

## **Relationship between computer anxiety and electronic library use among LIS undergraduates in universities in Southern Nigeria**

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### **Abstract**

The study investigated the relationship between computer anxiety and electronic library use among library and information science undergraduates in universities in Southern Nigeria. One research question guided the study while one research hypothesis was tested at 0.05 level of significance. The correlational research design was adopted for the study. The population of the study was 10,345 library and information science (LIS) undergraduates from ten federal, seventeen state and eight private universities in Southern Nigeria. The study adopts purposive and quota sampling technique to determine the sample size of 1,017 used for the study. Two instruments: “Undergraduates’ Computer Anxiety Questionnaire (UCAQ)” and “Undergraduates’ Electronic Library Use Questionnaire (UELUQ)” were used for data collection. The overall reliability indexes for the two instruments were .90 and .89 respectively using Cronbach’s alpha. Pearson’s Product Moment Correlation Coefficient (PPMC) and simple linear regression was used to analyze the data. The findings indicated that there was a very low positive relationship between LIS undergraduates’ computer anxiety and their electronic library use. The study further exemplified that there was a significant relationship  $f(df; 1,981) = 34.44, p < 0.05$  between computer anxiety and electronic library use among LIS undergraduates. However, it was recommended that LIS undergraduates should engage themselves in computer skills training regularly in order to have the needed proficiency in the different aspects of computer as this will ensure a continued and more effective utilization of electronic library resources. Also, university library management should have a well – structured electronic library use training and retraining for LIS undergraduates regularly through seminars, workshops, conferences to acquire and improve on the needed skills towards electronic library information resources usage.

**Keywords:** Computer anxiety, electronic library use, library and information science, undergraduate, Southern Nigeria

### **Introduction**

An electronic library is a multi-disciplinary concept that shares various branches of computer science and other subjects such as data management, information retrieval, library science, document management, information systems, the web, image processing, and artificial intelligence. The multi-disciplinary nature of the electronic library engenders flexibility in the concept which makes it difficult to have a singular definition of an electronic library. However, the format, form and nature of the library give clearer picture of what an electronic library means. An electronic library is a library in which collections are stored in

electronic or digital formats (as opposed to print, microform, or other media) and accessible by computers and telecommunication gadget. The content may be stored locally, or accessed remotely via electronic systems and computer networks (IFLA, 2012). The electronic library possesses the same functions and goals as the traditional print-based library and the difference lies in the electronic part of the term which indicates merely that the material is stored and accessed electronically.

Comprehensively, the electronic library can be defined as an organization which provides the resources, including the

specialized staff, to select, structure, offer intellectual access to, interpret distribute, preserve the integrity of, and ensure the persistence over time of collections of electronic works so that they are readily and economically available for use by a defined community or set of communities. The rationale for the adoption of electronic libraries in universities is solely to provide electronic and online information resources for staff, researchers and students. This provision is to enhance educational development and provide educational information resources for effective teaching, learning and research activities because users may not visit the library directly or physically for reference. Electronic library achieves their objectives by creating opportunities for users to access and retrieve appropriate information that cater for their information needs (Anyim, 2018).

Electronic library allows users to read any published items from their residence, office or college via internet. The rationale for adoption of electronic libraries in universities is solely to provide electronic and online information resources for staff, researchers and students. This provision is to enhance educational development and provide educational information resources for effective teaching, learning and research activities because users may not visit the library directly or physically for the reference. Electronic library achieves its objectives by creating opportunities for users to access and retrieve appropriate information that cater for their information needs (Anyim, 2018). Electronic libraries combine technology and information resources to allow remote access, breaking down the physical barriers between resources and researches (Marchionini & Maurer, 2012).

This combination of technology and information resources is made possible through the advent of the internet

(Eguavoen, 2011). The emergence and widespread use of Internet including web technologies have made libraries to undergo transformation from a manual system to a technologically-driven system and library patron's most especially undergraduate need to adapt to this latest technological innovation to use electronic library effectively (Bharti & Verma, 2021). Thus, the Internet is starting to provide the largest library humankind has ever had (Bank, 2017). The electronic library enables library users to directly access electronic data via telecommunications networks since the resources are available in digital format; where there is no paper and the information resources (indexes, journals, and reference materials including online reference services) are accessed through computer networks or the internet. Electronic library resource consists of materials that are computer – controlled, including materials that required the use of a peripheral (e.g., a CD-ROM player or drive) directly connected to a computerized device.

Conversely, adequate knowledge in the use of computer is paramount if undergraduates are to use the electronic libraries effectively because the cognition, proficiency and capacity to use the computer without computer phobia are of great importance to harness electronic library resources in this 21<sup>st</sup> century (Bringula, Sarmiento & Basa, 2017). However, despite the significance of electronic libraries as providers of authoritative scholarly resources in a convenient and unrestricted manner, studies have shown that usage of electronic libraries is not up to the level expected or is simply underutilized (Gakibayo, Ikoja-odongo & Okello-Obura, 2013; Kwadzo, 2015; Akussah, Asante & Adu-Sarkodee, 2015; Yamson, Appiah & Tsegah, 2018; Ebijuwa & Mabawonku, 2019). Also, some undergraduates believe that their search skills are inadequate for the

computerized electronic libraries information resources due to their low level of computer proficiency (Omosekejimi, Eghworo & Ogo, 2015), and even though more undergraduates use electronic libraries, there are still majority of them who lag behind in their confidence and/or desire to use computers and telecommunication gadget (Oladokun, 2022).

This circumstance may be as result of anxiety. Anxiety generated in the use of computer also known as computer anxiety has various speculations about what it is, and also what to do about it because of its changes through the years, illustrating researcher's progression in understanding what computer anxiety is and what it entails. Computer anxiety is context specific covering a wide variety of situation in which people established uneasiness, awkwardness and fret mindset to use the computer. This state of affairs is subjectively seen as menacing which is accompanied by muscular tension, restlessness, fatigue and problems in concentration. More so, the phrase computer anxiety also known as computer stress, computer phobia, techno stress, technophobia can be defined as the propensity of an individual to exhibit a level of discomfort over his or her intending use of a computer, which is disproportionate to the true threat offered by the computer. According to Ogunsanya, Solanke and Olatoye (2020), computer anxiety means feeling insecure for using online resources for academic work, the feel that using online resources is like learning new skill, the feel that sourcing for online resources are too cumbersome to understand and the fear of inability to keep up with the everyday advancement of online resources.

Aziz and Hassan (2012) viewed computer anxiety as the fear of computers or the tendency of a person to be uneasy while using computer which connotes with negative attitudes toward computer use. This

anxiety of fear is characterized by potential negative outcomes such as damaging the equipment or looking foolish, bewilderment, panic and technophobia or computer phobia by undergraduates. Computer anxiety can also be described as the tendency of an individual to have some level of apprehension over his or her impending use of a computer. It is an agonized reaction and unnecessary tension users expressed when they come in contact with computer and telecommunication gadget. Computer anxiety can be classified and specified into various type of anxiety such as feeling of frustration, embarrassment, apprehension, avoidance, disappointment and also fear of the unknown while using computer to perform a given task (Tuncer, 2012). These various classification of computer anxiety can be cause by anger, dissatisfaction, concern and other similar emotions that can affect not only interactions with computers but as well as academic performance and productivity.

Furthermore, the presence of computer anxious undergraduates in the university can lead to academic performance glitches, decline in motivation, productivity, moral, and quality which can increase errors and absenteeism in the use of electronic library information resources (Brosnan, Gallope, Iftikhar & Keogh, 2011). Secondly, the potential benefits of computers as aids to undergraduates' academic prowess may not be fully actualized due to computer anxiety, and the success of using a computer including the electronic library information resources is dependent on the user's acceptance, commitment and also their self-confidence on computer usage. Base on this user acceptance and commitment on computer usage for undergraduate academic work, several findings have revealed that electronic library are exceedingly underutilized by undergraduates irrespective of the financial implication by both

university management and government agency like TETFund and PTDF including oil companies in Nigeria for their provision alongside adequate Internet connectivity (Kwadzo, 2015; Akussah, Asante & Adu-Sarkodee, 2015; Yamson, Appiah and Tsegah, 2018; Ebijuwá & Mabawonku, 2019).

Studies have also shown that computer anxiety, lack of confidence and lack of enjoyment influence both the acceptance of computers and their use (Fletcher & Deeds, 2014 Gressard & Loyd, 2016). Therefore, the need to disabuse the mind of undergraduates from such fears and replace these misconceptions with confidence building measures is more than ever paramount. However, limited computer experience has been found to be a factor that influences computer anxiety in the use of information technology i.e. electronic library among students of library and information science (Gressard & Loyd, 2016). To this end, this study examined the relationship between computer anxiety and electronic library use among library and information science undergraduates in universities in Southern, Nigeria.

### **Research question**

The following research question is answered in the study:

1. What is the relationship between computer anxiety and electronic library use among LIS undergraduates in universities in Southern Nigeria?

### **Hypotheses**

The following null hypothesis is tested in the study:

**HO:** There is no significant relationship between LIS undergraduate computer anxiety and their electronic library use in universities in Southern Nigeria.

### **Literature review**

Electronic library has expressively altered information handling and management in academic environments most especially university libraries in particular. Electronic library is a multi-disciplinary concept that shares various branches of computer science including data management, information retrieval, library science, document management, information systems, the web, image processing, and artificial intelligence (Anyim, 2018). Multidisciplinary nature of electronic library engenders flexibility in the definitions which makes it difficult to have a singular definition of electronic library.

Electronic library is the library where some or all of the holdings of the library are available in electronic format, and the services of the library are also made available electronically-frequently over the Internet so that users can access them remotely (Onwuchekwa & Jegede, 2011). According to Kude (2013), electronic library also known as web-based libraries is a library consisting of electronic materials and services with walls as well as without walls, depends on the way the users access it. The foregoing means that electronic library eliminates physical boundaries of data storage, access, retrieval and dissemination of information to users within and across the globe with the use of internet network.

Owolabi, Idowu, Okocha and Ogundare (2016) noted that electronic library is a set of documents available through electronic means by the use of digital technologies that allow for the retrieval, archiving, preservation, and dissemination of electronic documents. Electronic library refers to the process of translating a piece of information such as a book, sound recording, picture or video into bits (Umaru, Aghadiuno & Mamo, 2018). These bits are the fundamental units of

information in a computer system. Fabunmi, Paris and Fabunmi (2016) established that electronic library use can be seen as the process of using electronic resources in the library via electronic medium. Yudina (2018) opined that electronic libraries use as information systems that allow reliable storage and effective use of various collections of electronic documents (text, image, sound, video, etc.), localized in the system itself, as well as accessible to it through telecommunications networks.

Borisova, Mikidenko and Storozheva (2020) asserted that electronic library use as that process of staying off-library to access electronic resources from diverse ends via the use of fingertips, computer and telecommunication gadget. Thus, students' can access information around the globe, particularly through the internet for their scholarly work. Information can be access from different part of the globe without any geographical and time limitations. The electronic library information resources can be subscribed through consortia/ publisher, update, modification and alteration could easily be effected, and made available in various files and formats for use. Tofi (2019) opined that electronic library use has created opportunities for global access to information, enhanced the speed of service, increased the number of users served, increased the quality of information provided, and offered new opportunities for undergraduate students to find relevant information. The use of electronic library enables undergraduates to access current international literature as soon as it is published on the Internet from different location.

Electronic library information resources consist of information provided in electronic formats such as CD-ROM, databases, flash drives, e-books e-journals, online database, Online Public Access Catalogues, institutional repository, e-prints,

World Wide Web; WIFI; search engines; online indexes; video CDs VSAT based Internet connectivity; portals and other computer – based electronic networks (Ekhanuere, Olayinka, Taiwo, Alonge & Obono, 2015; Ekere, Omekwu & Nwoha, 2016). Electronic library information materials also include all digital materials, as well as a variety of analog formats that require electricity, computer and Internet to use it (Kude, 2013). Electronic library information resources can be searched, browsed, accessed, copied, downloaded fast and customized, linking feature facilitates to link within the documents as well as outside of the documents (Owolabi, Idowu, Okocha & Ogundare, 2016). More-so, undergraduate can use electronic library resources simultaneously, and it is possible to monitor the usage of electronic information resources to some extent (Tlakula & Fombad, 2017).

However, undergraduates in university libraries make use of electronic library information resources for many purposes mostly for academic purposes that is, retrieving current literature for studies and preparing for examinations, doing class assignments, carrying out research projects, and communicating and collaborating with peers and teachers via the internet on e-mail or by following blog discussions (Adeniran, 2013). Undergraduates use e-books and e-journal articles to acquire knowledge and carry out research work (Ajayi, Shorunke & Aboyade, 2014). The use electronic library use help to develop access, increase usability and efficiency, and create new ways for students to use the available information in the university library (Umukoro & Tiamiyu, 2016). Electronic library use gives users reliable and accurate information for the right user. In addition, the use of electronic library information resources helps students to be well-informed and up-to-date in their respective thematic

areas, unlike print information resources that are not updated regularly (Fabunmi, Paris & Fabunmi, 2016).

In the context of this study, electronic library use can be seen as the electronic utilization of library information resources with the aid of computer and Internet connectivity. These information resources that are used electronically in the library include; e-book, e-journal, e-print, e-conference proceedings, e-thesis and dissertation, CD-ROMs, offline database, online data base, Internet access, institutional repository, Online Public Access Catalogues, e-mail reference services, ask-a-librarian, virtual reference desk, pathfinders online.org, frequently asked questions, question point reference services, user orientation and feedback, online current awareness, electronic reference sources just to mention but a few. Electronic library use affords students the opportunity to have access to global information resources, beck and call most especially the Internet for their academic prowess.

Anxiety is a feeling of uneasiness and worry, usually generalized and unfocused as an over-reaction to a situation that is only subjectively seen as menacing. Anxiety refers to a complex combination of negative emotional responses that include worry, fear, apprehension and agitation. Mathew (2012) defines anxiety as a natural and unavoidable reaction to a perception of danger or risk. American Psychiatric Association (2013) define anxiety as a normal human response, when excessive or persisting beyond developmentally appropriate periods it may be diagnosed as an anxiety disorder such as generalized anxiety disorder and obsessive-compulsive disorder. Anxiety come in different format, however, anxiety in the use of computer referred to computer anxiety.

Computer anxiety can be defined as the inclination of an individual to have a negative reaction while considering computer usage. According to Kannan, Muthumanickam and Chandrasekaran (2016) computer anxiety is feeling when an individual is afraid, uneasy to use computer. According to Wan-Husin, Thinakaran and Wan-Husin (2018), computer anxiety can be define as an emotional response usually resulting from a fear of using the computer with negative experiences such as damaging the computer components or looking foolish. Computer anxiety is a substantial barrier influencing the use of computers ultimately influencing the academic activities of students (Oribhabor, 2020). Computer anxiety can be one of the major problems that affect the effective and efficient use of information resources by students in university electronic libraries.

According to Saadé and Kira (2009), there are three types of computer anxieties: trait, state, and concept-specific. Trait anxiety defined as a general pervasive anxiety that is experienced by a person over the entire range of life experience. A person in this kind of anxiety will feel chronically anxious and constantly under pressure regardless of their situation. State anxiety is described as anxiety that fluctuates over time and or arises in a responsive situation where related to a person's learning background which a person may have experienced some anxiety in a situation and that anxiety is transferred to a similar situation when it occurred. While, concept-specific anxiety is referring to a transitory-neurotic type of anxiety that the range between the trait and state anxieties.

Simsek (2011) pointed out that there are three major dimensions of computer anxiety as psychological, operational, and sociological. To be more concrete, psychological dimension includes attitudes toward computers, self-efficacy, personality

types, avoidance, and self-perceptions. Operational dimension usually results from computer courses, teachers, nature of computers, the extent of experiences with the computer, and owning a personal computer. Sociological dimension is related to factors of age, gender, nationality, socio-economic status, and the field of study. Student trepidation is as a result of anxiety which maybe an emotion characterized by an unpleasant state of inner turmoil, often accompanied by nervous behavior such as pace back and forth, somatic complaints, and rumination (Mathew, 2012).

However, with the increasing use of technology in everyday academic life of undergraduates, one would expect that the use of computers would be comfortable and straightforward for student. It will interest you to note, that some student still feels intimidated when using computers, while others experience multiple levels of anxiety and, for high levels of anxiety, manifest what is known as computer anxiety (Do-santo & De-Santana, 2018). A person with computer anxiety may experience fear of the unknown, feeling of frustration, possible embarrassment, failure and disappointment which may result to avoidance towards computer usage (Olatoye, 2009). The thought that students vary in their levels of computer anxiety experienced when using electronic libraries is no more an issue or a new phenomenon (Parayitam, Desai, Desai & Eason, 2010; Shaha, Hassana & Embia, 2012).

Olatoye (2011) established that computer anxiety has shown essentially that some students avoid computers because of their phobic condition that is repelled to change. Students with high computer anxiety are likely to remain in that state of high computer anxiety in the future, and experience greater anxiety with repeated exposure to computers. The higher the anxiety in operating computers, the higher is

the tendency of committing academic procrastination (Rahardjo, Juneman & Setiani, 2013). In today information age, students are experiencing growing demand of being computer literate; they need to be able to operate these machines to function in academic activities. They are pushed into the increasing interaction with computers, some respond with enthusiasm and a desire to become the master of the machine; while others, approach the situation with fear and apprehension or reluctant (Chien, 2008; Olatoye, 2011). Therefore, in the context of this study, computer anxiety can be defined as an individual's inability to use the computer due to emotional response usually resulting from a fear of damaging the gadget.

Computers have made a dramatic impact on the contemporary society and almost all aspects of our lives are affected by computers to a significant degree most especially educational system. It is even difficult to imagine an academic task student can complete without using computers (Gill, 2015; Osisanwo, Ehioghae & Abdulsalaam, 2019). The prevalent usage of computer technology in today's society has enabled students to access much more information than ever before because computer make academic work easy (Oketunji, 2012). In the information age, students are coping with the growing demand of being computer literate; they need to be able to operate these machines to function in academic activities. They are pushed into the increasing interaction with computers, some respond with enthusiasm and a desire to become the master of the machines; others, however, approach the situation with fear and apprehension or reluctant. Thus, this situation is born out of anxiety toward the use of computer.

According to Mathew (2012), undergraduates trepidation is as a result maybe an emotion characterized by an

unpleasant state of inner turmoil, often accompanied by nervous behavior such as pace back and forth, somatic complaints, and rumination. Robinson, Vytal, Cornwell and Grillon (2013) argued that anxiety states appear to be well-conserved across numerous species, and as such (similarly to fear), they confer adaptive value. Specifically, in unfamiliar and uncertain environments, cautious avoidance while maintaining heightened vigilance and action readiness for signs of imminent danger improves survival odds. However, if this behavior is adopted permanently, it can become maladaptive.

Do-santo and De-Santana (2018) stated that some student still feels intimidated when using computers, while others experience multiple levels of anxiety and, for high levels of anxiety, manifest what is known as computer anxiety. Computer anxiety can be one of the major problems that affect the effective and efficient use of information resources by students in university electronic libraries. Although researchers' attention has been drawn for over three decades about the concept of computer anxiety but the nature of this phenomenon remains unclear because there have been mixed findings on the causes of computer anxiety since successful treatments to reduce the computer anxiety have not been developed (Olatoye, 2011). Oribhabor (2020) established that computer anxiety is a substantial barrier influencing the use of computers ultimately influencing the academic activities of students.

Computer anxious students may display the following characteristics: resisting to learn new technology that might assist them in doing research; fearing that they are the only ones not familiar with computers, therefore they experience feelings of embarrassment; feeling frustrated because the computer does not perform a function as quickly as they think it should.

Different factors may cause computer anxiety for students, which includes lack of skills to access the computer for use at any level, lack of access to and use of a computer at home which could be because of poor socio-economic background (Schlebusch, 2018). Singh, Chandwani, Singh and Kumar (2019) established that computer anxiety is emotional fear or apprehension of computer technology due to actual or imaginary interactions involving usage of computers.

Popoola and Adedokun (2021) opined that computer anxiety as a definite anxiety with several experiences, such as feelings of frustration, potential embarrassment, disappointment, and fear of the unknown. Kannan, Muthumanickam and Chandrasekaran (2016) refer computer anxiety as when a student is afraid, uneasy to use computer. Awofala, Akinoso and Fatade (2017) stated that computer anxiety has an exceeding influence on students' academic, and achieving a realistic level of competency in computer usage there is need to exposed students to daily use of computer application to repel the phobic condition of computer anxiety by undergraduates. Jan, Anwar and Warraich (2018) stated that computer anxiety is an important construct that affects about every aspect of a student's academic activity.

Rahardjo, Juneman and Setiani (2013) asserted that the higher the anxiety in operating computers, the higher is the tendency of committing academic procrastination. Alahakoon (2016) illustrated that hands-on-training of computer competency program in the university would be more effective for further reduction on the level of computer anxiety among students when students are with high computer anxiety, their performances might be poorer than those with less or no computer anxiety. Shaha, Hassana and Embia (2012) established that

undergraduates who enrolled in a teacher education course reported trainees demonstrated a high degree of computer anxiety; however, when they gained computer experience, their level of computer anxiety was reduced.

Acheampong, Zhiwen, Abubakar, Antwi and Akomeah (2016) explained that many students judge their ability to use the computer information retrieval system to accomplish the specified task as poor due to non-familiarity with the system. It is noted that a lot of students also doubt the ability of the system to provide the required responses they are looking for. This may be due to misconceptions from previous experiences or information gained from other people who have not been successful in using the information retrieval system. Teck and Lai (2011) indicated that the level of competencies on computer amongst pre-university students is still low. Aswathi and Mohammed Haneefa, (2015) highlighted that the benefits of ICT is to produce knowledge cannot be utilized if the computer literacy amongst students is low. According to Wan-Husin, Thinakaran and Wan-Husin (2018), most undergraduates have low level anxiety when using the computer, and that they are not able to demonstrate their skills when using computer during their learning process.

However, whether undergraduates feel comfortable or anxious regarding the role and use of computers in their academic endeavor, all undergraduates must be familiar with and even competent in using computers because this technology dominates all avenues of our societal as well as personal most importantly academic life (Simsek, 2011). The aim of the university library will not be accomplished if access and utilization of electronic resources are ineffective. Thus, access to and use of electronic library information resources has remained one area of growing concern for

undergraduates. Electronic libraries in various institutions all over the world, make available a wide variety of electronic resources such as journals, books, databases licensed by the university for use by the students and staff to fulfill the aim of the parent body (Men & Isreal, 2017; Lancaster University, 2018).

Electronic library resources are most useful to the information literate undergraduate of any library (Okeke, Oboreh & Nebolisa, 2019). These useful electronic library resources are accessible within and outside the library premises, users can browse, print out or save search results for study and research purposes, send via e-mail or as hard copy parts of articles to another individual for academic (Use of electronic library resources [www.Oulu.fi/library/node/11642.8/2/2017](http://www.Oulu.fi/library/node/11642.8/2/2017)). Technology (computer) has advanced in recent times and prints are giving way to the use of electronic library resources for information search and utilization especially in the academic environment, this rapid technological change has a great impact on and poses challenges to the education system most important individuals with computer anxiety (Agboola, Bamigboye & Owolabi, 2019). The effect computer anxiety has on a student is gross which in turn influence their electronic library use, and several factors that can influence computer anxiety among undergraduate students such as feelings of frustration, potential embarrassment, disappointment, fear of the unknown and experiencing a feeling of helplessness (Tuncer 2012; Popoola & Adedokun, 2021).

Computer anxiety has a significant influence on the use of electronic library resources undergraduates because it is expected that students' attitudes towards technology can be an indicator of whether they will use electronic library. Thus, lower computer anxiety and self-confidence in

computer use is an important factor for efficient use of electronic library. In the university spheres students virtually need electronic library resources to use in all academic activities such as writing term papers, class assignments, paper presentations, seminars, project writing. If a student has fears, apprehension, and negative feelings toward the use of a computer for such academic activities, it will be more difficult for such to even go further to use the electronic library resources. Consequences of avoidance of computer anxiety among university students include low academic performance and avoidance of computer use for academic purposes. Students with high computer anxiety levels will be at a significant disadvantage compared to students with low or no computer anxiety ( Evans, Borriello & Field, 2018).

Although introducing these electronic library resources is a welcome development to the information profession, their use by the library patrons most importantly undergraduates poses some challenges and concerns due to computer anxiety (Toyo, 2017). Computer anxiety is a concept-specific anxiety which is associated with students' interaction with computers (Endang, Pontoh & Amiruddin, 2018). This interaction of students with computer is relatively linked with negative beliefs about computers, problems in playing with them, and avoidance of the technology due to fear of damage to the computers and the tendency of a student to be uneasy, apprehensive and phobic towards current or future use of computer in general (Osalusi & Awujoola, 2021). Thus, a student is considered computer anxious, if his or her emotional state during interaction with computer reduces the benefits of the use of computers and discourage necessary use of electronic library resources most importantly open educational resources.

Studies have also established that computer anxiety has a strong negative influence on computer-related activities, such as computing skills, intention to use electronic library, attitudes toward computers usage, and perceived usefulness of computers to access information in the library that are electronic in nature (Fatemi-Jahromi, Forouzan & Gholaminejad, 2017; Hermawan, Biduri & Wahyu-Ningdiyah, 2021); Wolverton, Guidry-Hollier & Lanier, 2020). Therefore, considering computer anxiety and electronic library utilization, studies revealed that computer anxiety that is lack of confidence and lack of enjoyment influence both the acceptance of computers and their use of electronic library resources including teaching and learning tools (Fletcher & Deeds, 2014). Thus, the need to disabuse the mind of students from such fears and replace these misconceptions with confidence building measures is more than ever paramount because the extent of electronic library resources utilization for positive output in university is slow and little compared to the investment made by university management and government agencies due to computer anxiety.

However, empirical literature have established that there is relationship between computer anxiety of undergraduates' and electronic library use, worthy of mention among them is the investigation of Babalola and Babalola (2014) on use of information and communication technologies among distance learning students in University of Ibadan, Nigeria. The study used structured questionnaire as instrument for data collection with a population of 100 respondents. Simple random sampling technique was employed for administration of the questionnaire. The statistical tools used in the study for data analysis was simple percentages and frequency count. The finding revealed that 17.0% of the students used online resources for

educational purposes such as obtaining information and materials to do assignment, 86.2% of the students indicated that they used online resources for academic purpose specially to do their assignments. Thus, level of computer anxiety expressed by undergraduate students could have a relationship with their use of electronic library resources.

Likewise, the examination of Ogunsanya, Solanke and Olatoye (2020) on computer anxiety and use of online resources by distance learning students in two universities in Oyo State, Nigeria. The descriptive survey design was adopted using a questionnaire as instrument for data collection. The study population is 24,569 with a sample size of 491 respondents made up of a fraction of 2% of the population through the use of multistage sampling technique. The data was analysis using descriptive statistical measures such as percentages and frequency including Statistical Package for Social Science (SPSS). The finding revealed that there is no significant relationship between computer anxiety and use of online resources. Thus, positive relationships exist between computer anxiety and use of online resources in universities but correlation is only significant in National Open University of Nigeria and not significant in University of Ibadan. The findings conclude that positive relationships exist between computer anxiety and use of online resources in both universities but correlation is only significant in National Open University of Nigeria.

Also, the survey of Osisanwo, Ehioghae and Abdulsalaam (2019) on computer anxiety as correlate of use of information technology tools among undergraduates of library and information science in Tai Solarin University of Education, Ijagun, Ogun State. The descriptive survey design was adopted for

the study with a population of 1,132 LIS undergraduates. Stratified random sampling technique was used to select 169 LIS undergraduates. Out of the 169 copies of the questionnaire administered 120 copies (71%) were returned and found useful for the analysis. Data was analyzed by simple percentages, frequency, mean and standard deviation and Pearson product moment correlation. The findings affirmed that there was relationship between computer anxiety and students' utilization of IT tools among the LIS undergraduates as revealed Pearson product moment correlation that the coefficient is  $r = 0.844$ ; the relationship was positive. This result shows that there is statistically significant relationship between computer anxiety and students' utilization of IT tools among LIS undergraduates. It could be inferred that there is a significant relationship between computer anxiety and students' utilization of IT tools by the LIS undergraduates surveyed.

Similarly, Singh, Chandwani, Singh and Kumar (2019) study on exploration of level of computer anxiety among veterinary students of Punjab in India. The descriptive survey method was used in the study. The questionnaire was used as instrument for data collection with a population of 100 undergraduate and 100 postgraduate students of veterinary science. The stratified random sampling was explored in the study. Simple Percentage, frequencies and SPSS was used for data analysis. The findings established the relationship between computer anxiety and other variables ranging from  $r=.019$  for experience in using computers and time spent on computers to  $r=.323$  for the time spent on computers and time spent on the internet. The experience in using computer and time spent on internet had no significant correlation with in overall credit point average (OCPA). Thus, making it understandable that while using

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computers, student access the Internet services alongside the electronic library information resources also.

Furthermore, the investigation of Oribhabor (2020) on the influence of computer anxiety on the academic performance of junior secondary school students in computer studies in University of Africa, Toru-Orua Bayelsa, in Nigeria. The questionnaire was used as instrument of data collection. The descriptive survey design was adopted for the study with a population of 1, 200. Purposive sampling technique was used in the study. The independent t-test and PPMC were used to analyze data. The finding revealed that most of the students used in the study were mildly anxious when dealing with computer; there is no significant difference in the computer anxiety of male and female junior secondary school students in Nigeria; and there is a significant negative relationship between computer anxiety and computer studies performance of junior secondary school students' in Nigeria. The study conclude that students' anxious feelings of operating computer do negatively affect their performances in the computer studies.

Conclusively, the examination of Osalusi and Awujoola (2021) on influence of computer anxiety on the use of Open Education Resources for academic activities by DLC students in the University of Ibadan

and the National Open University of Nigeria, Oyo State, Nigeria. The study used questionnaire as instrument of data collection with a population 19,855 DLC students. Descriptive survey research design of correlational type was explored. Percentages, mean and standard deviations and Pearson's product moment correlation (PPMC). The findings revealed that the level of computer anxiety of the students is moderate (= 33.59:60). Findings also showed that significant relationship exists between computer anxiety ( $r = -.252$ ;  $p < 0.05$ ) and use of OER. Computer anxiety is germane to use of Open Educational Resources and the overall academic success of distance learning students.

**Methods**

The correlational research design was adopted for this study. The study was conducted in Southern, Nigeria. The study area consists of three geopolitical zones which include South-East, South-West and South-South. This study is more concerned with the tertiary level of education in the area. Specifically, there were 10 federal, 17 state and 8 private universities at the time of this study. The population of this study consists of all 10, 345 LIS undergraduates from ten federal, seventeen state and eight private universities in Southern Nigeria.

**Table 1: Distribution of respondents according to the institution**

S/N	Name of Institution	Ownership	No. of Reg. LIS Undergraduates					Zone
			100L	200L	300L	400L	Total	
1	Michael Okpara University of Agriculture, Umudike, Abia State	Federal	74	59	44	37	214	South-East
2	Nnamdi Azikiwe University, Awka, Anambra State	Federal	90	105	119	43	357	
3	University of Nigeria, Nsukka, Enugu State	Federal	65	63	78	90	298	
4	Abia State University, Uturu, Abia State	State	85	94	78	49	306	
5	Anambra State University of Science and Technology, Uli, Anambra State.	State	11	19	21	23	74	
6	Ebonyi State University, Abakaliki,	State	54	63	0	0	117	

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	Ebonyi State								
7	Enugu State University of Science and Technology, Enugu, Enugu State	State	118	98	105	81	402		
8	Imo State University, Owerri, Imo State	State	129	95	72	56	352		
9	Madonna University Okija, Anambra State	Private	3	1	6	2	12		
10	University of Port Harcourt	Federal	113	95	89	95	392	<b>South-South</b>	
11	University of Benin, Benin City, Edo State	Federal	88	79	62	65	294		
12	University of Calabar, Cross River State	Federal	120	137	115	117	489		
13	University of Uyo, Akwa Ibom State	Federal	102	98	72	69	341		
14	Niger Delta University, Warri, Bayelsa State	State	51	47	0	0	98		
15	Cross River State University of Science and Technology, Calabar, Cross River	State	216	118	96	59	489		
16	Delta State University, Abraka	State	115	127	121	118	481		
17	Ignatius Ajuru University of Education, Rumuolumeni, Rivers State	State	102	88	71	55	316		
18	Rivers State University, Port-Harcourt	State	105	119	205	85	514		
19	Rivers State University of Science and Technology, Nkpolu Rivers State	State	122	110	103	81	416		
20	Ambrose Ali University, Ekpoma Edo State	State	48	39	32	33	152		
21	Benson Idahosa University, Benin City, Edo State	Private	71	58	47	38	214		
22	Adekunle Ajasin University, Akungba, Ondo State	State	73	69	51	54	247	<b>South-West</b>	
23	Federal University of Oye Ekiti, Ekiti State	Federal	78	64	47	30	219		
24	University of Ibadan, Ibadan, Oyo State	Federal	115	137	121	159	532		
25	University of Agriculture, Abeokuta, Ogun State	Federal	115	83	55	45	298		
26	Ekiti State University, Ado Ekiti, Ekiti State	State	69	58	44	42	213		
27	Tai Solarin University of Education, Ijebu-Ode, Ogun State	State	90	81	68	73	312		
28	Lagos State University, Ojo, Lagos State	State	92	87	74	62	315		
29	Adekunle Ajasin University, Akungba Akoko, Ondo State	State	185	0	0	0	185		
30	Adeleke University, Ede, Osun State	Private	92	73	52	54	271		
31	Ajayi Crowther University, Ibadan, Oyo State.	Private	88	84	71	77	320		
32	Babcock University, Ilishan-Remo, Ogun State	Private	110	92	79	91	372		
33	Crescent University, Ogun, Ogun State	Private	63	51	42	58	214		
34	Fountain University, Oshogbo, Osun State	Private	61	54	41	49	205		
35	Leed City University, Ibadan, Oyo	Private	97	86	69	64	316		

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State.

3,210 2,731 2,350 2,054 10,345

**Source:** LIS departmental offices of the universities (2020/2021 academic session)

The sample size is 1,017 LIS undergraduates. This was derived by taking 10% of the entire population. It should be noted that Ebonyi State University Abakaliki, Niger Delta University, Wilberforce Island and Adeleke Ajasin University have been excluded from this study because they do not have a 200-400 level of study at the time of this study. Therefore, the total population figure for the three universities has been removed from the sample. Also, the entire population of Madonna University, Okija was used as a sample since the population figure is small.

The sample is regarded as adequate because Seaberg (1988) and Grinnell and Williams (1990) suggested that, “in most cases a minimum of 10% sample should be sufficient for controlling sampling error”. However, combinations of sampling techniques were used for this study. Firstly, the purposive sampling technique was used to sample the 10%. Secondly, the quota sampling technique was used to determine the sample size for each university as well as the levels of study. See the tabular representation of sample size according to level and institutions.

**Table 2: Sample of the study**

S/N	Name of Institution	100 level	200 level	300 level	400 level	Total
1	Michael Okpara University of Agriculture, Umudike, Abia State	7	6	4	4	21
2	Nnamdi Azikiwe University, Awka, Anambra State	9	11	12	4	36
3	University of Nigeria, Nsukka, Enugu State	7	6	8	9	30
4	Abia State University, Uturu, Abia State	9	9	8	5	31
5	Anambra State University of Science and Technology, Uli, Anambra State	1	2	2	2	7
6	Enugu State University of Science and Technology, Enugu, Enugu State.	12	10	11	8	41
7	Imo State University, Owerri, Imo State	13	10	7	6	36
8	Madonna University Okija, Anambra State	3	1	6	2	12
9	University of Port Harcourt	11	10	9	10	40
10	University of Benin, Benin City, Edo State	9	8	6	7	40
11	University of Calabar, Cross River State	12	14	11	12	49
12	University of Uyo, Akwa Ibom State	10	9	7	7	33
13	Cross River State University of Science and Technology, Calabar, Cross River	22	12	10	6	50
14	Delta State University, Abraka	12	13	12	12	49
15	Ignatius Ajuru University of Education, Rumuolumeni, Rivers State	10	9	7	6	29
16	Rivers State University, Port Harcourt	11	12	21	9	53
17	Rivers State University of Science and Technology, Nkpolu, Rivers State	12	11	10	8	41
18	Ambrose Ali University, Ekpoma, Edo State	5	4	3	3	15
19	Benson Idahosa University, Benin City, Edo State	7	6	5	4	22

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20	Adekunle Ajasin University, Akungha, Ondo State	7	7	5	5	24
21	Federal University of Oye-Ekiti, Ekiti State	8	6	5	5	24
22	University of Ibadan, Ibadan, Oyo State	12	14	12	16	54
23	University of Agriculture, Abeokuta, Ogun State	12	8	6	5	31
24	Ekiti State University, Ado Ekiti, Ekiti State	7	6	4	4	21
25	Tai Solarin University of Education, Ijebu- Ode, Ogun State	9	8	7	7	31
26	Lagos State University, Ojo, Lagos State	9	8	7	6	30
27	Adeleke University, Ede, Osun State	9	7	5	5	26
28	Ajayi Crowther University, Ibadan, Oyo State	9	8	7	8	32
29	Babcock University, Ilishan-Remo, Ogun State	11	9	8	9	37
30	Crescent University, Ogun, Ogun State	6	5	4	6	21
31	Fountain University, Oshogbo, Osun State	6	5	4	5	20
32	Leed City University, Ibadan, Oyo State	10	9	7	6	31
<b>Total</b>						<b>1, 017</b>

The questionnaire was used as instrument for data collection. The questionnaire is divided into two sections entitled: “Undergraduates’ Computer Anxiety Questionnaire” (UCAQ) and “Undergraduates’ Electronic Library Use Questionnaire” (UELUQ) respectively was used to collect data from the respondent. The computer anxiety scale was adapted from Heinssen, Glass and Knight (1987) computer anxiety scale. While, the electronic library use scale was adapted from Umar, Azeez and Haruna (2020) computer self-efficacy and electronic resources use scale.

To ascertain the internal consistency of the items, the instruments were administered to 20 LIS undergraduates in the Federal University of Technology Minna, Niger State of Nigeria, which is not part of the researchers’ area of the study because they share similar characteristics. Data collected were analyzed using the Cronbach’s Alpha method to measure the internal consistency and reliability of the

instrument. The alpha value of the reliability of the instrument resulted in the coefficient of each cluster, cluster A903.21 and B885.15 of the different clusters for each of the two instruments respectively were obtained.

The overall reliability indexes for the two clusters A and B was 90 and 89 respectively. These reliability coefficients were considered high enough for the instruments. However, out of 1,017 copies of questionnaire administered to the respondents, 829 copies questionnaire were returned and found useful for data analysis. The data collected were analyzed using inferential statistics. The research question was analyzed using Pearson’s Product Moment Correlation Coefficient (PPMC) and the hypothesis was tested using simple linear regression. The decision on the research question was based on the values assigned to the different statements. In taking a decision in the research question, Nwana (2007) opinion was used, thus the correlation coefficient ( $r$ ) with the score:

0.00- 0.20	=Very low relationship
0.20- 0.40	=Low relationship
0.40- 0.60	=Moderate relationship
0.60-0.80	=High relationship
0.80-0.90	=Very high relationship

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1.00 =Perfect relationship

**Results**

The findings and discussion are done according to the research question and hypothesis.

**Research question:** What is the relationship between computer anxiety and electronic library use among LIS undergraduates in universities in Southern, Nigeria?

The data in Table 3 are used to answer this question.

Table 3 shows that the Pearson’s correlation (r) between undergraduates’ computer

anxiety and their electronic library use yielded a correlation coefficient of .18. This value indicates that there was a very low positive relationship between LIS undergraduates’ computer anxiety and their electronic library use.

**HO:** There is no significant relationship between LIS undergraduate computer anxiety and their electronic library use in universities in Southern, Nigeria.

The data in Table 4 are used to test the hypothesis.

**Table 3: Pearson r on undergraduates’ computer anxiety and electronic library use**

Variables	N	Computer Anxiety	Electronic Library Use	Remark
Computer Anxiety	983	1.00	.18	Very Low Positive Relationship

**Table 4: Test of significance of simple regression analysis with computer anxiety as a predictor of electronic library use among LIS undergraduates**

Predictors	R	R <sup>2</sup>	F(1,981)	P	Decision
Computer Anxiety	.18	.03	34.44	.00	Significant

Table 4 reveals that there was a significant relationship between computer computer-anxiety and electronic library use among LIS undergraduates,  $f(df; 1,981) = 34.44, p < 0.05$ . Since the  $p$ -value was less than 0.05, the null hypothesis was rejected.

The table further illustrates that there was a significant relationship between computer anxiety and electronic library use among LIS undergraduates,  $f(df; 1,981) = 34.44, p < 0.05$ . Since the  $p$ -value was less than 0.05, the null hypothesis was rejected.

The analyses of research question one and hypothesis one established that there is a significant positive relationship between computer anxiety and electronic library use among LIS undergraduates in universities in Southern, Nigeria.

**Discussion**

The finding of this study substantiates Ogunsanya, Solanke and Olatoye (2020) that positive relationships exist between computer anxiety and use of online

resources in both universities (University of Ibadan and National Open University of Nigeria), but the correlation is only significant in National Open University of Nigeria. The finding also align with Osisanwo, Ehioghae and Abdulsalaam (2019) that there is statistically significant relationship between computer anxiety and students' utilization of IT tools among LIS undergraduates. Similarly, this finding further agree with that of Osalusi and Awujoola (2021) that significant relationship exists between computer anxiety and use of open education resources (OER).

### Conclusion

The main thrust of this study was to investigate the relationship between computer anxiety and electronic library use among LIS undergraduates. Thus, electronic library use is an exceptionally complex notion that is influenced by computer anxiety factor, however, the present study conclude that computer anxiety significantly correlate with electronic library use among LIS undergraduates in universities in Southern, Nigeria. Based on the findings of this study, the following recommendations are made:

- 1 LIS undergraduate are to engage themselves in computer skills training regularly in order to have the needed proficiency in the different aspects of computer as this will ensure a continued and more effective utilization of electronic library resources.
- 2 The university library management should have a well – structured electronic library use training and retraining for LIS undergraduates regularly through seminars, workshops, conferences to acquire and

improve on the needed skills towards electronic library information resources usage.

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