# Digital Literacy Skills for Locating and Creating Digital Information by Faculty Members in the Federal Universities of North-Eastern States of Nigeria

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**Abstract:** *This research investigated the digital literacy skills For Locating and Creating Digital Information by Faculty Members in the Federal Universities north-eastern states of Nigeria. Two research questions and were answered and data were analyzed using Statistical Package for the Social Sciences (SPSS), the research questions there are; what is the ability of library and information science faculty member in the north-eastern states of Nigeria to locate Digital information? What are the level of digital literacy skills of library and information science Faculty Members in the north-eastern states of Nigeria to create digital content?. Quantitative research method was applied in the study using random sampling technique to draw the sample. Forty-four copies of the questionnaires were administered while thirty-seven copies were completed, returned and was used in the study which represents 84% of the response rate. The finding of the study revealed that Faculty Members in the Department of Library and Information Science in the Federal University of North-eastern states of Nigeria were very confidents in the use of keywords commonly used in my discipline to search for information online, they can create content in different media for people to read online. The study recommends some steps to turn around the situations. The department of Library and Information Science in the North-Eastern States of Nigeria should ensure or organize digital literacy skills that will focus on the use of advance search in search engines. In addition Faculty members should also be taught how to recognize when to change search strategy or when their search is completed. Faculty members in the Department of Library and Information science in the North-Eastern States of Nigeria should be trained on how to cite online information resources to help them avoid being accused of plagiarism.*

## INTRODUCTION
Recent developments in Information and Communications Technology (ICT) have transformed how individuals access and use information for teaching and learning. ICT has acquired an important role in the learning process, both in the educational system and at home (Meyers, Erickson & Small 2013). The Internet, in particular, has made available a virtually boundless number of sources of information. As a result of teaching and learning process extensively requires the ability to access, locate, extract, evaluate, organize and present digital information. Digital technologies with their interactive and increasingly individualized digital services change people's habits and behavior, building new value models and vital clues. They are becoming an irreplaceable source of education and the development of new literacy. Digital technology enable immense amount of information to be compressed on small storage devices that can be easily preserved and transported. Digitization also quickens data transmission speeds. Digital technology has transformed how people communicate, learn, and work in the digital world. (Erstad, 2010).

### Digital Literacy Skills
Digital literacy is the "ability to understand and use information in multiple formats from a wide range of sources when they are presented via computers" (Paul Gilster, 1997). Gilster identified that the growths in digital technologies required different set of skills, attitudes and competencies than the tools and operations focus on ICT in the previous two decades. He understood that the abilities to access understand and critically analyze digital contents and applications were increasingly important in information and technology abundant

environment with that regard it is also important to understand digital literacy skills. The concepts of digital literacy skills continue to evolve as new aspects of digital technologies gain distinction. The UK Futurelab's Handbook (2015) provides a definition based on creating and sharing: "To be digitally literate is to have access to a broad range of practices and cultural resources that are able to apply to digital tools. It is the ability to make and share meaning in different modes and formats: to create, collaborate and communicate effectively and to understand how and when digital technologies can best be used to support these processes."

Digital literacy skills is "the ability to make, represent and share meaning in different modes and formats; to create, collaborate and communicate effectively and to understand how and when digital technologies can best be used to support these processes" (Hagel, 2012)

## Statement of the Problem.
In the digital era faculty members are expected to be digital literates, which imply that they have the ability to use digital technology and know when and how to use it for their teaching and research work. Digital literacy is a key to teaching and the more digitally literate faculty members are the more they are able to employ and impact these skills on their students as well as prepare them for the future work place. Despite the importance of digital literacy skills in teaching and research, preliminary investigation by the researcher in some of the Federal Universities in North-Eastern States, Nigeria that majority of faculty members in Department of Library and Information Science are not using digital technologies in their teachings; Sandholtz & Reilly (2010) observed that teachers' technology skills are strong determinant of digital integration, but they are not being used in the classroom. Devine (2015), also observed that among the factors that influence successful integration of digital technologies into teachings are teachers' attitudes and beliefs towards technologies. Could it be as a result of lack of digital literacy skills? Hence this study accessed the level of digital literacy skills of faculty members in the department of library and information science in Federal Universities of North-eastern states of Nigeria.

## Research Questions
This research answered the following research questions:
What is the ability of Library and Information Science faculty members in North-Eastern States Nigeria to locate Digital Information?
What are the levels of digital literacy skills of Library and Information Science faculty members in the North-Eastern States Nigeria to create digital contents?

## LITERATURE REVIEW
Literatures were reviewed in relation to;
Ability to locate digital information by faculty members in tertiary institutions in Nigeria. And their capability to create digital content.
Ability to locate digital information by faculty members

With the dramatic increase of articles found online, the ability to locate Digital information in databases rather than just on the shelf is critical. Understanding the difference between a keyword and subject search and the benefits of using truncation symbols, Boolean operators, and synonyms can mean the difference between a successful search and frustration. Doctoral students, especially those returning after years out of the academic environment benefit from instruction in these digital literacy skills.

Effective and efficient search for materials in Digital format is expected to enhance the quality of teaching and research by faculty members of any institution. In Nigeria, the use of computer terminals in information searching is gradually gaining popularity and so the librarians need to be computer literate. Thus, many Nigerian university libraries are striving to be fully automated while some are still in the process of computerization. To derive maximum benefit from the increasingly electronic library use environment, the librarians need to be computer literate. (Emwanta and Nwalo, 2013) Digital information provides a number of benefits over print resources. These benefits include the fact that Digital information are often faster to consult than printing indexes especially when searching retrospectively, and they are straight forward when wishing to use combination of keywords. They open up the possibility of searching multiple files at a time: Digital information can be printed, searched and saved to be repeated or consulted at a later date-They are updated more often than printed resources. Commenting on the advantages of Digital information, Dadzie (2009) cited in Egberongbe (2011) writes that Digital information are invaluable research tools that complement the print – based resources in traditional library settings. Their advantages, according to her include: searching for information that might be restricted to the user due to geographical location or finances, searching for more current information, and provision of extensive links to additional resources of related contents. Ability to create digital content by faculty members Schools and educators today have heightened sense of urgency towards understanding how educational technology can both support new curriculum standards and enable engaging and relevant classroom learning experiences. Increasingly, educators are turning to the implementation of digital content such as eBooks, videos and interactive simulations in the classroom to address both challenges. Per the national Speak Up 2014 research in the United State of America, 61 percent of educators noted that the use of digital content in their schools was already producing enhanced student achievement; in 2013, only 42 percent of educators noted that same impact (Smith & Anderson, 2010).

The use of digital content transformed the learning experience for the students by increasing students' interest in the subject matter. The increased student engagement resulted in new learning behaviors and attitudes. Sophisticated instruments and practices of knowledge creation given to students may extend their minds. Technologies already exist that involve artificial intelligence, such as Siri and Skype Translator. New technologies may help our students augment their personal and collaborative intellectual resources in a way that makes digital creation feasible. This does not happen without scaffolding of the

surrounding learning environment and more experienced peers, parents, and teachers (Ritella & Hakkarainen, 2012).

Also the use of tablets and mobile platforms has become part of everyday experience and we have seen the popularity of ideas such as MOOCs (Massive Open Online Courses) and of open educational resources, of BYOD (Bring Your Own Device), and of the flipped classroom and fully online learning. The mainstreaming of badges, gamification and learning analytics is just 'on the horizon', and 3D printing and wearable technology are expected to be considerably more widespread by 2018as well as the use of wiki linked.(New Media Consortium 2014).

## METHODOLOGY

A Quantitative research was employed for the study. The population of the study comprised of faculty members in the Department of library and information Science in the federal University of North-Eastern States of Nigeria. The table below shows the population of the study for both institutions that are teaching Library and Information Science in North-eastern states Nigeria.

Table 1: POPULATION OF THE STUDY

| S/NONAMESNUMBER OF FACULTY MEMBERS | |
| --- | --- |
| Abubakar Tafawa Balewa University, Bauchi | 12 |
| Modibbo Adama University of Technology Yola. | 17 |
| University of Maiduguri, Borno State. | 15 |
| TOTAL | 44 |

The researcher used the whole population because the population is not large and it is manageable. Hence, no sampling technique was required. Questionnaire was used for the instrument for data collection. The questionnaire was in likert scale format divided into four 4 sections A,B,C & D while section A elicit information in respondents bio-data, section B dealt with the ability to locate digital Information. Sections C dealt with critically judge and evaluate credible digital Information while section D dealt with the creating of digital content. The instrument was validated by expert in the field of digital technology. Logical validity index of 0.72 was obtained. This result indicated suitability of the instrument for use in the study

## Table 2. Ability to locate digital Information

| ITEMS | ATBU | | | MAUTECH | | | UNIMAID | | | TOTAL | | | Mean | SD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 1 | 2 | 3 | 1 | 2 | 3 | 1 | 2 | 3 | | |
| I know what information I can find on the web | 6(60%) | 3(30%) | 1(10%) | 6(42%) | 3(21%) | 5(37%) | 2(16%) | 5(38%) | 6(46%) | 14(39%) | 11(29%) | 12(32%) | 3.2 | 1.9 |
| I know what information I can find in an online library. | 4(40%) | 4(40%) | 2(20%) | 3(21%) | 6(42%) | 5(37%) | 3(23%) | 6(47%) | 4(30%) | 10(27%) | 16(44%) | 11(29%) | 3.5 | 1.6 |
| I can use advanced search options to limit and refine a search | 3(30%) | 4(40%) | 3(30%) | 3(21%) | 5(37%) | 6(21%) | 2(15%) | 4(30%) | 7(55%) | 8(21%) | 13(35%) | 16(44%) | 2.5 | 1.4 |
| I can use keywords commonly used in my discipline to search for information online. | 4(40%) | 4(40%) | 2(20%) | 3(21%) | 7(50%) | 4(29%) | 3(23%) | 4(30%) | 6(47%) | 10(27%) | 15(41%) | 12(32%) | 3.4 | 1.5 |
| I know when I need to change my search strategy or when my search is complete | 3(30%) | 6(60%) | 1(10%) | 3(21%) | 5(37%) | 6(42%) | 2(15%) | 5(38%) | 6(47%) | 8(21%) | 16(44%) | 13(35%) | 3.5 | 1.9 |
| I can use scanning / skimming techniques to quickly access the key relevant information on a web page. | 3(30%) | 5(50%) | 2(20%) | 7(50%) | 6(42%) | 1(8%) | 7(55%) | 4(30%) | 2(15%) | 17(45%) | 15(40%) | 6(15%) | 3.5 | 2.3 |

Key: 1 = Very Confident        2 = Quite Confident        3 = Not Confident SD = Standard Deviation

Table 2 revealed that "I know what information I can find on the web, I know what information I can find in an online library", "I can use keywords commonly used in my discipline to search for information online", "I know when I need to change my search strategy or when my search is complete" and "I can use scanning /skimming techniques to quickly access the key relevant information on a web page" have average mean scores of over 3.00 for all the faculty members in the North-Eastern states of Nigeria. These can be said to have high significant influence on the respondent's on locating online digital Information because they all recorded above 3.00 mean scores. Whereas, "I can use advanced search option to limit and refine a search" have average mean scores of over 2.00 for all the faculty members in the three institutions studied. This suggests that such factors have less significant influence on the respondent's on locating of digital Information because they are recorded over 2.00 mean scores. This means that the respondents have similar factors to locate digital information on the web. The implications of these findings are that once faculty members can locate information on the web they can easily use it for their teaching and research as Joseph (2010) explains that "an online, searchable, web-accessible database containing intellectual works by scholars and researchers organized to increase how to locate scholars' information and ensure the long term preservation".
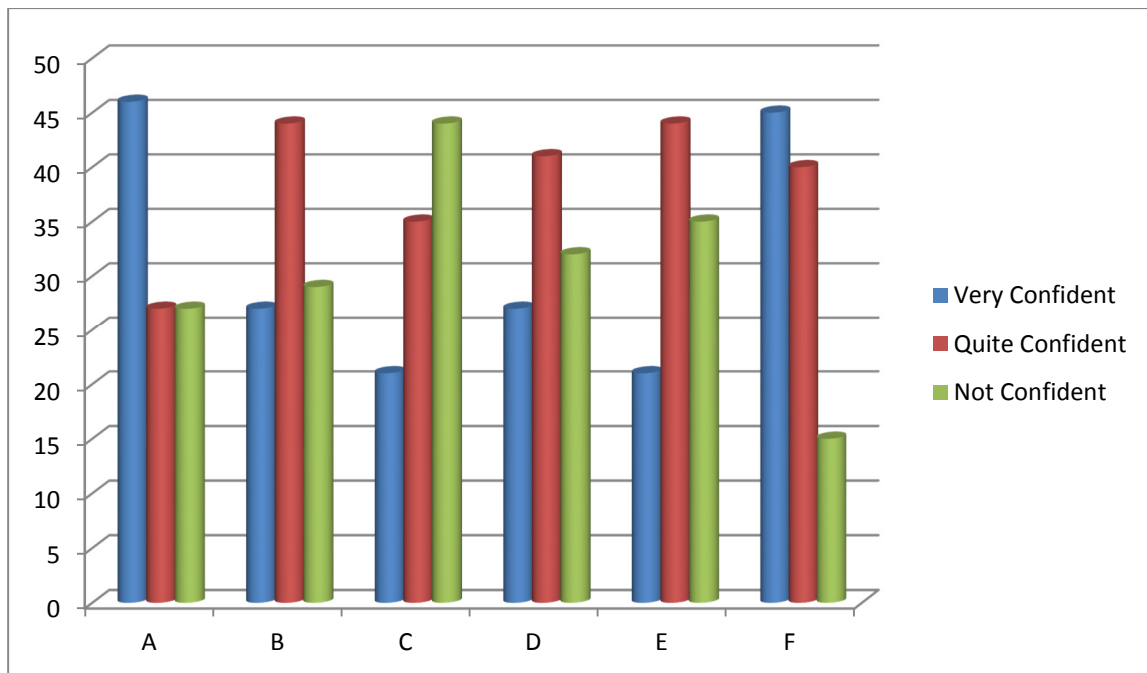


Figure 1: Ability to locate digital Information

## Table 3. Creating Digital Content by the faculty members

Key: 1 = Very Confident        2 = Quite Confident    3 = Not Confident

| STATEMENT | ATBU | | | MAUTECH | | | UNIMAID | | | TOTAL | | | Mean | SD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 1 | 2 | 3 | 1 | 2 | 3 | 1 | 2 | 3 | | |
| I can create content in different media for people to read online. | 2(20%) | 5(50%) | 3(30%) | 2(15%) | 6(42%) | 6(42%) | 3(23%) | 7(55%) | 3(23%) | 7(19%) | 18(49%) | 12(32%) | 3.5 | 1.9 |
| I can add comments to blogs, forums or web pages, observing 'netiquette' and appropriate social conventions for online communications. | 4(40%) | 4(40%) | 2(20%) | 3(21%) | 6(42%) | 5(37%) | 3(23%) | 6(47%) | 4(30%) | 10(27%) | 16(44%) | 11(29%) | 2.4 | 1.4 |
| I know how to 'tag' information I create online to allow others to retrieve it quickly | 1(10%) | 6(60%) | 3(30%) | 2(15%) | 6(42%) | 6(21%) | 2(15%) | 7(55%) | 4(30%) | 5(14%) | 19(51%) | 13(35%) | 3.7 | 2.2 |
| I can use other people's work (found online) without plagiarizing. | 4(40%) | 4(40%) | 2(20%) | 3(21%) | 4(29%) | 7(50%) | 2(15%) | 5(38%) | 6(47%) | 9(24%) | 13(35%) | 15(41%) | 2.6 | 1.7 |
| I can cite a reference to an online resource (e.g. in an assignment) using the correct format | 4(40%) | 4(40%) | 2(20%) | 3(21%) | 7(50%) | 4(29%) | 2(15%) | 6(47%) | 5(38%) | 9(24%) | 15(41%) | 13(35%) | 2.6 | 1.7 |

Table 3 indicated that "I can create content in different media for people to read online". and "I know how to 'tag' information I create online to allow others to retrieve it quickly" have average mean scores of over 3.00 for all the faculty members in the North-Eastern states of Nigeria. Whereas, respondents that indicated that "I can add comments to blogs, forums or web pages, observing 'netiquette' and appropriate social conventions for online communications", "I can use other people's work (found online) without plagiarizing" and "I can cite a reference to an online resource (e.g. in an assignment) using the correct format" have average mean scores of over 2.00 for all the faculty members in the three institutions studied. This suggests they have less significant influence on the respondent's on creating digital content because they are recorded over 2.00 mean scores. The implication of this finding indicates that they cannot create digital content in their teaching and research as Ritella & Hakkarainen, (2012) who confirmed that the use of digital content transformed the learning experience for the students by increasing students' interest in the subject matter.
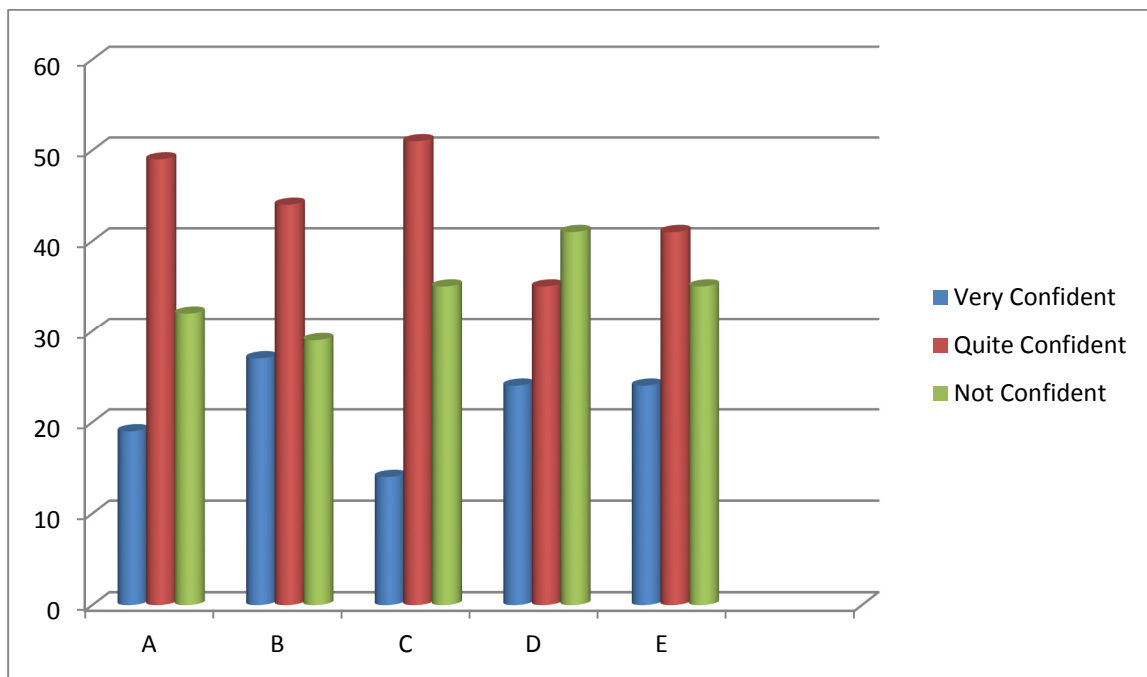


Figure 3; creating digital content

## CONCLUSION

Based on the findings of the study, the researcher concluded that faculty members in the Department of Library and Information Science North-eastern States of Nigeria have average level of skills in locating and creating digital information generally. However, Digital literacy skills are essential for information professionals. Faculty members have a lot to offer their students through ICT in the current dispensation. Therefore, it is very important to have adequate skills in the use of these technologies.

## RECOMMENDATIONS

Based on the findings of the research study, the following recommendations are suggested by the researcher: The department of Library and Information Science in the North-Eastern States of Nigeria should ensure or organize digital literacy skills that will focus on the use of advance search in search engines. In addition Faculty members should also be taught how to recognize when to change search strategy or when their search is completed. Faculty members in the Department of Library and Information science in the North-Eastern States of Nigeria should be trained on how to cite online information resources to help them avoid being accused of plagiarism.

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