Abstract

Studies have been carried out to investigate the information search behavior of students on the Internet and the regurgitation of facts from the Internet by students, often called “copy and paste”. It is possible that the problems documented about the search behaviour of students are compounded by the lack of motivation following an “imposed query”. Literature in the field pointed to a number of factors that are likely to affect searching behavior of students and the resultant “copy and paste” behaviour or plagiarism. This is an opinion paper which explores factors such as; motivation, cognitive states, and affective states as the things that influence the search behavior of students using the Internet following an imposed query. In discussing the above factors, typical information search behaviors of students will be explored using the Information Seeking Behaviour Paradigm and the Imposed Query Model as a conceptual framework through a synthesis of relevant literature. The paper concludes by recommending measures to be taken to improve the search behavior of users and to strengthen the skills for acquiring relevant information for solving information needs in a digital environment.

Keywords: Internet, plagiarism, Information Search Process, Big6 Model, Imposed Query Model, information search behaviours, students.

Introduction

Students most often get assignments or projects suggested to them and they proceed to carry out the projects and this situation is called an “Imposed Query” (Gross 2001) because the student did not initiate it. Such a situation has implications on the cognition or thinking processes, the comprehension as well as the motivation of the students involved with the assignment. The information overload experienced by those using the Internet further complicates the matter. The cognitive challenges facing students using the Internet are acknowledged in the literature. The stages involved in an information search are associated with cognition or thinking processes. The lack of motivation to carry out an imposed query, coupled with the abundance of information on the Internet possibly compounds the situation and leads to regurgitation of lose facts copied from the Internet.
According to Gross (2001), assignments originate from the instructor, therefore, students respond to somebody else’s query. The question this paper addresses is: “What are the consequences of information overload on an imposed query and student use of the Internet?” This paper, which is based on a literature review of relevant literature, explores the existence of cognitive challenges, lack of motivation to carry out an imposed query as well as the ramifications of information overload on cognition and the imposed query among students using the Imposed Query Model and the Information Search Behaviour Paradigm for the methodological lens.

**Related literature**

The literature covered in this paper encompasses two areas; Information Behaviours (including plagiarism) and Imposed Query Model as proposed by Gross (1997). In this paper plagiarism is considered to be an information behaviour since it happens during the seeking of a particular type of information and it mostly happens as a response to a query or the need to find some facts, hence the imposed query.

**Information Behaviours**

Information Behaviour (IB) field mainly deals with determination of information needs, seeking for information, and information use (Julien & Duggan, 2000). It is concerned with user-oriented research where the user creates an information need internally, in the mind and proceeds to translate that into thoughts, behaviour, feelings, perspectives to solve their needs (Belkin 1980, Choo, 2006). Information seeking behaviour is a subset of information behaviors and information behaviors can be defined as the total activities human beings (passive and active) engage in to seek information and use it, using different sources and channels of information (Wilson, 1999). This definition encompasses Information seeking behaviors, information organization behaviors and information use behaviors. Information behaviors are generalized behaviors in the actual initiation of information-seeking following an information need while Information seeking behaviors refer to the actions a user engages in to look for information and to use it (Wilson, 1999).

The bulk of information seeking research centers on a cognitive perspective (Wilson, 1981; Kuhlthau, 1991). The focus is on the individual’s cognitive states such as the interaction with an information system or service and completing tasks. Over the last 20 years research has largely concentrated on the cognitive perspective, this largely deals with the individuals in terms of their thinking processes and actions towards satisfying an information need (Krikelas, 1983; Wilson, 1999). Dervin (1998) describes an information need as a gap which needs to be filled with information during an information search. Dervin describes a gap as the difference between the contextual situation and the desired situation and this has also been explained as a cognitive gap. It can be concluded that the information need starts in the mind when a user recognizes a gap in their knowledge.

The information seeking process has been declared to be a complicated route and users experience myriad problems that librarians ought to be aware of, such as psychological
problems and emotional needs (Head and Eisenberg, 2010; Kuhlthau, 1991; Large, 2006; Wilson.1999). In this paper, plagiarism is considered an information behaviour process, specifically an information seeking and use behaviour. The thesis of this paper is that plagiarisms is part of the information seeking and use process and that it poses a problem because it does not fit in the processes as posited in some of the popular models of information seeking strategies. Three information search models, by Kuhlthau (1991), Eisenberg and Berkowitz (1992), and Ellis (1993), showing a six stage process, were chosen for description in this paper. These are shown in Table 1 in the Appendix.

On studying the information search process models proposed above, it becomes apparent that the researchers agree on the same ground rules of what should happen in an information search process. Although they use different terms for the actions described, it can be concluded that information seeking and use needs some skills such as synthesis, evaluation and critical thinking skills. Therefore the process described above is different from what happens during plagiarism and that is discussed next.

Plagiarism and the Web

Plagiarism is associated with stealing other people’s ideas and pretending that they are your own. According to the online Oxford Dictionary, plagiarism is defined as “the practice of taking someone else’s work or ideas and passing them off as one’s own” (1). This practice is known to happen among students who copy and paste from sources to complete assignments, however very little is documented about its prevalence and causes. Literature dealing with student use of digital media mentioned concerns about plagiarism (Large, 2006; Nicholas et al., 2009), lack of critical thinking skills leading to “potentially negative aspects of the Internet” (Large, 2006, p. 347.), and lack of information literacy (Timmers and Glas, 2010; Long and Shrikhande, 2007). Large (2006), supports that the challenges of the Internet on student learning must be researched on further in order to improve the learning experience of students. Obviously plagiarism is a source of concern and researchers worldwide try to find ways of curbing the practice. Rowlands, Nicholas, Williams, Huntington, Fieldhouse, Gunter, Withey, Jamali, Dobrowolski, and Tenopir, (2008), writing on the apparent challenges facing students on the web said that students “view rather than read and do not possess the critical and analytical skills to assess the information that they find on the web” (p.290).

The above literature shows that indeed students face difficulties in a digital environment and the plagiarism which features in schools today seems to be connected to the lack of information skills. The Web is full of information therefore plagiarism is easily achieved. Therefore the behaviour displayed by students who plagiarize needs to be investigated further to find out what causes plagiarism and what can be done to control it. So far the information search process models consulted, did not document plagiarism in the stages of information processing (Berkowitz and Eisenberg, 1998; Ellis, 1989; Kuhlthau, 1997, 2001; Wilson, 1999). Generally, there is an assumption that students would be aware of the proper information search process, yet cases of plagiarism are common. One wonders whether students lack the skills to search and use information or whether the imposed query contributes to the problem.
Imposed Query Model and Motivation

The key characteristics of Imposed queries centre on passing tasks from one individual to another, e.g. from teachers to students, or from employers to employees. Imposed queries can be formal and informal, e.g. the school assignment is formal and it is required. According to Gross (2001), the difference between self-generated and imposed is that the former is internally motivated by personal context while the later is a result of external motivation.

The motivation to carry out an imposed query has been remarked on by several authors (Gross, 2001, Bilal, 2001; Bilal and Sarangthem, 2001). Bilal and Sarangthem (2001), reporting on the results of Grade 7 students who were observed while responding to self generated tasks as well as imposed queries, said that children preferred the self generated tasks over the imposed ones. This is a clear indication of the challenges of information search and use by students when the task originates elsewhere. Students everywhere have to deal with imposed queries from several imposers (Gross, 2001), therefore the plagiarism problem is bound to exist due to the nature of information overload and lack of skills for manipulating the information. This concern forms the gist of this paper.

Purpose of the study

The purpose of this study was to investigate the relationship between the information seeking models as suggested by Ellis (1993), Kuhlthau (1991), and Berkowitz and Eisenberg (1992) and to juxtapose these to the Imposed Query Model in order to understand the causes of plagiarism amongst students.

To accomplish this purpose, the paper was designed to deal with the following objectives:

1. To identify describe some information search models in relation to plagiarism as an information behaviour
2. To describe the Imposed Query Model in relation to plagiarism and information behaviours in general.
3. To suggest ways of studying the phenomenon for the management of plagiarism in schools.

Methodology

This is an opinion paper based on a synthesis of literature using two paradigms for a conceptual framework; namely, Information Behaviours and Imposed Query Model. Under Information Behaviours, three models were selected and the steps in each model were listed in a table to find out whether there are any commonalities in the models and these were Kuhlthau’s Information Search Process (1991), Ellis(1993) Information Search Process, and the Big6 by Eisenberg and Berkowitz (1992). According to Kuhlthau’s model, during the Information Search Process (ISP), users undergo phases when
searching for information. This model incorporates three realms of experience which are; the affective (feeling), the cognitive (thought), and the physical (action) common to each stage. Eisenberg and Berkowitz came up with the Big6 Model which teaches a problem-solving strategy with six stages and Ellis (1993) also introduced a six stage model of information search process (later expanded to include verifying and ending).

The information literacy skills as suggested in the models were mapped into the six stage models in line with literature above which suggested that an information literate person exhibits certain skills. Next the three models were juxtaposed to the Imposed Query Model by Gross (1997) to find out if there was anything about externally motivated queries which hampers the process of information searching and use as laid down in the Information Behaviours Paradigm, specifically the three chosen models. Plagiarism as a proposed model of information searching was mapped into the table with the three models. The results are discussed next.

**Results**

The literature consulted above has revealed that though plagiarism is a type of information behaviour, it is not captured in the accepted information search strategies and models cited in this paper. The results of the three models, the information literacy skills needed for each stage as well as what seems to happen during plagiarism follows next.

On comparing plagiarism to three information search models, it appears that plagiarized work does not seem to follow all the steps needed by an information literate user. At the beginning of all three models, there is **Initiation, Task Definition** and **Starting**, denoting that the user is aware of a problem that needs to be researched on and literature consulted supports the notion that in most cases the information literate user is aware of lack of knowledge (Kuhlthau, 1991). The plagiarizing user’s behaviour at this stage is unknown due to the dearth of literature, therefore this paper assumes that this kind of user is not aware of the lack of knowledge but they are fully aware of the need to solve the imposed query by the quickest means. This assertion is backed by literature in the Information behaviour paradigm which has shown that for an information search to be successful, the user must identify an information need which would in turn motivate them to search for relevant information. In the case of the plagiarized work, further research is needed to establish whether the initiation or task definition was done prior to cutting and pasting some facts from the Web. Head and Eisenberg (2010) conducted a research on information literacy skills and reported that,

> Even though many students may consider themselves adept at evaluating information and applying techniques for tackling one course-related research assignment to the next, the sheer act of just getting started on research assignments and defining a research inquiry was overwhelming for students—more so than any of the subsequent steps in the research process (p.2).

Therefore, literature has established that the initiation or starting of the information search process is a problem for students. Kuhlthau (1991) rightly established that anxiety or apprehension also features at the initiation of the information search.
The second stage in the three models above includes Selection, Information Search Strategies and Chaining as the next step after starting the search. The three models have something in common at this stage and these are the selection and location strategies or skills. In terms of the plagiarizing user, it will seem that during the second stage of information searching, the user proceeds to select sources and to cut and paste what is deemed relevant to the query. Therefore, plagiarism needs to be studied further to understand the kind of information behaviour it is and its causes. Also, literature on the imposed query showed that motivation for the imposed query seems to be a problem, since the information need was created externally. This finding complements the Information Behaviours Paradigm which posits that users of information must feel the need to close an information gap for them to start searching for information. Possibly externally generated queries do not carry the same weight as internally generated queries and if this is proved to be true, it might explain the cut and paste behaviour students seem to engage in.

The third, fourth and fifth stages of the models under review are lumped together in this paper because of the common characteristics they seem to exhibit. The Exploration in ISP, Location and Access in Big6 as well as the Browsing in Ellis’s model are all bound by the information skills needed at that stage, which are gathering and research skills (Berkowitz and Eisenberg, 1992). The fourth stage of Formulation (Kuhlthau, 1991), Information Use (Eisenberg and Berkowitz, 1992) and Differentiating (Ellis, 1993) also demand skills such as reading, research and evaluation competencies, which the literature above has already established as missing in some users, possibly leading them to plagiarism. The fifth stage of Collection (Kuhlthau, 1991), Synthesis (Eisenberg and Berkowitz, 1992) and Monitoring (Ellis, 1993) is also bound by research, evaluation, synthesis and reading skills needed to accomplish the task. The last stages in the models discussed above indicate that at the end of the task there is Closure/Ending, Evaluation and Presentation. The skills needed include all the above skills as well as communication and critical thinking skills (Eisenberg and Berkowitz, 1992). Weiler (2004) carried out a study on the information behaviours of Generation Y users and came to the conclusion that “a very small percentage of the general population prefers to learn by reading (p.46). It is expected that for the accomplishment of the stages under discussion here, users need to be skilled at reading and comprehension and the literature cited in this paper revealed that Generation Y users are not skilled in that aspect, hence the plagiarism.

From the above discussion, the lack of information search skills surfaced as a major hurdle for students using the Web and this possibly explains in part the need for them to copy and paste facts from sources. It can be concluded that the literature consulted on Information Behaviours Paradigm and the Imposed Query Model is instrumental in explaining some of the causes of plagiarism amongst students. Kuhlthau (1991) also introduced affective feelings of apprehension and anxiety in the six stage model created following an imposed query project by students. Further research is needed to establish whether possibly too much anxiety and lack of information literacy skills lead to unbecoming information behaviours such as plagiarism. The lack of information literacy skills was reported to be missing by several authors (Large, 2006; Head and Eisenberg, 2010; Long and Shrikhande, 2007; Weiler, 2004). In this paper it is assumed that students
who plagiarize probably lack information skills which leads to anxiety during the information search, following an imposed query.

Conclusions and Recommendations

According to Krikelas (1983), information-seeking behaviour arises from a need perceived by a user, therefore to satisfy that need, the user makes demands on the sources but that information search can either be successful or unsuccessful. If this model is applied to the plagiarized information, will that be categorized as failure or success in information seeking behaviour? In response to this question, one is tempted to say that information searched for did not follow the stages suggested in the above chosen models because stages involved in an information search are associated with cognition or thinking processes. Examples are thinking skills such as recognition of relevance, analysis, synthesis, induction, deduction, evaluation, and thinking processes such as defining a problem. Given these processes, an imposition on an individual, to seek for information, adds to the burden and the motivation to carry out an imposed query, and other ramifications of an information search are captured in the Imposed Query Model (Gross,1997).

The information search strategies of students are brought under scrutiny in this paper to decipher the kind of information behaviour plagiarism is. Clearly plagiarism is an information seeking strategy but it is doubtful whether it brings satisfaction to the user. Most information search strategies consulted above indicate that the last stage of an information seeking strategy brings closure (Kuhlthau, 1991), ending (Ellis, 1989), or evaluation (Eisenberg and Berkowitz, 1992). Since plagiarism is a matter of cutting and pasting, it is possible that the user does not engage in the evaluation and proper ending of the information search strategy. Wilson (1999) summed up the information behaviours paradigm when he said that information search behaviour is a subset of information seeking behaviour and information seeking behaviour is another subset of all possible information behaviour. This implies that there are many other information behaviours, other than information seeking and it is possible that plagiarism in one of those behaviours, however, literature is scarce on what elicits this behaviour and on whether this behaviour brings satisfaction and feelings of relief to the user as Kuhlthau suggests (1991). In an article by Clemens and Cushing (2010), the authors also support the notion that there are many information behaviours that include information avoidance. When users select some facts to copy and paste, this behaviour fits the description of information avoidance and selection.

In summary, this paper has demonstrated the acceptance of information search processes using identified models and that plagiarism as an information behaviour is not captured in those models. Secondly the notion of an imposed query is revisited in this paper and it is suggested that plagiarism is probably compounded by the lack of motivation for imposed queries. Thirdly, information literacy skills are featured as a concern in the literature consulted and it is suggested that the lack of skills leads to anxiety which possibly leads to plagiarism. This is supported by Gross and Latham when they opine that, “traditional information literacy instruction may not be effective with non-proficient students, who are
unlikely to see themselves as needing or benefiting from such instruction” (p.332). This assertion sheds light on the hurdles embedded in an information search process for students who lack the right information literacy skills. This is a challenge to institutions and their “traditional” methods of imparting information literacy because there seems to be a gap or missing link between the skills students have and the expected skills for an information literate person. Literature consulted above has established that students often prefer the easiest method to information acquisition and plagiarism probably fills that gap for such students.

In view of the scarcity of literature on plagiarism, it is recommended that further research be done to determine the causes and circumstances under which plagiarism occurs among students. Secondly, the literature consulted stressed the need for information literacy skills and this concern crops up all the time in this field, therefore, in addition to the existing information search history (Eisenberg and Berkowitz, 1992, Large, 2006, Long, and Shrikhande, 2007; Weiler, 2004), it is essential that the information science field come up with models that profile users in order to determine the stages of information search they exhibit for them to offer remedial strategies. This is suggested because most often students come to an institution from different backgrounds and these often dictate their information search strategies they use. In addition to this, the literature consulted has identified apprehension and anxiety as a contributing factor during the search process, therefore profiling users can be helpful. Thirdly, the instructors (or imposers of assignments) need to align the tasks to the students’ capabilities and to offer as much support as possible to those who tend to plagiarize and this should be executed at an institutional level, thereby forming the school policy on plagiarism. This is suggested because in some university websites, warning against plagiarism is issued and yet plagiarism continues, therefore the warning does not appear to deter it due to the underlying information search challenges.

Limitations

The present paper is based on a synthesis of literature rather than empirical investigation, therefore further research using other methods would strengthen it.

References


**Professional Profile**

Dr. Angelina Totolo is a lecturer in the Department of Library and Information Studies as well as a Digital Scholarship Coordinator at the University of Botswana, and she holds a Doctorate in Information Studies from Florida State University, USA. Her main areas of interest are information technology adoption and use, information needs and services, information seeking behaviours, information policy, and school media centres. Dr. Totolo has published in International and African journals in the areas of Information technology use and adoption, Information behaviours of non library users, E-learning and teaching. In terms of research in the community, Dr. Totolo has worked in several projects which include digital scholarship at the University of Botswana, ACHAP sponsored Botswana Global Libraries Needs Assessment Project and Botswana Global Libraries Baseline Study. She is a recipient of 2010 ASIS&T SIG III International Paper Contest Award presented during the American Society for Information Science and Technology Conference held in Pittsburgh, USA in recognition of getting a First Place in the International Paper Contest.