looks at the concept of Information, overload and information overload respectively, a brief history of how information overload came into existence. It also outlined some salient factors that are responsible for or causes information overload and they entail the followings as enshrined in the study: Multiple sources of information; the availability of too much information; the difficulty in managing information; the information's irrelevance or insignificance; The inability to comprehend the material due to a lack of time. Furthermore, massive amounts of fresh information are constantly being created on a daily basis; pressure to create and compete in the provision of knowledge, particularly in the academic setting. The lack of complexity and nascent simplicity of creating, duplicating, and sharing information online, leading to a quantity over quality effect in many institutions and businesses; the absence of complexity and nascent simplicity of creating, copying, and sharing information online; The exponential development of information delivery methods, such as radio, television, print media, websites, e-mail, mobile telephony, RSS feeds, and so on; the growing weight of historical data available to us; a plethora of inconsistent, contradicting, and simply wrong information; the lack of clear structure in groups of information and poor clues as to the relationships between those groups; the lack of simple procedures for quickly processing, comparing, and evaluating information sources; the lack of clear structure in groups of information and poor clues as to the relationships between those groups. The study pointed out some symptoms that can be seen as evidence or signs indicating that there is the presence of information overload thereafter, it brought out some consequences of information overload specifically to an individual and collectively to an organization. In this paper the researcher ended the work by outlining some remedies on how to combat information overload since it has become a matter that has come to stay.

Keywords: Information, Overload, Information Overload, Causes, Consequences, Solutions

I. INTRODUCTION

Information is what rules the world today; it is likened to a key that has the ability to open all doors without any restriction. No wonder it is been considered by scholars as the fifth factor of production. Whoever that possess' it is likened to a powerful nation such that he or she is seen as a world power who decides the fate of other nations as the case may be. Pavel V. L. *et al.*, (2018) posited that there has been several studies by several scholars that information is currently seen as the fifth factor of production and is the most essential of them because its serves a vital role to all the other factors of production that includes entrepreneur.

We are currently drowning in a flood of information in our modern society. Every time we log on to the internet or turn on the television, we are bombarded with news, perspectives, opinions, facts, and information. Weary and bewildered in this never-ending repetitious environment, we are bombarded with information 24 hours a day, seven days a week. As a result, learning the art of sorting the wheat from the chaff and leading productive lives that are meaningful and deep is critical for professionals, students, and anybody who wishes to focus and concentrate. Knowing what is happening all around the world in real time and uninterrupted, for example, would cause mental fatigue and exhaustion, which would drain productivity and cause a lack of focus. It is not necessary to keep up with all of the news and events on Twitter, Face book, blogs, and television all of the time. Unless one develops the habit of separating what one wants from what is available, one is likely to experience information overload, which refers to the massive amount of information that we are continually assaulted with. Every dick and harry now have access to upload and disseminate information thanks to technologies such as the internet and the world wide web, especially in this era of web 2.0 with sites like twitter, Instagram, Face book, wikis, and blogs. Most of the uploaded information are not censored before they get online or to the end user. In a situation where there are series of things to choose from, choice making under this circumstances becomes a problem, so also is the issue of information overload. The internet, especially with the inception of the World Wide Web has paved way for the internet to be flooded with all sorts of information that are not scrutinized. Therefore, this subject matter called information overload will be looked into critically in order to arrive at a better understanding of this study.

II. THE CONCEPT OF INFORMATION

The saying by several persons all over the world that "information is now the in thing", "information rules the world", or we are in the "age of information" has become every household statement due to the role that information plays to humanity all over the world. Therefore, what then is information? According to Madden A. D. (2000) citing McCreadied and Rice (1999) the concept information was succintly defined in four perspectives which are,

1. *Information as a Representation of Knowledge:* information was viewed as a reservoir of knowledge in

man's early stages. Books were traditionally used as a storage medium, but electronic media are becoming increasingly significant.

2. *Information as Data in the Environment:* Information can be derived from a variety of environmental stimuli and phenomena, not all of which are meant to “send” a message, but which can be instructive when understood correctly.

3. *Information as part of the Communication Process:* People, not words or data, are the source of meaning. In the processing and interpretation of information, timing and social factors play a vital influence.

4. *Information as a Resource or Commodity:* Information is sent from sender to receiver in the form of a message. The communication is interpreted by the receiver in the same way that it was intended by the sender. As information is distributed or traded, there may be added value.

The researcher at this junction will put forward that the concept information can be regarded as the end product of a processed data from its raw form to a meaningful result that can be understood by the receiver that happens to be the recipient of the message sent by the sender. Every information that is relayed to anyone has a context that it possesses that aids the interpretation and they are as follows.

- a. The sender context
- b. Message context
- c. Receiver context

a. *The Sender Context:* this is the context where the raw data originates from. This is the conceiver of what is to be transmitted to the receiver.

b. *Message Context:* this is the means by which the raw data is transmitted from the sender to the receiver. It could be in written, spoken, facial expression as the case may be.

c. *Receiver Context:* this is the context that is responsible for receiving and interpreting the data so far received in order to make a meaningful result which will become the information after it has been processed accurately. After ascertaining the concept information, the next thing to consider in this study is the concept overload.

What then is the meaning of “overload” as a concept?

The term overload is a compound word that comprises of two different words that can stand alone when it comes to usage in English Language. First of all, the term *over* will be looked into simply means according to the Oxford dictionary a state where something is more than what it ought to be while *load* on the other hand is regarded as a large amount of items that is pressing on something or somebody. Therefore, the concept overload will be defined as a state of putting so much weight on something or somebody. To this end, the term “*information overload*”

according to Eppler & Mengis (2004) it is a state that occurs when information flow exceeds information needs. Similarly, in a study conducted by Sadiku M. N. O. *et al.*, (2016) Information overload happens when there is too much information and a finite ability to digest it, according to the notion. At this juncture, the concept information overload will be likened by the researcher to a man or woman who has loaded himself or herself with several junks which has made the individual to become obesity that he or she can no longer move his or her body freely the way he or she ought to. The requirement for documenting of new ideas in today's society is necessitated by the need for competition and the need to fulfill standards.

Since the dawn of time, people have been recording their ideas, activities, and expressions in a variety of ways. The body of knowledge created and acquired by humans began to expand with the development of literacy and the invention of new techniques of recording one's thoughts and ideas.

III. BRIEF HISTORY OF INFORMATION OVERLOAD

According to Interaction Design Foundation (n.d) Bertram Gross, a political science professor at Hunter College, popularized the term “information overload” in a 1964 paper. Organizational Management is a term used to describe the process of leading and managing a group of people.

However, Alvin Toffler, an American writer and futurist, popularized the term in his book “Future Shock” in 1970. According to Gross, information overload is defined as follows: “Information overload happens when a system's processing capacity is exceeded by the amount of data it receives. The cognitive processing capacity of decision-makers is fairly limited. As a result, when there is an abundance of information, decision quality is likely to suffer.” According to the authorities mentioned in this brief history, the concept of information overload has been around for a very long time. It predates the expression, and even in the 3rd (or possibly 4th) century BCE, the writer of Ecclesiastes 12:12 complained that “there is no end to making books.”

There have been complaints of knowledge overload throughout history, particularly during the Renaissance and the Industrial Revolution. However, the birth of the information era, along with access to sophisticated and low-cost automated data collecting, has provided us with more information than at any other time in history. Managing information in everyday life is no longer an issue that only the wealthy encounter; it is a problem that affects almost everyone.

Every day, we are bombarded with data from social media, e-mail, websites, Smartphone apps, and other sources.

IV. STATEMENT OF PROBLEM

Overload of information has become everyday thing all over the world since the explosion of information and technology. With the growth and development in technologies, it has opened the door way for the rapid flow of information more than the way it used to be in the early time therefore it pose as a problem to process them or take a decision. Without a question, today's workplaces are bombarded with massive amounts of data from ever-increasing sources.

The problem is exacerbated by modern trends toward globalization. The Internet, wireless communication technology, television, and newspapers are the primary sources of information overload. It shows up in the form of a mountain of paperwork, a flood of emails, numerous phone calls, and exposure to multiple sources of information.

Overloading one's mind with information can lead to bad judgment, losing track of things, and losing focus. This document was written with the goal of identifying the origins of information overload, symptoms of information overload, and repercussions of information overload, as well as providing realistic strategies to manage the flow of information overload.

V. OBJECTIVES OF THE STUDY

The objectives of the study is to

1. Determine the sources of information overload.
2. Ascertain the symptoms of overloaded information
3. Reveal the consequences of information overload
4. Recommends possible solutions to information overload

VI. CAUSES OF INFORMATION OVERLOAD

There is not a given event that happens in life that does not have a reason why it happens. No wonder there is a saying that there is no smoke without fire so also is the case with information overload. There is no way this can occur if there are no factors responsible for it. Outlined below are some of the reasons and factors why there is the existence of information overload in our world today as it was rightly given by HoqK M G (2014) citing Eppler and Menjris (2002) in a research they conducted on the concept information overload which are as follows.

1. The presence of information from several sources;
2. The availability of an excessive amount of data
3. The information management is challenging;
4. The information's insignificance or irrelevance;
5. The inability to comprehend the material due to a lack of time.

Subsequently, of all, there are nearly as many causes of information overload as there are bits of data at our disposal. However, in this contemporary time, the following

are some of the most common causes of modern information overload.

1. Massive amounts of new data are constantly being created on a daily basis.
2. In many institutions and sectors, the pressure to create and compete in information provision, particularly in the academic setting, has resulted in a quantity over quality effect.
3. The lack of complexity and the emergence of simplicity in the creation, duplication, and sharing of information on the internet.
4. The exponential growth of information delivery channels such as radio, television, print media, websites, e-mail, mobile telephony, RSS feeds, and so on.
5. The growing amount of historical data that is available to us
6. A lot of inconsistent, contradicting, and just plain wrong information
7. There are no easy techniques for swiftly analyzing, comparing, and assessing data sources.
8. There is no apparent structure in information groupings, and there are few indicators as to how those groups are related.

From the perspective of an organization, information overload occurs when the quantity of input to that organization goes beyond its handling ability. It may be viewed as such when the flow of information exceeds what can be efficiently managed. In other words, information overload occurs when a person is confronted with a large amount of data that exceeds their cognitive abilities. Infobesity or information anxiety, are terms used to describe information overload.

Also, Rajabzadeh, A. *et al.*, (2011) in a study they conducted, it was postulated that information overload is caused in the following areas: as an individual, the limitation of information processing capacity; lack of an organizational skills; useless utilization of time; willingness to do all the work without assistance.

VII. SYMPTOMS OF INFORMATION OVERLOAD

Information overload is likened to a man who has over feed himself with so much food that he cannot breathe conveniently and successfully, which is noticed by some indices pointing to the fact that the person is over fed. Similarly, is the case of information overload, when this situation occurs, there are indices or symptoms that show that there is the presence of information overload. Giving below are some of the indices or symptoms showing the presence of information overload. An American psychologist Stanley Milgram (1970) posited some overload warnings for persons living in huge cities, in particular. He identified six common reactions to constant exposure to a significant information overload in that study, which are as follows.

1. Each input is given less time.
2. Low-priority inputs are ignored.
3. Redrawing of boundaries in specific social transactions in order to shift the responsibility of overload to the other person in the transaction.
4. The use of filtering devices to reduce inputs.
5. The reluctance to receive communication.
6. The establishment of specialized institutions to absorb information that would otherwise overwhelm a single person.

Additionally, Rajabzadeh, A. *et al.*, (2011) stated definitely that information overload is manifested by the symptoms described below.

1. Lack of concentration due to a short-term memory overload.
2. Hurriedness is a mental condition in which a person believes they must race against the clock.
3. Multilateral behavior, which is typically the outcome of either too much or too little production power.
4. Anger is quickly irritated due to a bad mood, sensitivity, or being easily irritated.
5. Too much motivation or familiarity causes the brain to malfunction or cease working.

All these are signs indicating the presence of information overload and must be considered due to the fact that information overload is detrimental to mankind if not properly controlled or handled this bring us to the next aspect of this study which has to do with the ramifications of information overload

VIII. CONSEQUENCES OF EXCESSIVE INFORMATION

The presence of information overload has a lot of dangers that it place upon humanity and it usually cause fatigue to the bearer of the weight that the excesses of these information imposes.

Elson (2015) identified a number of consequences of information overload as it is stated rightly below.

1. When a huge amount of information is available, one tends to know less since the quantum of what is known is trivial in comparison to the available information.
2. Excessive information can cause brain freeze or exhaustion.
3. The existence of information overload leads to addiction in the sense that the individual becomes overly reliant on sources such as the internet, resulting in a loss in productivity in the workplace, which is damaging to the organization's growth and development.
4. Mental ability is impaired in this situation since almost all information needed by a user to make a decision is available in vast quantities from a variety of sources.

5. The vast amount of information available, particularly unfiltered information causes information to become tainted, resulting in poor decision-making.
6. This instills in the individual the habit of dwelling on the past and the immediate future while neglecting the present.

From the foregoing, you will discover that the presence of information overload is detrimental in the sense that the person in question will be overwhelmed with myriad of information resources from which decision making will be difficult and the person in question who is overwhelmed with information overload finds it very difficult to utilize his or her medulla oblongata to initiate ideas in proffering solution to a given problem in an organization due to the fact he or she feels that the internet has readily available resources at his beck and call thereby breed in laziness.

As a result of the preceding, you will see that this notion has a significant impact on the library profession, as libraries and information centers are already striving to satisfy the need to serve an expanding number of readers within limited resources. Budget, are also being harmed by information overload, because they are obliged to review a large number of information materials every day in order to pick the best resources - putting additional strain on their time and efforts.

The act of identifying and indexing these growing numbers of information resources, on the other hand, poses a new challenge. Many people seek advice from librarians on whether or not to use a particular piece of information or information source. Due to the inflow of information from numerous sources, library staff is finding it difficult to respond appropriately to the questions posed by users. Furthermore, correctly organizing all of this data is a difficult task. Information overload could easily overwhelm professionals who lack proper information management and bibliographic control skills.

Adding to Hjørland's observations, Kadiri (2012) asserts that libraries are particularly vulnerable to the consequences of information overload due to an explosion of "publications" or "papers" defined by more pages of professional journals and books, which are expanding exponentially. He believes that the 'publish or perish' mentality among academics and researchers is largely to blame for information overload. Indeed, many today's academics appear to be in a battle to "outwrite" and "outpublish" colleagues and other academics in order to establish their own dominance - resulting in the release of an increasing number of books, essays, reports, and blogs. Furthermore, many articles, particularly in science and technology, quickly lose their relevance due to their ephemeral character, becoming a burden on an already bloated and unmanageable library collection. All of these factors are exacerbating the problem of information overload.

IX. REMEDY/SOLUTION TO INFORMATION OVERLOAD

There is no existing problem that does not have solution no matter how that problem might seem in the eyes of the beholder; there is definitely a way out. At this point, the researcher's goal is to come up with some practical solutions or remedies that can help to alleviate the problem of information overload, either for those who provide the information (Librarians, Information Scientists, etc.) or for those who are on the receiving end (information seekers, Library users)etc. Individuals and organizations are looking for solutions to this multi-dimensional dilemma as the intensity of information overload grows. Libraries and information specialists are at the forefront of these initiatives since they are the ones who have to bear the brunt of the problem as information managers. Every day, new information is added to the current body of knowledge, making it increasingly difficult for individual information seekers and information professionals to identify, locate, and retrieve information.

According to IDC's groundbreaking study on information professionals, many information workers are involved in time-consuming and wasteful tasks that can squander up to 20 hours per week per worker. Reformatting from multiple formats to a single document format; searching for but not finding information; recreating content; publishing the same content to different audiences using different applications; moving documents from one format to another; and acquiring archived records with little or no automation are all examples of these tasks.

Feldman (2005) asserted that if information workers' information management abilities were improved, they would be able to complete more work in less time and better meet users' information needs. Some experts stated that in order for information users and information professionals to effectively tackle the issue of information overload, they must ensure that they are well-versed in information literacy expertise. (ALA 1989) is a group of librarians who outlined some necessary factors that must be taken into cognizance which are as follows.

1. An information literate person should be able to assess the amount of data required.
2. Ensure that they have effective and efficient access to the information they require.
3. Ability to critically assess information and its sources
4. Should make an effort to assimilate certain facts into one's knowledge base
5. Should be able to properly use knowledge to achieve a certain goal
6. Should be aware of the economic, legal, and social implications of information use, and should be able to acquire and use data in an ethical and lawful manner.

In a study he conducted, Kazi Mostak Gausul Hoq (2014) believes that if a person can develop at least a moderate

degree of information literacy, he or she will be able to access relevant information from a variety of sources and use it intelligently for problem solving. This is admittedly not a simple undertaking, and even the most seasoned information hunters may be overwhelmed by the vast amount of data available. However, as one's information literacy abilities are developed, upgraded, and refined, it will become simpler to deal with information overload in the long run.

Simpson and Prusak (1995) also emphasized that the information provided by information professionals should be of high value and delivered in the most convenient style and format possible to fight information overload.

Another important issue in this era of information communication technology boom, which has resulted in the emergence of information overload, is the requirement for information professionals and users to develop web searching abilities. Because searching skills are a necessity for dealing with information overload, any user who is familiar with them is more likely to get more relevant information from the web than someone who is not.

Information overload can also be addressed, according to Bawden and Robinson (2008), if the following approaches are properly followed.

1. Organize your time,
2. Management of the desk
3. Analytical thinking
4. Presentation of information
5. Improved information organization (including effective metadata use), and
6. Cultivation of a reasonable approach to personal data management.

Traditional tools will go a long way if they are properly arranged, utilized, and applied. Catalogues, indexes, bibliographies, and other tools, when utilized wisely, can assist an information seeker in swiftly locating and retrieving the information he or she requires. More educational and skills-development programs in this area, as well as the improvement of library instruction, user orientation, and reference services, could help twenty-first-century information consumers successfully deal with information overload.

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