Reliability Analysis of the Influence of Media and Information Literacy Skills on Individual Work Performance: A pilot study of academic staff of colleges of education in Southeast Nigeria

Godwin Nwachukwu Arua¹,², Shamila Mohamed Shuhidan¹*, Haslinda Husaini¹, Helen Obioma Ukwuaba³
*Corresponding Author

¹ School of Information Science, College of Computing, Informatics, and Mathematics, Universiti Teknologi Mara,
² Federal College of Education, Eha-Amufu, Nigeria
³ Enugu State College of Education (Technical), Enugu, Nigeria

shamila@uitm.edu.my, ngonwa4tochi@gmail.com haslinda3145@uitm.edu.my, helenukwuaba@gmail.com
tel: 0136922881

Abstract
The research aims to examine the influence of media and information literacy (MIL) skills on the individual work performance of academic staff of colleges of education. Researchers discovered that many educational professionals need more MIL skills to support their job performance. This set of skills required for effective research and information use is insufficient and impedes lifelong learning. Based on the review of related literature, a 50-item questionnaire was constructed. The study population is 3,200 from nine public education colleges in southeast Nigeria. A representative sample of the study is 344, derived from the Sample Size Calculator by Raosoft Inc. A proportionate stratified random sampling technique was employed to identify a representative sample for the study. To ensure data validity, reliability, and normality, the research instrument was pre-tested by experts/scholars. A pilot test was conducted, and thirty-nine academic staff participated. A quantitative survey method was used, employing SPSS to analyze collected data. Findings revealed that all items have reliability coefficients above 0.70 except for need skills, locate skills, and analyze skills with 0.566, 0.531, and 0.545 values. The study recommends that management should pay close attention to the MIL skills of their staff to optimize individual work performance.

Keywords: Media and Information Literacy, Media and Information Literacy Skills, Individual Work Performance, Academic Staff,

DOI: https://doi.org/10.21834/e-bpj.v9iS%2018.5490

1.0 Introduction
Literacy is a requirement for one to navigate Information in this technological era. Media and Information Literacy (MIL) is vital in this digital environment, where success in any endeavour depends mainly on the performance of the employees. Academic staff need knowledge, skills, and psychological capacity to discharge their teaching, research, and community service duties. This study explores the impact of media and information literacy skills on individual work performance to improve academic staff’s capabilities and service delivery. With the advent of the knowledge economy, it has become essential for individuals to continuously improve their media and information literacy skills to adapt to the always-evolving information environment. Sadly, inadequate information skills have impeded
lifelong education (Emisiko and Severina, 2018). Information literacy (I.L.) is the capacity to decide if specific information is required, locate it, analyze it, and successfully use it to address a given issue or problem. (The American Library Association (2010), cited by Emisiko and Severina (2018). I.L. is an integrated set of skills, knowledge, practices, and dispositions that prepare people to responsibly discover, interpret, and generate Information while learning how information systems interact to produce and distribute news, Information, and knowledge (Head, Fister, & MacMillan, 2019). Media literacy refers to an individual's capacity to communicate effectively through the media.

Information search is becoming increasingly vital, particularly for academic and research purposes. Similarly, sifting through many materials available in libraries and online to uncover meaningful and accurate data is becoming increasingly important. Media and information literacy competency provides academic personnel with a wide range of information resources and the capacity to identify and assess resources required for research. However, this set of skills necessary for effective research and information use needs to be improved (Oyedipe and Popoola, 2019). Unfortunately, researchers have discovered that many academic professionals need more information literacy skills, preventing them from using electronic resources entirely in their educational professions (Madu and Akinboro (2012). Academic professors at Nigerian education institutes are primarily responsible for teaching, research, and community service. They require the most up-to-date informational resources to supplement their knowledge to fulfill these obligations effectively and efficiently. We should always strive to improve our hard and soft skills, notably media and information literacy. By promoting our skills, we become valuable assets to an organization.

2.0. Literature Review
This study discusses literature in areas of interest to the study, such as information literacy, media literacy, and information literacy, and individual work performance.

2.1. Information Literacy (IL)
Information Literacy (I.L.) is a key to lifelong learning and achieving educational goals. It is crucial for lifelong learning, especially in education, where knowledge must be transferred to creative, critical thinkers and lifelong learners (Durodolu & Ochalla, 2017). Information literacy improves learning, skills, values, beliefs, and cultural awareness and encourages people to think critically about the Information they receive and generate new knowledge.

With the information explosion, academic staff must have remarkable talents to perform well. They must acquire information literacy skills to function effectively for educational institutions and national growth. IL talents can recognize, analyze, organize, use, and transmit information in any format. IL’s talents include research, critical thinking, computers, and communication (Indeed Education Team, 2021). A 21st-century educator who filters Information for teaching, learning, and community service needs practical IL. skills that enable lifelong learning. IL’s abilities include finding, using, and managing information resources. In other words, IL. encompasses skills and a person's ability to identify, locate, evaluate, and use the required Information effectively as and when required (Kolle, 2017). Developing I.L skills is critical for professionals in various industries and depends on individuals’ cognitive talents. Furthermore, IL abilities are seen as vital components of the graduate traits and skills demanded by the Nigerian labour force (Krubu et al., 2017, citing Johnson & Weber). I.L. enables users to successfully define their information needs, plan and strategize their search for appropriate Information, and critically assess and use the Information found.

2.2. Media Literacy (ML)
Media literacy (ML) refers to skills, knowledge, and understanding that enable people to interact with media effectively and safely. Media literacy is based on the person's ability to access, analyze, evaluate, and create various forms and genres of media texts. It also includes the ability to access, research, and assess the power of pictures, sounds, and messages that shape our daily lives and play an essential role in modern culture. On the other hand, media literacy is one of the critical competencies nowadays, as it enables a person to comprehend the role of media and communication in society (Fedorov & Mikhaleva, 2020). It refers to an individual's capacity to communicate effectively through the media.

It is pertinent to emphasize that media literacy extends beyond different media types. It includes broadcast news, journalism, cinema, theatre, and social media platforms like blogs, tweets, and Facebook. New competencies, particularly those connected to evaluation, are becoming increasingly important with the changing media landscape. How individuals evaluate the credibility of news sources, interpret political stances, engage in voting processes, and partake in civil society are vital issues that intersect with media literacy.

2.3. Media and Information Literacy (MIL)
From the onset, media literacy and information literacy have been treated as separate research fields. Still, at the present stage, sometimes for convenience of reference, they are combined into a broad field with some common objectives and competencies that are vital for people’s everyday lives, work, or study. The most obvious point of convergence between these two disciplines is the application of critical thinking skills to their focus areas. However, although these disciplines are related and, in some instances, overlap, they remain distinct areas of study. Information Literacy applies critical thinking skills to the assessment of Information. Media Literacy is an essential thinking skill used to source most of our Information — the mass communication channels” (Silverblatt, 2016).

Modern understanding of media and information literacy globally is based on the presupposition that its primary and significant function is to provide access to Information and knowledge and promote free, independent, and pluralistic mediated social environments (UNESCO, 2020). UNESCO defines media and information literacy (MIL) as "The basic competencies that allow citizens to interact with
the media effectively and develop critical thinking and lifelong learning skills for socialization that make them active citizens. Media and Information Literacy recognizes the primary role of media and Information in our everyday lives. It lies at the core of freedom of expression and Information – since it empowers citizens to understand the functions of media and other information providers, to evaluate their content critically, and to make informed decisions as users and producers of information and media content (UNESCO, 2020).

Media and information literacy are essential skills that not only form the basis for lifelong learning but are also critical to the mission of higher education institutions (Latifah et al., 2019). Media and information literacy help develop individuals' intellectual abilities to think critically and teach them how to learn (Chen, Chen & Ma, 2017). Media and information literacy enhance education quality because both aim to foster critical thinking and are competency-oriented approaches that our current knowledge societies demand. If Information is regarded as an essential knowledge input, academic personnel should know how to find, evaluate, use, and communicate it.

2.4. Individual Work Performance (IWP)

In line with the digital environment, media and information literacy skills must still be essential to support their work performance. Job performance consists of a set of employees' behaviours that are perceived to agree with organizational goals that can be measured, monitored, and assessed as an achievement at an individual level (Nwokike and Unegbu, 2019). The academic personnel's job performance is that aspect of work behaviour relevant to the institution's success. Work performance comprises behaviours that workers demonstrate in their jobs pertinent to the establishment's goals. Job performance interests organizational behaviour, and the result is essential for individual work effectiveness evaluation. Thus, an organization's success or failure depends on the job performance of the individuals in that organization (Popoola & Tabuke, 2021). The ability and capability of academic personnel to perform functions competently is essential for the institution's overall effectiveness of higher learning. Thus, an organization's success or failure depends on the job performance of the individuals in that organization (Popoola & Tabuke, 2021).

Employees will be encouraged to increase their work performance level to boost the institution's performance and productivity and to increase the chances of surviving any possible re-organization with reduced personnel. Therefore, it becomes paramount that management maintains, improves, and optimizes individual work performance. Given this, this study focuses on the effect of media and information literacy skills on individual work performance regarding research productivity and online teaching of the academic staff of colleges of education in Nigeria.

2.4.1. Research Productivity

Higher learning institutions are globally recognized as centres for producing, accumulating, and transferring knowledge. The core functions of academic staff are teaching, research, and community service, aiming to create a trained workforce for various areas of national development. Nirman (2007, cited by Olakunle & Olarewaju, 2019) avers that the mission of higher education is to advance knowledge, create knowledge, disseminate knowledge through research, and provide service to the community. Research is critical in promoting a nation's prosperity and its citizens' well-being. In institutions of higher learning, recognition and advancement of individual academic staff members depend mainly on the quantity and quality of research productivity.

Access to relevant information resources is essential in conducting any research. The availability of information resources to the researcher encourages them to conduct research and helps to situate their work in the context of available literature. Thus, research output depends highly on effectively utilizing quality information resources.

Based on the review of related literature, a 50-item questionnaire was constructed. The study is a quantitative survey method with a 344 representative sample of 3200 as the study population. The sample was obtained from Raosoft Calculator Inc. using a stratified random sampling technique. To ensure data validity, reliability, and normality, the research instrument was pre-tested by experts/scholars. A pilot test was also conducted through a survey, and thirty-nine (39) academic staff members participated. The researcher distributed copies of the questionnaire to the academic staff of colleges of education in southeast Nigeria. Data was processed using SPSS.

2.4.2. Online Teaching and Learning

Online learning refers to open education and instruction delivered through the Internet. Authors, scholars, and academics in their respective fields have described it in numerous ways. Ibrahim (2020), citing Ally (2008), defines online learning as an educational experience that allows students to develop personally, acquire knowledge, and construct their learning by providing access to learning materials via the Internet, interacting with the content instructor and other students, and receiving support while acquiring new information. It is a technique of training that requires academic professionals to have practical media and information literacy skills. In today's digital world, Online education is a critical right that promotes the social integration of all nations.

Online or remote education implies that students are physically distant from the instructors and require a delivery method (Wilde & Hsu, 2019). The interaction between students and teachers is mediated by technology and technology, if used effectively, allows students and teachers to engage mutually and collaborate. The usage of emerging technologies by educators is vital to their job performance and the improvement of the effectiveness of the teaching and learning process vis-à-vis the quality of Education (Edoh, 2019). Technology can be used as a tool to help people to raise their performance and adapt to changes. This means that academicians and other professionals should be prepared to innovate by continually embracing emerging technologies to flourish in their careers and fit into the new world of work.
3.0. Methodology

The research is a quantitative survey method. The structure of the survey questionnaire began with Part A concerning demographic content, consisting of 8 questions. Part B-D consists of 50 questions concerning the study’s independent and dependent variables. Each of these parts has some dimensions to understand and collect vital information. Part E contains open-ended questions to allow respondents the opportunity to respond subjectively. The five Likert scales were used in all the Part B-D, ranging from "strongly agree" (coded 5) to "strongly disagree" (coded 1). The respondents were academic staff from public colleges of education in southeast Nigeria. The data was analyzed using the Statistical Package for Social Sciences (SPSS), Version 22. Linear regression analysis was employed to analyze Cronbach's alpha coefficients to determine the reliability and internal consistency of the measuring scales. In developing the survey questionnaire, six professionals (three librarians and three academicians) from public universities in Nigeria were chosen to review the instrument. These academicians are highly experienced and qualified in library and information science, education, and research methodologies for social sciences. All these reviews were highly useful in helping the researchers finalize the questionnaire set with the appropriate modifications.

4.0. Reliability Test Analysis

As shown in Table 1 below, Cronbach’s alpha coefficients determine the reliability and internal consistency of the scales exercised in the study. All factors had Cronbach’s alpha values greater than 0.70, suggesting that the reliability level is appropriate and acceptable, except for in the dimensions of locate, need, and analyze skills, where the value of Cronbach's alpha is below 0.70. According to the SPSS analysis results, the overall consistency, or Cronbach's alpha values, of all 50 items for each dimension contained in the instrument was between 0.531 and 0.897. Skills for evaluating information and media show the highest value of 0.897, while the skill for locating information shows the lowest value of 0.531; this means there is room for refining the instruments in this study. A frequently cited acceptable range of Cronbach's alpha is a value of 0.70 or above. It is derived from the work of Nunnally (1978), who provided that the lower cut-off (i.e., 0.70) was appropriate in the early stages of research (i.e., exploratory), such as during scale development. More stringent cut-offs should be used for basic research (0.80 or higher) and applied research (0.90 or higher) (Cho & Kim, 2015). Ideally, you want your scale reliability (Cronbach's alpha) to be above 0.70 for psychological constructs. Suppose you do not get a reliability of 0.70 or above. In that case, you can review the Item Reliability Statistics table to decide which item may be dropped to improve reliability and redo the reliability analysis to revisit your options for improvement or to obtain a final reliability measure. (Hitti, et al., 2022)

Table 1: Cronbach’s Alpha Analysis Result.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Measures</th>
<th>Number of Items</th>
<th>Cronbach’s Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Individual work performance</td>
<td>1.1 Research Productivity</td>
<td>5</td>
<td>0.779</td>
</tr>
<tr>
<td></td>
<td>1.2 Teaching Output</td>
<td>5</td>
<td>0.852</td>
</tr>
<tr>
<td></td>
<td>Overall</td>
<td>10</td>
<td>0.853</td>
</tr>
<tr>
<td>2. Information Literacy Skills</td>
<td>2.1 Need Skill</td>
<td>5</td>
<td>0.566</td>
</tr>
<tr>
<td></td>
<td>2.2 Locate Skill</td>
<td>6</td>
<td>0.531</td>
</tr>
<tr>
<td></td>
<td>2.3 Evaluate Skill</td>
<td>4</td>
<td>0.897</td>
</tr>
<tr>
<td></td>
<td>2.4 Use Skill</td>
<td>5</td>
<td>0.780</td>
</tr>
<tr>
<td></td>
<td>Overall</td>
<td>20</td>
<td>0.850</td>
</tr>
<tr>
<td>3. Media Literacy Skills</td>
<td>3.1 Access Skill</td>
<td>5</td>
<td>0.701</td>
</tr>
<tr>
<td></td>
<td>3.2 Analyze Skill</td>
<td>5</td>
<td>0.545</td>
</tr>
<tr>
<td></td>
<td>3.3 Evaluate Skill</td>
<td>5</td>
<td>0.897</td>
</tr>
<tr>
<td></td>
<td>3.4 Communicate Skill</td>
<td>5</td>
<td>0.795</td>
</tr>
<tr>
<td></td>
<td>Overall</td>
<td>20</td>
<td>0.907</td>
</tr>
<tr>
<td></td>
<td>Overall Reliability of Instruments</td>
<td>50</td>
<td>0.891</td>
</tr>
</tbody>
</table>

5.0. Findings

The analysis of the collected data results suggests that the overall index of the scale’s internal consistency within the instrument is reliable, with Cronbach's Alpha of 0.891. According to the reliability test of the pilot study, information literacy skills have a Cronbach’s Alpha reliability of 0.850, media literacy skills have a Cronbach’s Alpha of 0.907, and individual work performance has a Cronbach's Alpha of 0.853, respectively. The findings in the separate work performance variable show that the teaching output dimension has a higher Cronbach's Alpha of 0.852 than research productivity, which has 0.779. In the information literacy skills variable, the Need skill and Locate skill have a lower Cronbach's Alpha of 0.566 and 0.531, respectively. Evaluate skill and Use skill have a high Cronbach's Alpha value of 0.891.
Alpha of 0.897 and 0.780, respectively. In the media literacy skills variable, the Access skill has a high Cronbach's Alpha of 0.701, while the Analyze skill has a lower Cronbach's Alpha of 0.545. Evaluation and communication skills have a higher Cronbach's Alpha of 0.897 and 0.795, respectively.

6.0. Discussions
This article summarises an ongoing research project on the effect of media and information literacy skills on the individual work performance of academic staff of colleges of education in southeast Nigeria. A review of related literature and preliminary studies has been conducted. Before the actual research, the instrument underwent pre-testing with six experts to ensure each question's reliability and the items' understandability. A pilot study was also carried out by 39 respondents among academic staff of public colleges of education in southeast Nigeria. The analysis results of the collected data suggest that the overall index of the scale's internal consistency within the instrument is reliable. With Cronbach's Alpha reliability of 0.850 for information literacy skills, 0.907 for media literacy skills, and 0.853 for individual work performance, respectively, it shows that the academic personnel have a high level of both information literacy skills and media literacy skills, impacting their high work performance. It indicates that a presumed relationship exists between information literacy skills, media literacy skills, and the work performance of the academic staff. In the individual work performance variable, findings show that the teaching output dimension has a higher Cronbach's Alpha of 0.852 than research productivity, which has 0.779. Historically, teacher education colleges were established as institutions emphasizing teaching rather than research. Reforms introduced into these institutions included a research focus and the role of teacher educators as researchers. Teaching includes formal classroom instruction, advising, informal instruction, and training students to conduct research. Therefore, it is reasonable to assume that experienced teacher educators are more research-productive than their less professional peers. Simon, Vlado, & Maja (2017) found that research productivity is not related to teaching quality, whereas research quality is positively related to teaching quality.

All factors had Cronbach's alpha values greater than 0.70, suggesting that the reliability level is appropriate and acceptable, except for in the dimensions of need, locate and analyze skills where the value of Cronbach's alpha is below 0.70, which could be better. The SPSS analysis results show that the overall consistency, or Cronbach's alpha values, of all 50 items for each dimension contained in the instrument was between 0.531 and 0.897. Skills for evaluating information and media show the highest value of 0.897, while the skills for locating information show the lowest value of 0.531; this means there is room for refining the instrument. It shows that further investigation and action are needed, for low reliability can adversely affect the quality of research and assessment. According to Tavakol & Dennick (2011), cited by Jain & Angural (2017), a Cronbach's alpha value of less than 0.70 will affect the validity of the data. Two possibilities arise in this scenario: either the number of items in need, locate, and analyze skills dimensions needs to be more, or the items are partly correlated with each other, or there is diversity in the construction of the instrument. Therefore, there is a need to revise or remove items. The value of Cronbach's alpha can be refined by analyzing the items, modifying the scale, and consulting experts, after which more related items may be added to test the same concept. This result implies that, particularly at this point in the investigation, the overall index of the scale's internal consistency within the instrument is reliable, with no unexpected abnormalities in the data. The findings imply that the management of colleges of education should pay close attention to the literacy levels of their staff. Since literacy is an important skill set in the digital era, management should identify which work groups or individuals require literacy training and instruction and provide specific and relevant training or literacy interventions to increase their literacy level.

7.0. Recommendations and Conclusion
Academics must be able to identify when Information is needed, know the sources of Information that can meet their needs, understand how to access Information to fill the knowledge gap and be able to minimize the barriers that obstruct their access to Information to carry out their primary functions of teaching and research effectively. Only then will they be able to effectively fulfill their jobs as instructors and researchers? In addition to filling knowledge gaps, this study aims to provide a solution by providing a deeper understanding of current academic staff's online learning and their use of information resources regarding the media and information literacy skills possessed or not possessed to meet the most recent teaching and research demands. This study contributes to the body of knowledge by increasing research on academic staff's media and information literacy and individual work performance. In addition, because of the better MILS possession, this study will boost and improve the personal work performance of College of Education academic professionals. This study will add to the scant past research on the influence of media and information literacy skills on academic staff's work performance. Due to time and budget constraints, this study is limited to academic staff of colleges of education in Nigeria. Future studies may be undertaken to ascertain the relationship between media and information literacy skills of academic personnel of other categories of higher education in Nigeria. It is therefore recommended that academic staff ensure they possess the requisite MIL skills to enhance effective task performance, for better MILS will likely improve work performance. Also, as literacy is such an important skill set in the digital age, the College of Education Management should identify personnel that require literacy training and provide specific and relevant training to help them acquire new skills in their job to meet the demands of the challenging work environment. The appropriate training or literacy interventions are aimed at helping those lacking sufficient literacy update their skills. The employer should undertake a regular evaluation of work performance to assess the performance of the employees, find reasons for non-performance, and provide solutions to them. On the other hand, employees should be encouraged to increase their work performance level to boost the institution's performance and productivity and to increase the chances of surviving any possible re-organization with reduced personnel. Therefore, the management of colleges should also maintain, improve, and optimize individual work performance.

285
Acknowledgement
The researchers would like to extend their gratitude to Universiti Teknologi MARA (UiTM) – Institute of Postgraduate Studies (IPSis) for funding the research, Faculty of Information Management Puncak Perdana for providing the necessary atmosphere for research, particularly the supervisors, for their assistance and guidance, as well as the event secretariats for the opportunities provided. The researchers would also like to thank the Colleges of Education academic staff and respondents who provided feedback and participated in this study.

References


