The Effects of the Information Explosion on Information Literacy

Introduction

The sheer magnitude of information that is coming available to people on a daily bases is unsettling in my opinion. The information explosion is largely going unchecked and our society is being given helpful and quickly accessible knowledge, but at the same time drowned in false and harmful lies. The eruption of readily accessible information has led to increase productivity through the sharing of ideas in some areas and caused unchecked mass hysteria in others. In this paper I will talk about the effects of today’s information explosion and how it is specifically affecting information literacy. I will explore the meaning of the term information explosion, more importantly what it entails and its effects, followed by what information literacy is, and how it is changing to meet the demands of today’s sudden increase of information and technology.

Information Explosion

According to the Rudds’ article titled The Impact of Information Explosion on Library Users: Overload or Opportunity. ‘The term information explosion should be used only to describe an extreme increase in the supply of information to library users.’ (Rudd & Rudd, 1986) While I am not narrowing my affected area to only library users, I am including all information users, I do agree with the general concept of the definition they use. In the last decade we have seen an extreme increase in information ready for consumption on just the Internet alone. In less than .30 seconds Google can retrieve over 900,000 results for the word aardvark. Over a decade ago if someone wanted to know about aardvarks they would have to make a trip to the library, a cultural center, or a zoo. It would take them weeks, if not months to compile such a list. And some of that information wouldn’t even exist, now they can watch a video from their computer and conduct in depth research without ever leaving home. There’s even an increase in self-publishing companies lowering their rates so that anyone and everyone can write a book and have it published. Not to mention the ever growing popularity of the electronic books, or e-books. It is reasonable to say that the information increase has been from digital technology.

With rapid development of digital information technology and the Internet, individuals or groups ability to create and disseminate information in an un-mediated manner, to self-publish has exploded. The ability to create and share information and knowledge is literally at our finger tips. (Branin, 2009) The information explosion is in a way a never ending circle, the more information there is out there, the more people are going to be productive and create information spurring more information to be dispersed.

Cause and effect of information overload.
In addition to the benefits from the sudden increase of new information created by the information explosion a problem has surfaced to the attention of those that study the information sciences; information overload. Information overload is not a new concept, neither is the thought of an information explosion. In the 15th century, Gutenberg’s press was credited with propagating the Renaissance culture. The Renaissance was all about the discovery of new ideas and information. The printing press allowed explorers, inventors, social commentators, and other idea holders the ability to share these discoveries to a wider audience. I think the difference now than what was before, is the speed at which the information can be gathered and shared. Many religious leaders of the time believed this 15th century explosion was dangerous to moral society by making information available to the masses who had not been shown how to discern between morally right and morally wrong writings. To these leaders, the printing press created an information overload on issues of morality.

The Ruds go on to talk about information overload, which would be over-exceeding the maximum amount of information actually acquired by a processing system. In the above example the processing system was the church, which overloaded and lost much of the control it once held over the population. It could no longer contain information within the walls of the religious scholars to be distributed in an orderly and controlled manner. In today’s terms it is the information seekers who are suffering from information overload. Vast amounts of information is available to the individual, too much so to process and retain.

The Ruds believe that three things will come of overloading your internal processing system. First you might experience an overload effect, becoming confused, tuning out some information, there could be a decrease in the quantity and/or quality of the information you manage to output, and in rare case you could have a system wide shutdown. Other information seekers might have an increase in quality and/or quantity of information output, and a slim group would have no discernible change (Rudd & Rudd, p2-3). These last two groups of information seekers come out of the potential overload relatively unscathed.

I can personally attest to the symptoms of information overload. While researching the term information overload I was bombarded with information. A simple keyword search in a journal database resulted in over 800 results for the term information overload. I had no time nor inclination to read through each one but after I had wading through a handful of them I found myself more confused about the topic than when I started. I started having to reread some articles because I hadn’t managed to retain anything and the notes I was taking were starting to become less coherent. After a few hours of this I felt like my mind was starting to shut down and refusing to take in any more new information about information. How ironic?

What is Information Literacy?

So, what skills are needed to survive the bombardment of information, to find relevant and meaningful resources amidst all the clutter and confusion? Those who have done research on the epidemic of information overload believe the best recourse is information literacy. According to the American Library Association’s Presidential Committee on Information Literacy they believe in order for one ‘...to be information literate, a person must be able to recognize when information is needed and have the ability to locate, evaluate, and use effectively the needed
information.’ (Presidential Committee on Information Literacy, 1989) While Jeremy Shapiro and Shelly Hughes article Information Literacy as a Liberal Art states that information literacy is ‘...a new liberal art that extends from knowing how to use computers and access information to critical reflection on the nature of information itself, its technical infrastructure and its social, culture, and philosophical context and impact.’ (Shapiro & Hughes, 1996). Information literacy is a skill with broad applications.

The Association of College & Research Libraries Standards Committee has set forth standards for information literacy. These standards are:

1. The information literate student determines the nature and extent of the information needed.

2. The information literate student accesses needed information effectively and efficiently.

3. The information literate student evaluates information and its sources critically and incorporates selected information into his or her knowledge base and value system.

4. The information literate student, individually or as a member of a group, uses information effectively to accomplish a specific purpose.

5. The information literate student understands many of the economic, legal, and social issues surrounding the use of information and accesses and uses information ethically and legally.

(Association of College & Research Libraries, 2008)

ACRL’s Introduction to Information Literacy states that information literacy equips them (users) with the critical skills necessary to become independent lifelong learners. In theory those who have gone through an information literacy program should be able to effectively research on their own with limited assistance from the information gatekeepers.

Going back to Shapiro and Hughes’ article information literacy can be broken down into seven dimensions, this paper deals with four of those dimensions;

1. **Tool Literacy**: ability to understand and use the practical and conceptual tools of current information technology, individual software, hardware and multimedia.

2. **Resource Literacy**: understand the form, format, and location and access methods of information.

3. **Research Literacy**: understand and use the IT based tools relevant to the work of today’s researcher and scholar.

4. **Emerging Technology Literacy**: ongoing adaptation to, understand, evaluate and make sense of the continually emerging innovations in information technology.
Tool literacy is important because information access is being affected by new technologies, liken to the Gutenberg press. If a user is unable to work a computer in today’s world many information resources are unattainable. This affects the second information literacy competency set forth by ACRL. By limiting your resources you are not accessing information effectively and efficiently.

Resource literacy is needed because if a user does not understand the form, format, location or how they accessed the information they can not begin to understand how to verify it, or validate the resource. Affecting the third competency for information literacy, you can not effectively evaluate a resource when you do not know how to dissect the resource.

Research literacy is also affecting the third competency because to expand one's knowledge base they need to understand any and all tools concerning the resources most relevant to their field of study. A law student would not necessarily need in-depth understanding of Cumulative Index to Nursing and Allied Health Literature (CINAHL), which is a database for health resources, if they were researching laws about health. They would need knowledge of how to navigate a legal database.

While emerging technology literacy would affect the first competency because new technology has been the greatest factor in the information explosion. Knowing how to adapt and know the extent of information needed will allow information seekers to avoid information overload.

The Effect

These competencies are not seen as something an average information seeker can learn on their own. Libraries, specifically college libraries, believe that their users need to be taught how to be information literate. How to avoid plagiarizing, respecting copyrights; understand footnotes and anything else connected to research are taught in information literacy instruction. (Foster, 2007)

However, Stanely Wilder mentions in his article, Information Literacy Makes all the Wrong Assumptions, that information literacy instruction does nothing to help libraries compete with the Internet and should be discarded (Wilder, 2005). Instead of the critical skills of information literacy, information seekers are limiting themselves to partial unreliable sources that are the simplest and most direct. Peter Webster in his article about information silos says, ‘Often web-searchers believe they are already searching everything that is available online, not realizing they’re missing premium sources.’ Information seekers wish to find quality information in the quickest and most efficient way. As Internet researching is now powerful enough that students can graduate without ever using the library, this lending strength to Wilder’s argument while at the same time making it obvious that information literacy instruction is still needed more than ever to give users the skills needed for independent research outside the library and other traditional information silos.

In talking to other students about the importance of information literacy, and specifically library literacy, there is an overwhelming belief that quality and formal research require using
the library and its resources. However, for any individual assignment many students do not use the library and its resource, preferring to ease of online research. As a whole, information seekers do know that there are more resources available to them, outside of online. Likewise not all online resources are valid and reliable. However, there is a misconception that the Internet is the best resource for information seeking because it is fast and offers relevant enough results. As stated in class most information seekers would most likely not go past page five in a Google search.

**Conclusion**

In conclusion, the information explosion has been brought about by leaps and bounds of technology. Masses of information are available at your fingertips. This surge of knowledge has lead to information overload in information seekers. The information processing systems are exhibiting the signs of overload, through confusion, tuning out information, decreasing the quantity and/or quality of information, and in some rare cases shutting down completely. This overload has affected information literacy. Because information seekers know that the resources found online are not complete, or even the most efficient or effective for their needs. They still opt to go this route, neglecting the competencies of ACRL, or even Shapiro and Hughes' seven dimensions of information literacy as it implies to computer literacy. As new technology comes available the information explosion will gain more momentum, which is going to cause more information seekers to become overloaded, unless information literacy skills are brought back into the information seeking process.

**References**


