

Influence of Emotion on Web Information Searching and Retrieval among Academic Staff and Students in Nigerian Universities

By

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Abstract

This study investigated the Emotional Influence on Web Information Searching and Retrieval among Academic Staff and Students in Nigerian Universities. The study adopted a survey research design and copies of questionnaire were used as instrument for data collection. The subjects were made up of the academic staff and students in Ahmadu Bello Universities Zaria, University of Nigeria Nsukka, and University of Ibadan. However, 384 academic staff and students were selected for the sample. To achieve the objective of the study, one research question was raised and answered, hypothesis was formulated and tested. Descriptive (Percentages, Means and Standard Deviation) and Inferential statistics (One way Analysis of Variance) was used to analyze the data collected. The study established that the emotional factor that influences information searching and retrieval in the Nigerian Universities studied is frail. Whereas, the null hypothesis formulated was retained, suggesting no significant difference among the academic staff and students in Nigerian Universities studied. The study therefore recommended that library instruction programmes should be attuned to students' emotional needs. The study concluded that web users can enhance their self-efficacy by diminishing emotional arousals such as fear, stress, and physical agitation since they are associated with decreased performance, reduced success, and other avoidance behaviors..

Keywords: *Web Information searching and retrieval, Emotion, Academic staff, Students.*

Introduction

All categories of users (experts and novice) are afforded the same information retrieval opportunities to access information from the web by using emerging information retrieval systems (Tenopir, Wang, Zhang, Simmons, & Pollard, 2008). Yet, defining the best practices for assisting users to find the information they seek remains an unrealized goal (Janette, 1999). It has been discovered that successful information retrieval is more than mastering searching techniques and knowing the information

sources available. Emotions, attitudes, as well as other personal and environmental factors play a crucial role in determining whether a search will be successful or not (Matteson & Miller, in press). Flavian-Blanco, Gurrea-Sarasa, & Orus-Sanclemente, (2011) posited that searching for information is more than mastering a set of techniques or following certain rules or principles to achieve desired outcomes. They found that affective states or emotions experienced during the search can influence the nature and the performance of the

search. The study of the affective element of information seeking behavior has examined different emotions involved in the process such as uncertainty, optimism, positive and negative feelings towards the search, satisfaction and perceived self-efficacy (Flavian-Blanco *et al.*, 2011; Tenopir *et al.*, 2008). Hence, success in performing a task is not only based on the possession of the necessary skills but it requires the confidence to use the skills effectively. There is a marked difference between possessing a set of skills and being able to use them optimally under diverse circumstances. For this reason, people with similar skills or the same individual on different situations may perform poorly or extraordinarily depending on their emotions.

Problem Statement

Although there are billions of information resources available on the Web, the resources are not of uniform quality, nor do they offer equal value to all stakeholders in the higher education. For one to succeed in web information retrieval task, what is required is not just connectivity but certain skills regarding his or her ability to triumph.

The researcher has observed that Academic Staff and Students in Ahmadu Bello University Zaria are facing challenges

retrieving the needed information. This is evident considering the time spent on the web trying to retrieve the required information. To buttress this point, Ndubuisi & Udo (2013) stated that even though the web has numerous advantages, problems in accessing and using web-based information resources are still noticed, particularly among postgraduate students. The finding of Liyana, Noorhidawati, & Hafiz (2010) on the use of the web by postgraduate students of the computer science department of the University of Malaya, reported that the students were having difficulties in finding information that is suitable to their learning style using the available information retrieval tools. Thus, identifying or locating web resources, in a consistently efficient and effective way that are both relevant and of high quality, poses significant information retrieval challenges for Universities (Waldhart, Miller, & Chan, 2000).

The challenge faced by librarians is “ensuring that individuals who need information can obtain it with minimum cost (time and money) and without being overwhelmed with irrelevant matter” (Mohammed, 2011). Going by the factors that motivate or urge the web users to search and retrieve needed information, it is

necessary that users of information retrieval system must be acquainted with the ways of searching, retrieving and evaluating web information. Otherwise, all the information networks capturing the whole global information will be of no use for those who are not able to successfully access, search, and retrieve the needed information.

A study by Tatiana & Andreas (2013) also showed that more than half of web users search the web predominantly alone. Unfortunately, not all of them succeed in information inquiry and they experience difficulties. Thus, the focus of this research is to look at factors influencing web information searching and retrieval from the perspective of the user's emotions.

Research Question

1. To what extent does Academic Staff and Students' emotional state influence web information searching and retrieval in Nigerian Universities?

Objective of the Study

1. To examine the influence of Academic Staff and Students'

emotions on web information searching and retrieval in Nigerian Universities.

Hypothesis

Ho: There is no significant difference among the Academic Staff and Students in Nigerian Universities in the emotional state that influence their web information searching and retrieval.

Literature Review

Greenberg & Safran (1987) view emotion as a biologically based response consisting of a combination of cognitive, affective, relational, and motivational components. Emotion informs the individual of his or her responses to internal or external events and thus is considered an important source of information regarding the meaning of a given event. Thus, an individual in an aroused state (e.g., high visceral anxiety while giving a presentation) may interpret the arousal as debilitating fear and feel excessively vulnerable to failure. Bandura (1977) reported that, in these anxiety-producing situations, modeling yielded higher self-efficacy and performance than psychological desensitization. A person who expects to fail at some task or finds

something too demanding is likely to experience certain physiological symptoms: a pounding heart, feeling flushed, sweaty palms, headaches, and so on. The symptoms vary from individual to individual, but if they persist may become associated with low performance.

Early studies on the effects of emotions in information seeking were performed in a library environment. While investigating the effects of the library anxiety, Mellon (1988) found that negative emotions impeded information seeking and learning. The author suggested mitigating the negative effects of library anxiety by offering library instruction programs that are attuned to students' emotional needs. Onwuegbuzie *et al.* (2004) also examined college students' library anxiety and showed that it had a negative effect on research paper quality.

A growing consensus in the literature exists about the effects that cognition and emotion have on each other. How an individual feel about him can play a critical role in what and how an individual think? Similarly, thinking processes can make a significant difference feelings and perceptions of successes or failures. An

individual's perceptions of his or her physiological state may be used in assessing performance capability.

An investigation into the role of emotions in the information seeking process Arapakis *et al.*, (2008) provided evidence of the effect of the search task on users' emotions. More specifically, the findings indicated a progressive transition from positive to negative valence as the degree of task difficulty increases. Emotions/affect and search strategies, performance and satisfaction (Nahl, 2004; Nahl, 2004). While examining relationships between affective and cognitive variables during the online search, Tenopir *et al.* (2008) showed that positive feelings were reported more frequently than negative feelings, and were associated with the thoughts about search results. Negative feelings co-occurred more often with the thoughts related to system, search strategy and task. Similar findings were reported in the study of children's use of a search engine (Bilal, 2000). The study found that young participants identified more positive than negative feelings during the search. Positive feelings were associated with the use of a system in general, and ease of use, keyword search option, availability of graphics and fun in particular. Negative

feelings of confusion and frustration were associated with software failures. However, negative feelings did not have significant impact on children's persistence and patience in web searching. The study findings showed that positive feelings supported subsequent interactions while negative feelings hindered the search. The findings also indicated that successful search performance reduced negative feelings, such as anxiety.

Nahl (2004) investigated the effects of affective variables on search behaviour and found that self-efficacy and optimism counteracted the effects of negative emotions (e.g., irritation and frustration associated with uncertainty and time pressure), and increased user support and acceptance of the system. In a study of affective motivation during on-line information search, Nahl (2004) found positive correlation between self-efficacy and optimism, and motivation for completing the task. The author found that higher self-efficacy and optimism were associated with higher satisfaction. The effects of self-efficacy on search behaviour were also studied by Nahl and Meer (1997). The authors found positive correlation between students' self-efficacy and search

performance. Kim (2008) examined relationships between search tasks, user emotion control and performance during the web search. The experiment involved completion of different search tasks of varying scope (specific task vs. general task), and reporting users' expectations of problem solving. The study results indicated that both tasks and emotion control impact users' search behaviour. The author suggested ways of releasing cognitive and affective burden on the searcher by offering information literacy education and improving interface design. Nahl (1998) reviewed information behaviour literature covering cognitive and affective components of searching and found evidence of the effect of affective variables on search motivation, performance and satisfaction.

Web users can enhance their self-efficacy by diminishing emotional arousals such as fear, stress, and physical agitation since they are associated with decreased performance, reduced success, and other avoidance behaviors. Emotional arousal can be mitigated with repeated symbolic exposure that allows people to practice dealing with stress, relaxation techniques, and symbolic desensitization. People experience sensations from their body and

how they perceive this emotional arousal influences their beliefs of efficacy (Bandura, 1977). Some examples of physiological feedback are: giving a speech in front of a large group of people, making a presentation to an important client, taking an exam, and using computer etc. All of these tasks can cause agitation, anxiety, sweaty palms, and/or a racing heart (Redmond, 2010). Although this source is the least influential of the four, it is important to note that if one is more at ease with the task at hand they will feel more capable and have higher beliefs of self-efficacy. Bandura argues that emotional cues dictate self-efficacy and self-efficacy has been related to other motivational theories.

Methodology

A survey research design was adopted for this study. This method is found suitable due to the scattered nature of the population across the three region of the country. The population of the study comprised of the three first generation universities in the geopolitical zones of Nigeria. They are (Ahmadu Bello University, Zaria) Northwest, (University of Ibadan) Southwest, and the (University of Nigeria Nsukka) Southeast. The study focused on the academics and students of the

Universities. There are One hundred and five, thousand (105,000) students and Six thousand, two hundred and nineteen (6,219) academic staff in the three Universities, totaling One hundred and eleven thousand, two hundred and nineteen (111, 219). Three hundred and eighty four (384) were selected as sample. This is according to Krejcie & Morgan (1970) who stated that for a population over 100, 000 a sample size of 384 should be selected. The survey was administered to the proportionate stratified randomly selected sample from the population. The participants were selected based on their involvement and use of web information resources and their being easily accessible in their various e-libraries, computer centres and offices, as such sampling error cannot be completely ruled out because of the difference between sample and population size. Each item adapted 5-point Likert scale with the following anchors: 1 (strongly disagree), 2 (disagree), 3 (agree), 4 (strongly agree) and 0 (undecided). Software Package for Social Sciences (SPSS) version 20.0 was used. Descriptive and Inferential statistical methods such as percentage for demographical data; mean and standard deviation for research questions (descriptive

statistics) and One Way Analysis of variance for the hypothesis.

Results

Out of the 384 copies of questionnaire distributed to both the academic staff and students in the three Universities studied, 321copies (83.50%) were duly completed and returned. This high response rate could be attributed to the efforts put by the research assistants especially in A.B.U (86.71%) and UNN (87.69%). However, UI recorded (76.19%) the lowest among the Universities.

Data Analysis

Extent of Emotional Factors influence on Web Information Searching and Retrieval

Attempt was made by the researcher to examine the extent of emotional influence on web information searching and retrieval in the Universities studied in Nigeria. The respondents were provided with a list of options on emotions that could influence information searching and retrieval. They were requested to indicate the extent of emotional influence on their information searching and retrieval from the options provided in table 1. The data collected and analysed were presented in table 1.

Table 1 Extent of Emotional Factors influence on Web Information Searching and Retrieval

S/N	Emotional Factors	Responses on Level of Agreement with the Extent of Emotional Factors influence on Web Information Searching and Retrieval												Averages			
		SA		A		SD		D		U		Total		\bar{x}		SD	
		AS	St	AS	St	AS	St	AS	St	AS	St	AS	St	AS	St	AS	St
1.	Searching for web information makes me feel good	39	104	50	95	2	5	2	11	3	10	96	225	3.25	3.24	0.86	0.97
2.	I use to have sweaty palms whenever I handle a mouse	7	65	28	43	29	60	26	51	6	6	96	225	2.01	2.45	1.07	1.24
3.	I feel energized when I am searching for web information	12	60	60	85	8	15	9	27	7	38	96	225	2.65	2.51	1.05	1.40
4.	I think looking for web information is relaxing	16	51	48	102	10	27	18	26	4	19	96	225	2.65	2.62	1.02	1.20
5.	My heart pounds whenever I am on the web	8	27	12	49	23	50	35	72	18	27	96	225	1.68	1.10	1.17	1.19
6.	Searching for web information can be frustrating	13	42	26	65	20	33	27	62	10	23	96	225	2.13	2.31	1.20	1.23
7.	I am optimistic and enjoy searching for information on the web	30	68	59	108	4	10	2	21	1	18	96	225	3.18	2.88	0.75	1.13
8.	My head ache when I am on the web	14	24	8	59	27	66	38	57	9	19	96	225	1.91	2.01	1.15	1.15
9.	I feel comfortable when searching for information	23	66	62	105	7	19	1	30	3	5	96	225	3.00	2.92	0.91	0.98
10.	I am always confused and agitated from not finding what I am searching for information on the web	21	58	25	55	19	29	26	67	5	16	96	225	2.40	2.49	1.18	1.21

Key: SA- Strongly Agree, A-Agree, D-Disagree, SD-Strongly Disagree, U-Undecided, AS- Academic Staff, St-Students,SD-Standard Deviation

Table 1 reveal that only a single emotional factor (searching for web information makes me feel good) recorded above 3.00 average mean scores for both the academic staff and students web users in the Universities studied. However, the factors that; I feel comfortable when searching for information and I am optimistic and enjoy searching for information on the Web; equally recorded 3.00 mean score for academic staff. This suggests that these factors have high influence on the academic staff respondent's in their information searching and retrieval.

The remaining emotional factors such as; I use to have sweaty palms whenever I handle a mouse; I feel energized when I am searching for web information; I think looking for web information is relaxing; My heart pounds whenever I am on the Web; Searching for web information can be frustrating; I am optimistic and enjoy searching for information on the Web; My head ache when I am on the web; I feel comfortable when searching for information; and I am always confused and agitated for not finding what I am searching for on the web, recorded average 2.00 mean scores for the academic staff and students. It might be concluded that these factors have less

influence on the respondents' information searching and retrieval because they all recorded above 2.00 mean scores.

This finding implied that the influence of emotional factor on information searching and retrieval is generally weak on the two categories of respondents. Studies by Mellon (1988) and Onwuegbuzie *et al.* (2004) on the effects of emotions in information searching were performed in a library environment. For example Mellon found that negative emotions impeded information searching and learning. Similarly, Onwuegbuzie *et al.* examined college students' library anxiety and showed that it had a negative effect on research paper quality. The current findings have corroborated with that of Tenopir *et al.* (2008) who showed that positive feelings were reported more frequently than negative feelings by academic users' interactions with Science Direct, and were associated with the thoughts about search results. Negative feelings co-occurred more often with the thoughts related to system, search strategy and task. Similar findings were reported in the study of children's use of a search engine (Bilal, 2000). The study found that young participants identified more positive than negative feelings during Internet

search. Positive feelings have been associated with the use of a system in general, especially as it relate to; ease of use, keyword search option, availability of graphics and fun in particular. With these findings it can be stated that out of the ten emotional factors identified, only three of them significantly influence the academic staff and one factor influences students information searching and retrieval in all the three Universities studied.

Inferential Statistical Analysis

The data analysed in this section is based on the data collected with respect of the null hypothesis raised in the study. It was tested using one way ANOVA because the study involved testing significant differences of the means of two independent

(unrelated) groups. The ANOVA allows comparing the means of two or more groups simultaneously. The researcher adopted 0.05 as the level of significance for testing the hypotheses. This was because the research involved human beings and the 0.05 level of significance is generally accepted due to likely human error involved. The finding is presented as follows.

Hypothesis: There is no significant difference among the Academic Staff and Students in Nigerian Universities in the emotions that influence their web information searching and retrieval.

In order to test this hypothesis, the data was subjected to one way ANOVA test. The analysis is presented in table 2.

Table 2 Analysis of difference among the web users in the emotional state that influence information seeking and retrieval

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	4.380	2	2.190	.021	.979
Within Groups	33467.383	318	105.243		
Total	33471.763	320			

Table 2 reveals that the F value is .021 and p value is .979 which is greater than alpha=0.05. Hence, the null hypothesis five is retained. This indicates that there is no significant difference in the emotions that influence the respondents' web information

searching and retrieval in the Universities studied. The emotional factors that influence the academic staff and students' web information searching and retrieval in the Universities studied didn't considerably differ.

Findings

1. The emotional factor that influences information searching and retrieval in the Nigerian Universities studied is frail. The only factor that recorded above 3.00 means score for the academic staff(mean score 3.25, std0.86) and the students (mean score 3.24, std 0.97) was positive feeling.

The result of the hypothesis tested showed that:

- i. There is no significant difference among the academic staff and students in Nigerian Universities studied in the emotional states that influence their information searching and retrieval.

Conclusion and the way forward

Based on the findings of the study and the conclusion reached, the following recommendation was proposed for Nigerian Universities.

1. It has been established that emotions affect search strategies, performance and satisfaction whereas, modeling yielded higher self-efficacy and performance. As such, library instruction programmes should be

attuned to students' emotional needs. Web users can enhance their self-efficacy by diminishing emotional arousals such as fear, stress, and physical agitation since they are associated with decreased performance, reduced success, and other avoidance behaviors.

2.

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