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## **Gender Differences in Information Literacy Self-Efficacy among Academic Librarians in Federal University Libraries in South-East Nigeria**

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### **Abstract**

The study investigated gender differences in information literacy self-efficacy among academic librarians working in federal university libraries in South-east Nigeria. The descriptive survey research design was used in this study. Using purposive sampling, twenty academic librarians were selected for the study. The Information Literacy Self-Efficacy Scale (ILSES) was used to obtain the data. In total, there are 28 items on the scale, which has a high Cronbach Alpha reliability score of 0.91. In this scale, seven sub-dimensions are measured extensively. To analyze the data, percentages, means, standard deviations, t-tests, and Lavene's tests were used. In terms of mean ratings, male and female academic librarians did not differ significantly ( $t(2,28) = -1.83$ ;  $p = .855$ ). As such, gender has no effect on information literacy self-efficacy in academic librarians. Any difference in the perceived self-efficacy of academic librarians in information literacy was not caused by their gender. To improve work efficiency and professional competency, academic librarians should upgrade their information literacy skills.

**Keywords:** Information literacy self-efficacy, gender differences, academic librarians, work efficiency, Librarianship.

### **Introduction**

The wave of advances in information and data revolution have greatly impacted all areas of knowledge (Audi & Ali, 2019). As a result of this revolution, information packaging and dissemination have greatly changed (Adjoe et al, 2010). Globally, massive amounts of information are generated every day in a variety of formats, raising concerns about their credibility, reliability, and authenticity. Consequently, people are perplexed by all the information and various resources they have at their disposal to resolve their problems (Shelar, 2011). More than three decades ago, the American Library Association (ALA) instituted a team to describe the basic tenets of information literacy (IL) and propose

guidelines for instruction for educators and academic librarians (ALA, 1989). The significance of IL only continues to grow exponentially since then (Naik & Padmini, 2014).

The American Library Association [ALA] (1989) defines IL as recognizing when data or information is required and the ability to locate, being able to find, appraise, and utilize that information efficiently. There are some indicators that show a person is knowledgeable about gathering, finding, and using information. Among these indicators are recognizing the need for information; clearly defining the information need; selecting suitable lexicon that reflects the topic under inquiry; formulating a navigating approach that incorporates diverse sources; locating appropriate information sources; gaining access to that information; and analysing the data collected for value are all requirements for being information-literate (ALA, 1989; Doyle, 1994). IL is defined by the Association of College and Research Libraries [ACRL] (2016) as an integrated set of skills that includes understanding the process information creation and valuing, using information to create novel information, and partaking properly in groups of learning. The enabling skill to locate and utilize a variety of data sources to solve a problem is an example of IL. There are many ways to define IL. As defined by Rader (1991), IL is the ability to get information and appraise it efficiently for the purpose of solving a problem. Acquiring knowledge of information needs, recognizing, locating, accessing, understanding, evaluating, and using information competently, effectually, validly, and decently in order to resolve issues and make knowledgeable decisions are commonly termed IL (ACRL, 2000; ALA, 1989). In general, IL is a vital skill for gaining a competitive advantage, making better decisions, and increasing the competence and efficiency of the employees (Karim and Hussein, 2008; Schroeder & Cahoy, 2010; Klusek & Bornstein, 2006).

In order to achieve pecuniary, societal, and politically aware empowerment for the advancement of a country, knowledge literacy skills are crucial (Demirel & Akkoyunlu,

2017). Through the implementation of information literacy programs, citizens of a country or an organization are able to change how they reason, feel, and respond to a variety of situations, in the sense that they build or strengthen their sense of pride, self-esteem, and self-confidence. Baro and Zuokemefa (2011) assert that information literacy prepares academic librarians for delivering their services in making academic information and knowledge resources accessible to students and faculty. In order for a country or organization to achieve rapid development, Dewan et al. (2005) argue that people who are information literate are essential. When an individual possesses the ability to learn, they are said to be information literate. For societies to attain lasting knowledge, they need self-assured, independent, and self-regulated learners (Kumaresan, 2008). IL is essential, but confidence in using these skills effectively is also necessary (Bandura, 1977). In theorizing the tenets of self-efficacy, Bandura (1977) believed that achieving a high level of self-efficacy was as important as having the necessary skills to achieve a goal. In the view of Kurbanoglu et al (2006), accomplishing a high level of self-efficacy beliefs facilitates optimal information literacy.

According to Bandura (1977a, 1977b), self-efficacy is an assessment of a person's ability to perform actions aimed at achieving desired outcomes. In making decisions, people rely more on their beliefs than their skills. Human motivation and well-being, as well as personal achievement, are founded on the belief in one's own efficacy (Pajares, 2006). The self-efficacy of an individual influences how it approaches tasks, goals, and challenges, according to Bandura (1997). Motivation to achieve, desire for well-being, and individual achievements are influenced by level of self-efficacy inherent in the person. In this regard, Kuburoglu (2003, 2009) found that people with poor self-efficacy and who avoid challenging activities are less likely to build lifelong learning competencies. Bandura (1995, 1997) argued that individuals who have high self-efficacy, i.e., believe they have the ability to succeed, are more likely to accept difficult tasks as a challenge rather than avoiding them. To put it

another way, individuals prefer to accomplish tasks for which they are skilled or self-confident, while evading those for which they are less confident (Kear, 2000). Academic librarians need to be self-assured, motivated, and resilient to overcome adversity to succeed in their roles. The individual with a high perceived self-efficacy belief will succeed and finish a task in most cases. Low self-efficacy persons fear failure and forsake tough tasks, especially in academic libraries in the utilization of information literacy (Pajares, 2002).

Academic libraries provide physical and digital access to a variety of materials rather than exhibiting them (Guo et al., 2020). Akporhonor (2005) described academic library as a place in tertiary institutions as universities, polytechnics, and colleges of education that support their institutions' teaching, learning, and research goals. Academic librarians acquire, organize, and manage library materials and services while ensuring that library services meet the needs of students and faculty (Bell & Shank, 2004). Providing students, faculty, and other academics with access to the resources they need to conduct their studies or conduct research is an academic librarian's responsibility (Fagan et al., 2021). In this age of information overload, academic librarians and users of information need the skills and knowledge required to find, access, appraise, and utilize information efficiently. For information stakeholders such as academic librarians to be effective in an environment of information overload, they must be information literate (Blummer & Kenton, 2014). In information-age societies, therefore, independent learners with a robust sagacity of restraint and self-confidence, as well as lifelong learners, are even more essential (Kurbanoglu 2003).

Research has found a substantial relationship between self-efficacy and IL, suggesting that greater self-confidence leads to greater perseverance, resilience, and higher propensity to resolve data and information problems (Baran 2011; Adalier & Serin 2012; Ata & Kilic-Akmak, 2010). An academic librarian's information literacy self-efficacy describes the individual's belief that he or she can identify areas where information is required, find the

information, assess it, and use it to solve problems. Bruce (2000) suggests that IL levels may be influenced by an array of factors, including self-efficacy and gender. Gebhardt et al. (2019) suggest that gender plays a significant role in information literacy self-efficacy.

In every society, gender distinguishes women's abilities from those of men in a broad and general sense (Scherer & Siddiq, 2015). In learning and skill acquisition, it is a sensitive and important variable. It is essential to understand that gender and sex are distinct and should not be used interchangeably. It is pertinent to note that sex is a biological state that makes individuals to be either female or male (Uwalaka, 2013). Gender is a socially and traditionally acquired characteristic, whereas sex is a physiological condition. On the other hand, Wong and Hanafi (2007) examined gender variances in the male and female attitudes about using information and technology (IT) tools and applications. It appears that the experience level of computer users is gender-specific, as changes in confidence in information technology over a given time assume varied patterns for males and females. The gender gap in skill acquisition has raised much concern among educators. Female behaviour, on the other hand, is considered abnormal and supportive, while male behaviour is assertive, competitive, and aggressive. In turn, these preferences influence how each gender perceives and approaches information and new technologies, which in turn impacts their information literacy skills. Taking advantage of electronic resources effectively takes basic computer skills, an understanding of what is available and how to use it, and an understanding of how to formulate a research question.

## **Literature Review**

In 2013, the International Education Association conducted an International Computer and Information Literacy Study (ICILS). The study found that female students had higher computer and information literacy scores than the males. It was evident from the beginning of

the history of computing in schools that male teacher dominated computer use (Reinen & Plomp 1993), which enhanced their exposure to information and increased their ability to become information literate. In another findings, female had higher scores than male students on the IEA's ICILS 2013, which was took place in 21 countries (Fraillon et al. 2014). Between male and female performance in Australia's four national assessments of ICT literacy, a fifth of a standard deviation was the average difference (ACARA 2015). Other national assessments have reached the same conclusions. According to NCES [National Centre for Educational Statistics] (2016), women outperformed men in the ICT content area of the 2014 National Assessment of Educational Progress. Several large-scale studies have concluded that information literacy is not gender-dependent (ICILS, 2013). Another study found no substantial gender variances in IL in Thailand or Turkey (Fraillon et al. 2014). Out of the 19 participating countries in OECD PISA 2009 digital reading study (OECD 2011), only Colombia recorded no gender variance in instrumental learning (IL). According to Venkatesh and Karahanna (2014), female library users have much lower self-efficacy (ie, CSE) in the use of electronic library resources and thus use technology at a lower rate than their male colleagues. The finding that male users make use of electronic resources more than female users, resulting in better performance, is a surprising outcome that requires immediate attention.

Researchers have found gender variations across different computer and information-based tasks. In line with the data from ICILS 2013, Potter et al. (2017) identified the way that information is used, evaluated, and reflected upon, as well as how it is shared or communicated (for example, through a product). Women scored better than males on both the evaluation and reflection of information as well as sharing and communicating information. However, technical functional variances between male and female students were not significant in four countries, but significant in five countries for female students. In spite of a

seemingly insignificant difference between male and female students who reported daily computer use across countries, the magnitude of the differences varied (Fraillon et al. 2014).

EU (2013) policy states that ICT-savvy teachers are more likely to use it in their classrooms. Nevertheless, SITES 2006 indicated that digital technology use and ICT self-efficacy did not correlate, and that there were differences between countries as well as between environments within countries. In terms of self-efficacy, male teachers were more confident in their ability to use computers for instructional purposes, despite gender differences in basic and advanced d operational differences in Computer skills.

In another report, Sang et al. (2010) found that after controlling for mediating variables, gender had no effect on teacher ICT self-efficacy and attitudes toward computing skills. Thus, the ability to locate, evaluate, and use information resources confidently and without difficulty is dependent on a variety of factors, including their disciplines, academic workshop and training, user experiences, age, country, and gender, among others. In this study, the researchers will examine gender differences in the level of self-efficacy of academic librarians in university libraries in south-east Nigeria.

## **Hypothesis**

**H<sub>01</sub>:** there is no significant difference in the mean ratings of male and female academic librarians.

## **Methods**

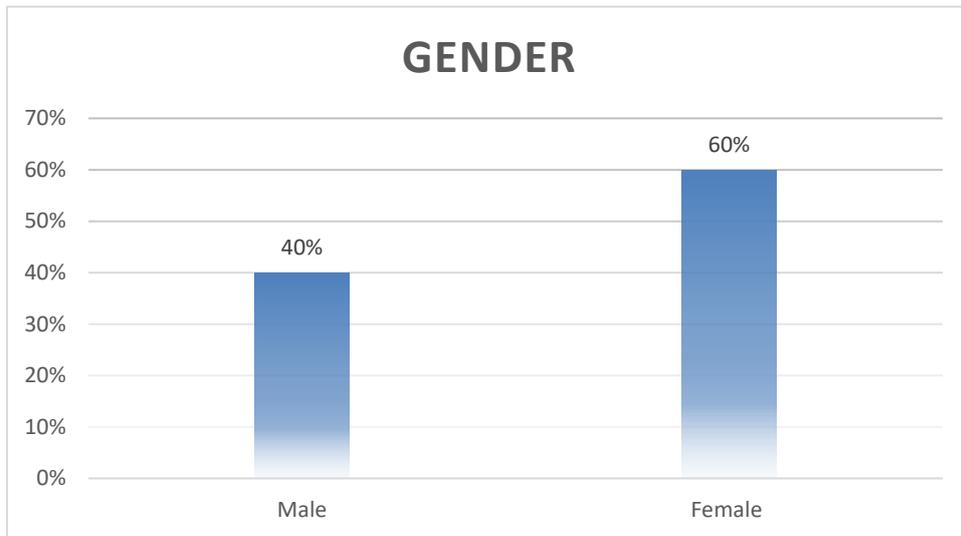
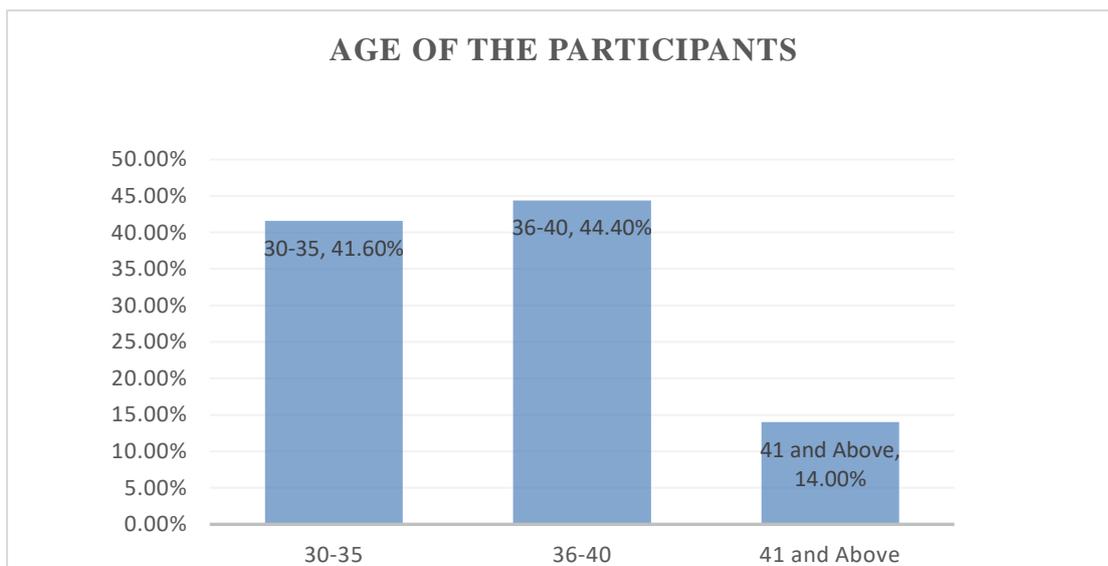
The descriptive survey research design was adopted in this study. Basically, a descriptive research design defines a research problem. Research was conducted at Federal Universities in Nigeria's South-East Zone. The study sample consisted of 30 academic librarians from the Nnamdi Azikiwe Library at the University of Nigeria, Nsukka. Data were collected using the Information Literacy Self-Efficacy Scale (ILSES). According to a review of published research, the most appropriate and directly related data gathering instrument was the ILSES developed by Kurbanoglu et al. (2006). In addition to its reasonable length,

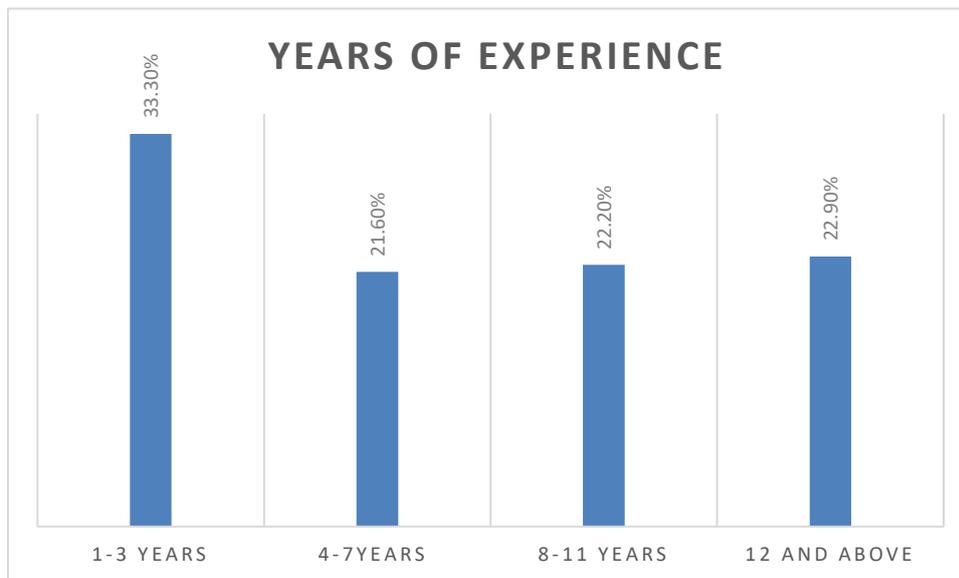
reliability, and consistency, this scale is widely used for self-efficacy assessment (Keshavarz et al., 2017; Kurbanoglu et al., 2006; Mahmood, 2017; Shim et al., 2009). Overall, the scale contains twenty-eight statements and has a Cronbach Alpha coefficient of 0.91. According to the scale, there are seven sub-dimensions that explain various aspects of information and data manipulation and optimization. Furthermore, this scale was used to assess gender differences in ILSE among academic librarians in Nigeria. The survey questionnaire included some demographic variables such as gender, age, sex, academic qualifications, years of experience, and other relevant information. The scale's statements were evaluated by using a seven-point Likert type scale with response categories (1= almost never true, 2= usually not true, 3= occasionally but infrequently true, 4= occasionally true, 5= usually true, 6= almost always true).

The approval to carry out this research was granted by the Chief Librarian of the Nnamdi Azikiwe Library at the University of Nigeria, Nsukka. Following that, a meeting with the academic librarians was scheduled with the Head of Academic Librarians. The researcher was introduced to academic librarians on the day of data collection. The purpose of the research study was explained to the librarians, and those who agreed to participate in the study were given consent forms to fill out. The selected librarians were then given questionnaires to complete, which took about 30 minutes, after which they were debriefed. Percentages, mean, standard deviation, t-test and the Lavene's test were used to analyze the data. The p-value (level of significance) was set at 0.05.

## **Results**

**Test for Equality of Variances (Levene's):** Leven's test of equality of variance was performed on datasets of the information literacy self-efficacy scale. Male and female academic librarians did not differ significantly in variance  $F(1, 449) = .003, p = .954$ . Thus, the assumption of variance homogeneity is not violated.

**Fig 1****Fig 2**

**Fig 3**

Results in figure 1 shows demographic variable of the academic librarians that completed the study. The result shows that males constitute 48.4% of the respondents whereas female constitutes 51.6% of the respondents. Furthermore, in figure 2, 41.60%, of the participants were in the age bracket of 30-35; 44.4% of the participants were in the age bracket of 36-40; and 14.0% of the participants were in age bracket of 41 and above. In addition, in figure 3, year of experience of the participants showed that 33.3% of the participants had 1-3 years of experience, 21.6% of the respondents had 4-7 years of experience, 22.2% of the respondents had 8-11 years of experience, and 22.9% of the respondents had 12 years and above.

**H<sub>01</sub>:** there is no significant difference in the mean ratings of male and female academic librarians.

**Table 1: t-test analysis of difference in mean ratings of male and female academic librarians.**

Gender	N	Mean	Std. Deviation	T	df	Sig.	Decision
Male	12	98.22	3.472	-.183	28	.855	Not sig.
Female	18	98.28	3.483				

Table 1 shows t-test analysis of difference in mean ratings of male and female academic librarians' information literacy self-efficacy. The result showed that there was no significant difference in the mean ratings of male and female academic librarians (2,28) = -183;  $p = .855$ . Since the associated probability score is greater than 0.05. Therefore, the null hypothesis was accepted while the alternative hypothesis was rejected. In other words, gender is not a significant factor with regards to academic librarians' information literacy self-efficacy.

## **Discussion**

The study investigated gender variances in ILSE among academic librarians in federal university libraries in south-east Nigeria. The study also discovered that the mean ratings of male and female academic librarians did not differ in a statistically significant manner, indicating that gender is not an important factor in academic librarians' information literacy self-efficacy. Perhaps both male and female librarians have the same attitude toward self-efficacy in information literacy. Information literacy skills are essential for all librarians in today's world, regardless of gender. In this way, librarians of both genders develop self-efficacy in information literacy. The findings of this study are consistent with Hatlevik and Christophersen (2013), who found no significant gender differences in digital literacy among Norwegian students. The results are also in line with the findings of Wong, who analyzed gender differences in attitudes about information technology (IT) applications and tools. According to the findings, increases in IT confidence over time assumed different patterns for males and females, refuting the notion that computer experience is gendered. As shown in the current study, female library users have lower computer self-efficacy (CSE) than their male counterparts, and therefore use technology at a lower rate. This contrasts with Venkatesh and Karahanna's findings (2014), which suggest that female library users are much less proficient

in using computers. In the event that male students use electronic resources more than their female counterparts and thus perform better, this is an unexpected result that needs to be addressed immediately.

## **Conclusion**

There was no significant difference between the mean ratings of male and female academic librarians, indicating gender has no impact on academic librarians' ILSE. The reason for this may be due to existing studies that found no difference between men and women in terms of information literacy skills in academic libraries. It is possible that both male and female academic librarians have the same or similar dispositions and attitudes. Because of this, differences in academic librarians' ILSE may be attributable to psychological, personal, or institutional factors. In light of the digital information revolution, the study's findings have implications for a variety of stakeholders, especially academic libraries in universities. Academic librarians' work environments need to be optimized in today's highly complex technological environment in order to meet the challenges of information literacy in today's classrooms. Researchers found that the findings of this study have application to academic librarians, library administrators, and pre-service school librarians. First, the study recommended that academic librarians improve their skills in order to improve their work efficiency and professional competence. Additionally, lecturers in library and information science departments should provide specific skill orientation programs to future academic librarians to improve their information literacy proficiency.

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