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Olufemi J. Ojo Mr
University of Ibadan, Nigeria, olufemijojo@gmail.com

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INFORMATION ANXIETY AND INFORMATION OVERLOAD OF UNDERGRADUATES IN TWO UNIVERSITIES IN SOUTH-WEST NIGERIA

Olufemi J. Ojo

 E-mail: olufemijojo@gmail.com

Mobile phone: +234(0)7031205593

Abstract

Keywords: information anxiety, information overload, undergraduates, universities, Nigeria

Information anxiety and information overload have no single generally accepted definition and term. They are all state based academic anxiety that serve as a barrier to the use of information particularly by students. The purpose of this study is to ascertain the influence of age and gender on information anxiety as well as information overload by undergraduates in University of Ibadan and Tai-Solarin University of Education in South-West Nigeria. The study population were 193 undergraduates in four faculties similar to both universities sampled using purposive and stratified random sampling technique with proportionate to sample while six hypotheses were formulated and tested using SPSS at 0.05 level of significance. The results of the findings showed that both age and gender had no influence on information anxiety and information overload by undergraduates respectively.

1.1 Introduction

Information anxiety has no single generally accepted definition. The term is taken to represent a state of affairs where an individual's effectiveness and efficiency in using information in their work is hampered by the amount of relevant, and potentially useful, information available to them (Bawden & Robinson , 2008). However, Lambert and Blundell (2014) defined information anxiety as the combination of library anxiety and information technology anxiety. The information must be of some potential usefulness, relevance and value or such information is available. Katapol (2010) suggests that students are affected by information anxiety, which creates a barrier to obtaining and using information for academic work. The study also considers participants' views on how information literacy and information seeking behaviour may affect information gathering, access, and sharing.

From the definitions provided above one can deduce that there is no clear cut definition for information anxiety. Depending on context, where most modern researchers use the term "information,' some discussions of information anxiety used terms such as "books," "ideas," "knowledge," "species," "things," "library," "social," "technology," or even "truth

itself." The sheer number of these terms makes categorisation and definition somewhat difficult. Should it be measured by something tangible such as the number of written texts, or is it more accurately determined by a more abstract measurement such as ideas or facts? Some believe it is better to dwell on the broader concepts rather than the specifics (Bright, Kleiser & Grau, 2015; Girard & Allison, 2008; Katapol, 2010). Therefore, Information anxiety refers to the negative experience of undergraduates typified by their inability to access, understand, organise and or make use of information in any setting for academic activities in the selected universities.

Information overload also had no single accepted definition and term (Bawden & Robinson, 2008; Williamson, Christopher Eaker & Lounsbury, 2012). It refers to the difficulty a person can have understanding an issue and making decisions that can be caused by the presence of too much information (Yang, Chen & Honga, 2003). Speier, Valacich and Vessey, (1999) state that information overload, which is also one of the items of information anxiety (Wurman, 1989; Bawden & Robinson, 2008), "occurs when the amount of input to a system exceeds its processing capacity. Decision makers have fairly limited cognitive processing capacity. Consequently, when information overload occurs, it is likely that a reduction in decision quality will occur." The evidence on the relationship between information overload and gender has been mixed (Chowdhury & Gibb, 2009; Allen, 1997; Walsh and Mitchell, 2004; Kim, Lustria & Burkey, 2007; Sveiby & Simons, 2002 Reffell & Waterson, 2001; Williamson, Christopher Eaker & Lounsbury, 2012). Likewise, some studies have found a positive relationship between information overload and age, whereas others have found none (Chowdhury & Gibb, 2009; Jansen *et al.,* 2008; Kim *et al.,* 2007; Williamson, Christopher Eaker & Lounsbury, 2012).

In many ways, the advent of information technology has increased the focus on information overload: information technology may be a primary reason for information overload due to its ability to produce more information more quickly and to disseminate this information to a wider audience than ever before (Evaristo, Adams & Curley, 1995; Hiltz & Turoff, 1985)

Originally, focus in library and information science was on "library anxiety," a term brought to the fore in library and information science literature by researchers like Constance Mellon in 1986 followed by Sharon Bostick in 1992 and others since then (Gross & Latham, 2009; Kwon, 2008; Kwon *et al*., 2007). Library anxiety as a term is best described as the range of anxiety (fear, nervousness, confusion, etc.) someone experiences when attempting to identify, define, and satisfy an information need, especially when that

person must use the library and/or its resources (such as reference services) to satisfy that need (Blundell & Lambert, 2014; Gross & Latham, 2007; Onwuegbuzie, Jiao & Bostick, 2009). "Information anxiety" was coined by Richard S. Wurman in 1989 in his book Information Anxiety although it has been for several hundred years (Bawden, 2001) while Alvin Toffler popularized the term "Information overload" in his bestselling 1970 book Future Shock (Toffler, 1984). Both have become a major problem in modern society (Girard & Allison, 2008; Bawden & Robinson, 2008).

In recent times, additions of information technology to libraries and information centres, it is a logical step to include the impact of information technology on information anxiety and information overload by undergraduates (Blundell and Lambert, 2014; Kovach, 2010). Undergraduates refer to full time regular students who are studying in the universities under study and who are pursuing a bachelor's degree programme while universities refer to the two academic institutions that support teaching, learning and research of undergraduates by the provision of resources, space and friendly atmosphere for such activities.

1.2 Statement of the problem

Undergraduates experience a great deal of information anxiety and information overload when seeking information in a formal (i.e. library and information system) setting, particularly if the process relates to an academic information need. Researchers in library and information science have discovered that age and gender had mixed results on information anxiety and information overload. Despite scholarly awareness of the situation described above, little is known about triggers for such results, or specific areas within the concept of anxiety that are experienced most strongly by undergraduates in Nigeria. Therefore, there is a need to understand more about the influence of demographic factors such as age and gender of undergraduates on information anxiety and information overload so that they may be more effective in addressing these effects when using the information system particularly in Nigerian universities.

In spite of all these findings on information anxiety and information overload of undergraduates, there still seems to be a gap on the influence of age and gender on information anxiety and information overload by undergraduates in Nigerian universities as what could be responsible for this trend remains unknown. This study, therefore, aims at ascertaining the influence of age and gender on information anxiety as well as information overload by undergraduates in two universities in South-West Nigeria.

1.3 Objectives of the study

The purpose of this study is to ascertain the influence of age and gender on information anxiety by undergraduates in two universities in Southwest Nigeria.

The specific objectives of the study are to:

i. examine the influence of age on the information anxiety by the undergraduates;

ii. examine the influence gender on information anxiety of the undergraduates in the selected universities;

iii. examine the relationship among age, gender and information anxiety by the undergraduates in the selected universities.

iv. ascertain the influence of age on the information overload by the undergraduates in the selected universities;

v. ascertain the influence of gender on information anxiety of undergraduates in the selected universities; and

vi. examine the relationship among age, gender and information overload by undergraduates in the selected universities.

1.4 Hypotheses

The study will test the following null hypotheses at 0.05 level of significance:

$H_0$1 There is no significant relationship between age and information anxiety by undergraduates in the selected universities in South-West Nigeria;

$H_0$2 There is no significant relationship between gender and information anxiety by the undergraduates;

$H_0$3 There is no significant composite relationship among age, gender and information anxiety by the undergraduates.

$H_0$4 There is no significant relationship between age and information overload by the undergraduates;

$H_0$5 There is no significant relationship between gender and information overload by the undergraduates;

$H_0$6 There is no significant composite relationship among age, gender and information overload by the undergraduates.

1.5 Scope of the study

This study focuses mainly on the influence of age and gender on information anxiety and information overload by undergraduates in University of Ibadan and Tai Solarin

University of Education. The study will also include regular full-time undergraduate students in similar faculties in the selected universities. The study will also be restricted to the main campuses of the selected universities. The study will focus on empirical study using inferential statistics.

1.6 Significance of the study

The study seeks to investigate the influence of age and gender on information anxiety as well as information anxiety by undergraduates in University of Ibadan and Tai Solarin University of Education. It will show how age and gender influence information anxiety and information overload affect undergraduates' attitude toward the use of an information system. The recommendations at the end of this study may provide opportunities for undergraduates to develop proactive approach towards the use of information system for academic activities. It is hoped that the findings of this study will go a long way to reveal the actual state of information anxiety and information overload by undergraduates in University of Ibadan and Tai Solarin University of Education.

Again, the findings of this study would provide recommendations that will enable the stake holders in Nigerian education sectors, among others to know what arises from undergraduates' information anxiety and information overload. Finally, the findings may indicate the scope for further studies in the area by providing rich source of empirical data to contribute significantly to the field of Library and Information Science as it will be an addition to the existing growing body of literature in the field of information and academic anxiety.

2.0 Literature Review

The broad issue of information and its effects on individuals has been studied for the last 400 years (Bawden, 2001). Whether it is referred to as information overload (Yang, Chen & Honga, 2003) or information anxiety (Wurman, 1989; 2001) the general construct remains the same. Too much information creates an atmosphere where confusion, anxiety, and uncertainty are developed (Bawden & Robinson, 2008). This, in turn, affects the usage of information for the purpose intended (Katapol, 2010; Ruud, 2013).

Bawden and Robinson (2008) also note that a major cause of information anxiety is the uncertainty surrounding the existence of a particular piece of information. In other words, the cause may be either information overload or information poverty due to poorly organised or presented information, or a variety of other causes which include a lack of understanding

of the information environment in which one is working. The term overload seems to imply that limiting the quantity of information will solve the problem. Increasingly, research indicates that there are other information challenges with even greater impact. The collective noun for this group of challenges is Information Anxiety (Bawden & Robinson, 2008). The consideration of the wider classification of this information challenge, as suggested by Wurman (1989), Kirsh (2000), Linden (2001), and Linden *et al.* (2002) is more pertinent than a study focused solely on some of the narrow definitions provided. The latter implies a technological solution to reduce the quantity of information, perhaps by eliminating duplicate data. This may ease the size of the problem and may well be a part of the ultimate solution; however, the challenge is more complex and not merely an issue of quantity. They all underscore other associated concerns, which from an academic point of view are equally important. For example, simply reducing the quantity of information will do nothing to assist in their concerns of not knowing where to find information.

Research into the characteristics of information-anxious students show that an information-anxious student includes being young, not being a native English speaker, being employed while going to school and infrequent visits to the library and information settings (Blundell & Lambert, 2014; Jiao & Onwugbuzie, 2004; Katapol, 2010). However, of all forms of academic-related anxiety that prevails at the academic level, information anxiety appears to be among the most prevalent (Blundell & Lambert, 2014). This may be attributed to the information needs of such students in their various programmes of study. In recent times, however, most researches focus on the concept of too much information and thus narrow information anxiety to infer only the challenge of too much information at the expense of other measures (Girard, 2004; Girard & Allison, 2008).

Since the late 1990s, the recommendation of information literacy or digital literacy has denoted a lack of information literacy, another challenge to information anxiety which information professionals and academic librarians are considering, using terminologies such as information mastery, information fluency, information competence and smart working through formulation of information training programmes designed in search of a panacea (Bawden & Robinson citing Martin & Madigan, Eds., 2006, Secker, Boden, & Price, 2007). According to Blundell and Lambert (2014) there is need for further research in the area of limiting information anxiety specifically by increasing understanding of specific causes for information anxiety among undergraduate students in general.

Bawden and Robinson (2008) state that Wurman theorizes five broad circumstances, which are liable to initiate information anxiety as indicated below. Other research supports all

five ideas (Girard & Allison 2008; Hurst, 2005; Girard, 2004; 2005). The same circumstances were used to gauge information anxiety within the population that was researched. The five components of information anxiety (IA) according to Wurman (1989) as stated earlier are: Not understanding information (Understanding information, UI); Feeling overwhelmed by the amount of information to be understood (Information overload, IO); Not knowing if certain information exists (Knowing information exists, IE); Not knowing where to find information (Finding information, FI); and Knowing exactly where to find the information, but not having the key to access it (Accessing information, AI).

Allison (2008) in his study of United States Air Force officers attending the Air Command and Staff College focuses specifically on information anxiety which shared some characteristics with previous studies (Allison, 2006; Girard, 2005a). The experience and education of this group was similar to the one in Allison (2006) though the nationality and vocation of his study is similar to the one done by Girard (2005a). Their findings reveal that information anxiety has remained relatively unchanged across society, though there is some evidence that the levels have dropped dramatically within the smaller population of the United States Air Forces. There is clear evidence to suggest that certain variables may affect the level of information anxiety, but to what extent is difficult to predict at this point (Girard & Allison, 2008). For example, the education level of the respondents sampled by Allison (2008) was very high, with a full 100% possessing at least a bachelor's degree. Likewise, the respondents sampled by Girard (2005a) also had a high level of post-secondary education, with 75.2% possessing at least a bachelor's degree. This is in contrast to the respondents in the survey by Allison (2006), where only 10.6% of respondents possessed a bachelor's degree or higher. This is significant and may point to an area requiring further analysis and study. Understanding these variables could pay huge dividends in the development of approaches to deal with work-related concepts (Girard & Allison, 2008).

Winkle (1998) cited in Ifijeh (2010) has identified the following problems associated with information overload, one of the causes of information anxiety: Damaged health; Bad judgment. According to him studies have linked both decreased vision and cardiovascular stress to information overload. Besides, overconfidence in information sources or the opposite has resulted in bad judgment or "paralysis of analysis", not being able to discern truth from fact. Moreover, information anxiety is produced by the ever widening gap between what one understands and what one thinks one should understand as earlier stated. However, it is important to note that information overload is not all negative on users (Girard, 2005). It provides an opportunity to select needed information from a wide range of resources.

Many researchers have examined the relationship between demographics and the level of information overload (a component of information anxiety). The most studied area is almost certainly gender. For example, Sveiby and Simons (2002) reported no significant difference between genders in their study of collaborative climate. Reffell and Waterson (2001) concluded that females reported feeling overloaded more frequently than did males. Though the literature is inconclusive, the research question remains important, specifically is there a relationship between demographics and the level of information anxiety reported.

Williamson, Christopher Eaker and Lounsbury (2012) concentrate on the subjective dimension of information overload, defining it as " distress associated with the perception that there is too much information". Williamson, Christopher Eaker and Lounsbury (2012) averred that they utilise psychometric scale development procedures to measure information overload and correlate it with demographic and psychological variables. From their findings they found that information overload is positively correlated significantly with gender (being female) (r=0.216[**]; n=179; p<0.01); age (r=0.183[*]; n=179; p<0.05) and year in college (r=0.213[**]; n=152; p<0.01); and negatively with all measures of life satisfaction.

Therefore, the following was hypothesized: The first was whether women report the same level of information anxiety as do men; secondly, whether more experienced middle managers report the same level of information anxiety as do less experienced middle managers; and thirdly, whether university graduates report the same level of information anxiety than do non-graduates (Girard, 2005). The research finding based on the null hypothesis for the levels of information anxiety between university graduates and non-graduates managers shows no significant difference between the groups with respect to the level of information anxiety reported. A two-sample t-test between groups was performed to determine whether there was a significant difference between the samples with respect to the level of information anxiety reported. The t-statistic was not significant at the .05 critical alpha level, t (87) = 0.851, p = .397 (two-tailed). Therefore, the null hypothesis was accepted and the result concluded that the difference in information anxiety was not significant.

Blundell and Lambert (2014) posit another dimension to information anxiety from a pilot study they conducted on undergraduates. Blundell and Lambert defined the phenomenon as a combination of library anxiety and information technology anxiety in which students experience uncomfortable feelings or emotions while in an information setting (using a library or information technology). Information anxiety is prevalent among university students (Battle, 2004; Blundell and Lambert, 2014), who, when caught in an information-

anxious moment, can feel tension, fear and a sense of helplessness (Blundell and Lambert, 2014;; Onwuegbuzie *et al.,* 2004).

Blundell and Lambert (2014) assert that the studies in information seeking processes of undergraduate students in the United States has repeatedly shown that uncertainty and anxiety are common factors in the process, which when such uncertainty and anxiety are heightened (either through frustration or lack of ability in this area), information seekers either "satisfice" in their information seeking (i.e. claim satisfaction with minimal or poor resources), or abandon a search for information altogether (Becker, 2003; Gross *et al.*, 2007; Gross *et al.*, 2009; Kalbach, 2006; O'Brien *et al.*, 2007; Prabha *et al.*, 2007 all cited in Blundell & Lambert, 2014).

Findings by Blundell and Lambert (2014) on undergraduates information anxiety, analysis of the pilot study's descriptive statistics revealed that although 50% of respondents were mostly sure about how to begin a general search for information, 47.8% respondents agreed or strongly agreed they were unsure about how to begin their research, 62.5% of respondents feel uncomfortable searching for information, and 67% of respondents do not want to learn how to do their own research (Blundell & Lambert, 2014).

Presently, however, very little research examines specific factors that either increase or decrease anxiety or uncertainty during the information seeking process. One thing these cited researchers do agree on is that one of the best ways to aid students' academic success is through limiting their various anxieties during the information seeking process. The pilot study carried out by Blundell and Lambert (2014) forms a foundation for further research in the area of limiting information anxiety specifically by increasing understanding of specific causes for information anxiety among undergraduates in general.

It has been observed that an abundance of information can paralyze rather than enable action and can reduce one's sense of control (Edmunds & Morris, 2000 Cited in Carrier *et al.,* 2014). Katapol (2010) suggests that students are affected by information anxiety, which creates a barrier to obtaining and using information for academic work. He opines information anxiety rather than library anxiety that affects information behaviour in the use of various information sources: humans (librarians, other students, and professors); electronic resources such as the library web page, databases, social networking and push technology sources such as discipline listservs and RSS feeds; and the physical library resources such as books (Katapol,2010). The relationship of undergraduates to information is not the only source of information anxiety (Blundell & Lambert, 2014; Katapol, 2010). They

are also made anxious by the fact that their access to information is often controlled by other people (the producers of such information).

Katapol (2010) further asserts that the diverse resources used by students to gather information for academic tasks suggests that researchers and practitioners reframe and expand the idea of library anxiety and consider the notion of information anxiety. What caused anxiety for participants were problems in finding too much, or not enough, online information; determining authenticity and authority of online sources; and obtaining information from people who, according to participants, knew little about the research and relevant literature on the minority populations that were the focus of their research.

2.1 Theoretical framework
2.1.1 Information Anxiety Theory

The Wurman's information anxiety theory forms the basis of the information anxiety of undergraduates under study. The information anxiety theory was propounded by Richard S. Wurman in 1989. This theory states that information anxiety is produced by the ever widening gap between what one understands and what one thinks one should understand when information does not tell us what we want or need to know. Information anxiety was constructed in a manner similar to the measure used in Girard (2004; 2005), Allison (2006; 2008), Girard and Allison (2008). As in these studies, Wurman's (1989) theory of information anxiety formed the basis for this independent variable. It was generated as a sum of the five subcomponents defined by Wurman and others (Linden, 2001; Linden, Ball, Arevolo & Haley, 2002) -- Understanding Information, Information Overload, Knowing Information Exists, Finding Information, and Accessing Information. Respondents were asked to rate the degree to which each of these five subcomponents, or elements, might be experienced in typical work situations (defined by scenarios). This resulted in scores for each of the subcomponents, as well as an overall Information Anxiety Score generated as the mathematical sum of the five subcomponent scores. This theory would be adapted to this study in order to conceptualise the information anxiety and information overload by undergraduates based on the five subcomponents of information anxiety by Wurman which was supported by various scholars in the field (Allison, 2006; 2008; Girard, 2004; 2005; Girard & Allison, 2008; Linden, 2001; Linden, Ball, Arevolo & Haley, 2002).

METHODOLOGY

3.1 Research design

The descriptive survey research design of the correlational type was adopted for this study which involved an attempt to provide an accurate description of a particular situation or phenomenon by examining the relationship between two or more variables within the same group of individuals at one or more points in time (Korb, 2012; Popoola, 2011). The descriptive survey was most appropriate due to the nature of this study. The plan of the study involved the use of a closed structured questionnaire to collect data in order to test the research hypotheses formulated. The use of this method was aimed at obtaining the relevant facts about the significant influence of age and gender on information anxiety as well as information overload by undergraduates in two universities in Southwest Nigeria.

3.2 Population of the study

The target population of this study consisted of all the undergraduates (25, 562) of the two universities selected in Southwest Nigeria: University of Ibadan (UI) and Tai Solarin University of Education (TASUED). The population for the study comprised the 19,248 undergraduates in the four Faculties that were common to the two universities. This was done to ensure that the population and sample share certain similar characteristics from which generalized conclusions could be derived from the sample to the population (Korb, 2015; Singleton & Straits, 2010). The second reason was that there were only four Colleges (similar to Faculties) in Tai Solarin University of Education (http://tasued.edu.ng). Therefore, the population of study was 19,248 undergraduates in the four Faculties that were common to the two universities.

3.3 Sampling technique and sample size

The purposive and stratified random sampling technique with proportionate to size was used to select the sample size of undergraduates. The strata in this study were the four Faculties in both universities under study. A sampling fraction of 1.0% was used to obtain a total number of 193 undergraduates as the sample size for the study. This sample size was justified by Krejcie and Morgan (1970), who recommended a sample size of 384 for a population of 200,000.

3.5 Data collection instrument

The data collection instrument used for the study was the structured questionnaire. The structured questionnaire was made up of two (2) parts:

Section A elicited background information such as institution, age and gender of respondents.

Section B elicited information on respondents' information anxiety. The level of Information Anxiety was assessed using a revised version (adapted and modified) of the "The Information Anxiety Scale" by Girard and Allison (2008) and its 5 dimensions, using 1 item per Dimension except for information overload with 7 items. Of the series of 5 statements of the original methodology, 6 items were added (from the 15 items by Williamson, Christopher Eaker & Lounsbury, 2012) and all the items were revised in order to fit the study's specific situation. Participants were asked to rate their agreement with the statements on a four-point Likert-type scale (ranging from1"Strongly disagree" to 4"Strongly agree").

3.6 Validity and reliability of the instrument

The draft of the structured questionnaire was given to experts in the field of library and information studies for their inputs, expert opinions and judgments on the adequacy, accuracy, precision and appropriateness of the items of constructs used. Based on their advice, suggestions and constructive criticisms, some items on the questionnaire were modified for face validity. The questionnaire was trial- tested on thirty undergraduates from the faculties which were not part of the faculties selected for the study for content validity. The data collected were subjected to Cronbach's Alpha reliability coefficient and the results obtained show Cronbach's Alpha reliability of 0.759 for Information Anxiety Scale and 0.887 for Information Overload Scale. According to Nunnally and Bernstein (1994), the values of Cronbach's Alpha of 0.700 or higher are enough to conclude that the scale exhibits adequate internal consistency reliability. Therefore, this instrument was considered very adequate, suitable and appropriate for the study.

3.7 Data collection procedure

The questionnaire was personally administered by the researcher. The administered copies of the structured questionnaire were collected sequel to its completion by the respondents. The administration of the questionnaire was done over a period of four (4)

weeks in order to collect adequate data for the successful realisation of the research aim and objectives.

3.8 Method of data analysis

The descriptive and inferential tools were employed to analyse the data collected. The Statistical Package for Social Sciences (SPSS) software was used for the analysis in order to arrive at accurate decisions and conclusions. The demographic characteristics were analysed with the descriptive method of analysis using frequency counts and percentages presented in tables while Hypotheses 1-6 (H_o1- H_o6) were analysed using the inferential statistics such as Pearson Moment Correlation and Multiple Regression Analyses. The Pearson Moment Correlation was used to ascertain the significant level of the variables concerned while Multiple Regression Analysis was used to establish the composite relationship among the variables concerned. Tables were used to present the result of the findings and discussion of findings would be made sequel to the interpretation of the findings.

RESULTS AND DISCUSSION

This study investigated the influence of age and gender on information anxiety as well as information overload by undergraduates in two universities in Southwest Nigeria. Respondents for the study were drawn from the University of Ibadan, Ibadan, and Tai Solarin University of Education, Ijagun.

4.1 Demographic characteristics of the respondents

Descriptive statistics of frequency counts (F) and percentages (%) were used for the demographic characteristics of the respondents. Table 4.1 shows the distribution of respondents based on age and gender. On age, in University of Ibadan 44(63.8%) were between 16-20 years category. Only 1(1.4%) was between 31-35 years while in Tai Solarin University of Education, 70(56.5%) were between 21-25 years. Only 11(8.9%) were between 26-30 years.

Findings revealed that there were more males than females in both universities. Table 4.1 shows that there were 37(53.6%) male respondents in University of Ibadan while in TASUED, there were 68(54.8%) male respondents.

Table 4.1: Demographic characteristics of respondents by age and gender

Variables	University of Ibadan (UI)		Tai Solarin University of Education (TASUED)	
Age	**Frequency (F)**	**Percentage (%)**	**Frequency (F)**	**Percentage (%)**
16-20	44	63.8	43	34.7
21-25	18	26.1	70	56.5
26-30	6	8.7	11	8.9
31-35	1	1.4	-	-
Gender				
Male	37	53.6	68	54.8
Female	32	46.4	56	45.2
Total	69	100.0	124	100.0

4.2 Testing the hypotheses

This section of the research reports the results of the testing of null hypotheses formulated to guide the study. The hypotheses were tested at 0.05 level of significance.

4.2.1 Hypothesis H_01: There is no significant relationship between age and information anxiety by undergraduates in the selected universities.

To establish the association between age and information anxiety by undergraduates in the selected universities, a correlation was conducted. Table 4.2 revealed that in UI, there was a negative significant correlation between age and information anxiety by the respondents (r= -0.156; df = 68; p >0.05). Since such relationship was not significant at the 0.05 level of significance the null hypothesis 1 was hereby accepted in UI.

Similarly, Table 4.2 revealed that in TASUED, there was also a negative significant correlation between age and information anxiety by the respondents (r= -0.146; df = 123; p >0.05). Since such relationship was not significant at the 0.05 level of significance the null hypothesis 1was also accepted in TASUED.

The results hereby inferred that age had no significant influence on information anxiety at the .05 level of significance in both institutions. Therefore, age does not determine the information anxiety of undergraduates in both universities.

Table 4.2: Relationship between age and information anxiety by undergraduates in UI and TASUED

Name of University	Variable	Mean	Std. Deviation	N	r	Df	Sig. (P)	Remarks
University of Ibadan	Age	1.48	0.720	69	-0.156	68	0.200	Insig.
	IA	24.52	6.441					
TASUED	Age	1.74	0.610	124	-0.146	123	0.106	Insig.
	IA	23.37	5.715					

4.2.2 Hypothesis $H_0 2$: There is no significant relationship between gender and information anxiety by the undergraduates.

Findings from Table 4.3 established that in UI, there was a weak negative correlation between gender and information anxiety by the respondents (r= -0.035; df = 68; p > 0.05), although the relationship was not significant. However, since the correlation was not significant in UI at the .05 level of significance, the null hypothesis was hereby accepted.

On the contrary, Table 4.3 revealed that in TASUED, there was a weak positive correlation between gender and information anxiety by the respondents (r= 0.064; df = 123; p > 0.05), although the positive correlation was also not significant. However, since the correlation was not significant in TASUED at the .05 level of significance, the null hypothesis 2 was hereby accepted.

From the above, although there was negative correlation in UI and positive correlation in TASUED, the correlations in both universities were not significant at the threshold level of significance (p< .05).

Table 4.3: Relationship between gender and information anxiety by undergraduates in UI and TASUED

Name of University	Variable	Mean	Std. Deviation	N	r	Df	Sig. (P)	Remarks
University of Ibadan	Gender	1.46	0.502	69	-0.035	68	0.775	Insig.
	IA	24.52	6.441					
TASUED	Gender	1.45	0.500	124	0.064	123	0.479	Insig.
	IA	23.92	5.715					

4.2.3 Hypothesis H₀3: There is no significant composite relationship among age, gender and information anxiety by the undergraduates.

Table 4.4 and 4.5 showed that in UI, the R =0.164 and multiple correlation R^2=0.027 obtained were found to be insignificant (F [2, 66] = 0.911; p >0.05). This means that the R was due to chance and that only 2.7% of the variance was accounted for by the two predictor variables when taken together while other variables not included in this model may have accounted for the remaining variance. Similarly, in TASUED, the R = 0.149 and multiple correlation R^2=0.022 obtained was found to be insignificant (F [2,121] = 3.491; p > 0.05). The R was also due to chance. This means that 2.2% of the variance was accounted for by the two predictor variables when taken together while other variables not included in this model may have accounted for the remaining variance.

Table 4.4: Summary of composite relationship among age, gender and information anxiety by undergraduates in UI and TASUED

Name of University	R	R Square	Adjusted R Square	Std. Error of the Estimate
UI	0.164	0.027	-0.003	6.450
TASUED	0.149	0.022	0.006	5.697

Table 4.5: ANOVA Table for the Regression

Name of University	Model	Sum of Squares	df	Mean Square	F	Sig. (P)
UI	Regression	75.789	2	37.894	0.911	0.407
	Residual	2745.429	66	41.597		
	Total	2821.217	68			
TASUED	Regression	89.640	2	44.820	1.381	0.255
	Residual	3927.553	121	32.459		
	Total	4017.194	123			

Table 4.6 showed that there was a negative but insignificant multiple influence of age on information anxiety (β = - 0.161, t = -1.319, p > 0.05 {sig. 0.192}). On the other hand, gender had a positive but insignificant multiple influence on information anxiety (β = 0.050, t = -0.410, p > 0.05 {sig. 0.683}). It could be inferred from Table 4.6 both age and gender had no multiple significant influences on information anxiety by undergraduates in UI. However, the significance of the variables was beyond the bounds of the threshold for significance, well above the 0.05 level. This was not statistically significant, indicating that the variables, when included together, did not adequately predict any changes in the information anxiety.

The table showed further that there was a negative but insignificant influence of age on information anxiety (β = - 1.299, t = -1.501, p > 0.05 {sig. 0.136}). In addition, gender had a positive but insignificant influence on information anxiety (β = 0.372, t = 0.352, p >

0.05 {sig. 0.725}). It could however be inferred from the table that both age and gender had no multiple influence on information anxiety by undergraduates in TASUED. The significance of the variables was also beyond the bounds of the threshold for significance, above the 0.05 level. This was not statistically significant, indicating that the variables, when included together, did not also adequately predict any changes in the information anxiety.

Therefore, the multiple influence of age and gender on information anxiety in both universities showed that, none of the two predictors had significant multiple influences on information anxiety in UI and TASUED. From the findings, therefore, none of the demographic factors (the independent variable) contribute to information anxiety. Therefore, the null hypothesis 3 was accepted in UI and TASUED respectively.

Table 4.6: Composite relationship among age, gender and information anxiety by undergraduates

Name of University	Factors	Unstandardized Coefficients		Standardized Coefficients	Rank Sig.	T	
		B	Std. Error	Beta			
UI	(Constant)	27.589	3.023			9.126	.000
	Age	-1.440	1.092	-0.161	2nd	-1.319	.192
	Gender	-0.642	1.564	0.050	1st	-0.410	.683
TASUED	(Constant)	25.642	2.436			10.524	.000
	Age	-1.299	0.865	-0.139	2nd	-1.501	.136
	Gender	0.372	1.056	0.032	1st	0.352	.725

4.2.4 Hypothesis H_04: There is no significant relationship between age and information overload by the undergraduates.

To establish the association between age and information overload by undergraduates in the selected universities, a correlation was conducted. Table 4.7 revealed that in UI, there was a negative significant correlation between age and information overload by the respondents (r= -0.170; df = 68; p >0.05). Since such relationship was not significant at the 0.05 level of significance the null hypothesis 4 was hereby accepted in UI.

Similarly, Table 4.7 revealed that in TASUED, there was also a negative correlation between age and information overload by the respondents (r= -0.168; df = 123; p >0.05). Since such relationship was also not significant at the 0.05 level of significance the null hypothesis 4 was hereby accepted in TASUED.

The results hereby inferred that age had no significant influence on information overload at the .05 level of significance in both institutions. Therefore, age does not determine the information overload of undergraduates in both universities.

Table 4.7: Relationship between age and information overload by undergraduates in UI and TASUED

Name of University	Variable	Mean	Std. Deviation	N	r	Df	Sig. (P)	Remarks
University of Ibadan	Age	1.48	0.720					
				69	-0.170	68	0.162	Insig.
	IO	15.86	4.470					
TASUED	Age	1.74	0.610					
				124	-0.168	123	0.062	Insig.
	IO	15.71	3.987					

4.2.5 Hypothesis H_05: There is no significant relationship between gender and information overload by undergraduates in UI and TASUED

Findings from Table 4.8 established that in UI, there was a weak negative correlation between gender and information overload by the respondents (r= -0.035; df = 68; p > 0.05), although the relationship was not significant. However, since the correlation was not significant in UI at the .05 level of significance, the null hypothesis 5 was hereby accepted.

On the contrary, Table 4.8 revealed that in TASUED, there was a weak positive correlation between gender and information overload by the respondents (r= 0.079; df = 123; p > 0.05). However, since the correlation was not significant in TASUED at the .05 level of significance, the null hypothesis 5 was also accepted.

From the above, although there was negative correlation in UI and positive correlation in TASUED, the correlations in both universities were not significant at the threshold level of significance (p< .05).

Table 4.8: Relationship between gender and information overload by undergraduates in UI and TASUED

Name of University	Variable	Mean	Std. Deviation	N	r	Df	Sig. (P)	Remarks
University of Ibadan	Gender	1.46	0.502					
				69	-0.035	68	0.775	Insig.
	IO	15.86	4.470					
TASUED	Gender	1.45	0.500					
				124	0.079	123	.386	Insig.
	IO	15.71	3.987					

4.2.6 Hypothesis H$_0$6: There is no significant composite relationship among information overload by the undergraduates.

Table 4.9 and 4.10 showed that in UI, the R = 0.0178 and multiple correlation R^2= 0.032 obtained were found to be insignificant (F [2, 66] = 1.076; p >0.05). This means that the R was due to chance and that only 3.2% of the variance was accounted for by the two predictor variables when taken together while other variables not included in this model may have accounted for the remaining variance. On the contrary, in TASUED, the R = 0.173 and multiple correlation R^2=0.030 obtained was found to be significant (F [2,121] = 1.870; p > 0.05). The R was also due to chance. This means that 3.0% of the variance was accounted for by the two predictor variables when taken together while other variables not included in this study may have accounted for the remaining variance.

Table 4.9: Summary of composite relationship among age, gender and information overload by undergraduates in UI and TASUED

Name of University	R	R Square	Adjusted R Square	Std. Error of the Estimate
UI	0.178	0.032	0.002	4.465
TASUED	0.173	0.030	0.014	3.959

Table 4.10: ANOVA Table for the Regression

Name of University	Model	Sum of Squares	df	Mean Square	F	Sig. (P)
UI	Regression	42.906	2	21.453	1.076	0 .347
	Residual	1315.645	66	19.934		
	Total	1358.551	68			
TASUED	Regression	58.630	2	29.315	1.870	0.159
	Residual	1896.918	121	15.677		
	Total	1955.548	123			

Table 4.11 showed that there was a negative but insignificant multiple influence of age on information overload (β = - 0.175, t = -1.438, p > 0.05 {sig. 0.155}). Similarly, gender had a negative but insignificant multiple influence on information overload (β = -0.052, t = - 0.410, p > 0.05 {sig. 0.673}). It could be inferred from Table 4.11 both age and gender had no multiple significant influences on information overload by undergraduates in UI. However, the significance of the variables was beyond the bounds of the threshold for significance, well above the 0.05 level. This was not statistically significant, indicating that the variables, when included together, did not adequately predict any changes in the information overload.

The table showed further that there was a negative insignificant influence of age on information overload (β = - 0.158, t = -1.723, p > 0.05 {sig. 0.087}). In addition, gender had a positive insignificant influence on information overload (β = 0.042, t = 0.462, p > 0.05 {sig. 0.645}). It could however be inferred from the table that both age and gender had no multiple influence on information overload by undergraduates in TASUED. The significance of the variables was also beyond the bounds of the threshold for significance, above the 0.05 level. This was not statistically significant, indicating that the variables, when included together, did not also adequately predict any changes in the information overload.

Therefore, the multiple influences of age and gender on information overload in both universities showed that, none of the two predictors had significant multiple influences on information overload in UI and TASUED. From the findings, therefore, none of the demographic factors contribute to information overload. Therefore, the null hypothesis 6 was accepted in UI and TASUED respectively.

Table 4.11: Composite relationship among age, gender and information anxiety by undergraduates

Name of University	Factors	Unstandardized Coefficients		Standardized Coefficients	Rank Sig.	T	
		B	Std. Error	Beta			
UI	(Constant)	18.133	2.093			8.664	.000
	Age	-1.087	0.756	-0.175	2nd	-1.438	.155
	Gender	- 0.458	1.083	-0.052	1st	-0 .423	.673
TASUED	(Constant)	17.023	1.693			10.053	.000
	Age	-1.036	0.601	-0.158	2nd	-1.723	.087
	Gender	0.339	0.734	0.042	1st	0.462	.645

4.3 Discussion of the findings

The test of significant relationship between age and information by undergraduates of both universities showed that there was a negative insignificant correlation between age and information anxiety by the respondents. Therefore, the null hypothesis (Ho1) was accepted and the result concluded that no significant relationship exist between age and information anxiety in both universities.

Findings from the test of significant relationship established that in UI, although there was negative correlation in UI and positive correlation in TASUED, the correlations in both universities were not significant at the threshold level of significance (p> 0.05). Therefore, the null hypothesis (Ho2) was accepted and the result concluded that relationship between gender and information was not significant in both universities.

From the findings, also, the multiple or composite influence of age and gender on information anxiety by undergraduates in both universities showed that, none of the two predictors had significant multiple influences on information anxiety in UI and TASUED. Therefore, the null hypothesis (Ho3) was accepted and the result concluded that no significant composite relationship exist between age and gender on the information anxiety by undergraduates in both universities.

The test of significant relationship between age and information overload revealed that there was a negative correlation between age and information overload by undergraduates in both universities, although the relationships were not significant at the 0.05 critical alpha levels (two-tailed). Therefore, the null hypothesis (Ho4) was accepted and the result concluded that relationship between age and information overload by undergraduates was not significant in both universities. This finding was at variance with Williamson *et al.* (2012).

The findings on the relationship between gender and information overload showed there was negative correlation in UI and positive correlation in TASUED, the correlations in both universities were not significant at the threshold level of significance (p> 0.05).Therefore, the null hypothesis (Ho5) was accepted in UI and TASUED respectively. This finding was at variance with Williamson *et al.* (2012).

Finally, from the findings, also, the multiple or composite influence of age and gender on information overload by undergraduates in both universities showed that, none of the two predictors had significant multiple influences on information overload in UI and TASUED. Therefore, the null hypothesis (Ho6) was accepted and the result concluded that no significant composite relationship exist between age and gender on the information anxiety by undergraduates in both universities.

SUMMARY AND CONCLUSION

5.1 Summary of the findings

This study investigated influence of age and gender on information anxiety and information overload by the undergraduates in two universities in Southwest Nigeria. In order to achieve the objectives of the study, six hypotheses were formulated and tested. The findings of the study are summarized below:

1. There was no significant correlation between age and information anxiety in both universities.

2. There was no significant correlation between gender and information anxiety in both universities.

3. Both age and gender had no multiple significant influences on information anxiety by undergraduates in UI and TASUED.

4. There was no significant correlation between age and information overload in both universities.

5. There was no significant correlation between gender and information overload in both universities.

6. Both age and gender had no multiple significant influences on information overload by undergraduates in UI and TASUED.

5.2 Conclusion

Although, the literature is inconclusive about whether specifically there is a relationship between demographics and the level of information anxiety reported while mixed results were found for demographics and information overload. However, this study has also established that demographics such as age and gender had no significant relationship with information anxiety as well as information overload by undergraduates in University of Ibadan and Tai-Solarin University of Education; there is a need for further research on other demographic factors in order to elucidate their influences on information anxiety and information overload by undergraduates.

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