



Digital Technology Training among Library Personnel for Effective Management of Online Resources and Services in Federal University, Otuke, Bayelsa State

Abstract

This study examines the digital technology training skills needed among library personnel for effective management of online resources and services in Federal University, Otuke, Bayelsa. The population of the study consist of 26 (twenty six) academic and non-academic library personnel. Five (5) research questions and two hypotheses were formulated. Questionnaire were used to collect data from respondents, data collected were analyzed using mean score, simple percentage while the hypotheses were tested using t-test statistic at a 0.05 level of significant. The result shows that the level of digital technology skills acquired among library personnel in managing online resources for effective library services is high. However, it was accepted that they still need more training on their digital technology skills to manage and improve the online resources and services. Among the recommendation were Library personnel should be encouraged to apply for grants from university or agencies such as Tertiary Education Trust Fund (TETFund) to attend workshops on digital skills or ICT skills and knowledge. This will help to update their knowledge in this current information age.

Keyword: Digital technology, Library management, ICT skills, online resources.

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1.1 Introduction

Libraries have continued to provide significant contributions in research, teaching and learning. The major resources used in libraries in meeting this significant role is the digital technologies. Digital technologies are electronic equipment, devices, systems and materials that produce, store or disseminate information. Through the use of computers, internet, software, mobile device, networking technology other related facilities such as the social media, multimedia, cloud computing

application, etc., libraries have been able to support learning and research within and outside the it` s environment.

Digital skills are necessary for online resources management such as subscribing, searching for free databases, creating a platform for storing, organizing, retrieving and disseminating up-to-date information. According to Eshet-Alkalai (2004) this skills are more than just searching and printing online resources from databases, it involve more skills and knowledge making this

resources available for use all the time. Librarians need to master some of these skills that will enable them exploit online resources and manage it effectively without frustration of use among users of the library.

Seen and Pillia (2014) stated some of this skills as creating metadata/tag, photo-shop, installation and managing library software, installation of institutional repositories software, managing library consortium, library networking, Operating System Linux, system barcode technology and website design. Emiri (2015) conducted a study on digital literacy skills among librarians in university libraries in the 21st century in Edo and Delta States, Nigeria among the objectives of the study was to determine the level of the digital literacy skills among librarians. The study revealed that majority of the librarians had low proficiency of digital literacy skills.

Digital technologies are meant to keep up with the pace of changes in libraries, transforming librarians from the traditional skills to the digital skills. As a result of this there is need for librarians to update their digital skills to meet up with information needs of users in this digital society. It can be said that it only libraries with available digital resources and librarians with up-to-date digital skills that can provide valuable support to library users. Librarians with digital technology skills will benefit from better career prospects. This study there for attempt to x-ray the digital technology training among library personnel for effective management of online resources and services in Federal University, Otuke, Bayelsa State.

1.2 Objective of the Study

The main objective of the study is to digital technology training among library personnel for effective management of online resources and services in Federal University, Otuke, Bayelsa State while the specific

objective are to:

1. Determine the level of digital technology skills acquired among library personnel in managing online resources for effective library services.
2. Determine the various digital technology training skills needed among library personnel for effective library services.
3. Determine how often do library personnel undergo digital technology skills training for effective online resources management and services.
4. To determine if there is a difference in male and female digital technology skills acquired among library personnel in managing online resources for effective library services.
5. To determine if there is a difference in the various digital technology skills needed in male and female library personnel for effective library services.

1.3. Research Questions

The following research questions were formulated to guide the researchers:

1. What is the level of digital technology skills acquired among library personnel in managing online resources for effective library services.
2. What are the various digital technology training skills needed among library personnel for effective online resources management and services.
3. How often do library personnel undergo digital technology skills training for effective online resources management and services.
4. Is there is a difference in male and female digital technology skills acquired among library personnel in managing online resources for effective library services.
5. Is there a difference in the various digital technology skills needed in male and female library personnel for effective library services

1.4 Hypotheses

1. There is no significant difference in male and female digital technology skills acquired among library personnel in managing online resources for effective library services.
2. There is no significant difference in the various digital technology skills needed in male and female library personnel for effective library services.

2.1 Review of Related Literature

Previous Researchers have studied on digital technologies vis-à-vis library operations. Adeleke (2014) researched on digitalization capacity and skills of academic librarians in Nigeria. The study shows that librarians placed emphasis on communicating and promoting digital research content with (mean of 2.0946) and communicating with institutional leadership with (mean of 2.1216). It was seen from the study that librarians were not well grounded in advance digital technology skills such as communicating and promoting digital content to all stakeholders, deploying and managing digital resources software, developing of digital contents, planning and digitizing workflow. This could be as a result of lack of training among librarians in Nigeria. This reason was confirmed by Baro and Eze (2015) and Tiemo (2017) that libraries in federal institutions in Nigeria have more financial support than those in state institutions. Librarians in federal enjoy training privileges than librarians in state institutions.

Ayaoku, Ezeni and Osuigwe (2015) studied the information literacy practices of librarians in Universities in South-South, Nigeria. Among the objectives of the study was to examine the level of literacy skills acquired among librarians. The survey research was applied for the study. Questionnaire was used in collecting data, the research focused on government owned Universities. A total number of 76

questionnaire was found useful for the study. The response showed that librarians were proficient in the use of skills in locating information, answering inquiring online, internet searching and retrieval of information resources. The study further showed that librarians were not skilled in creating web sites and usage of reference manager. This are digital technology skills that are needed in the information age that librarian lack.

Shidi and Nwachukwu (2015) study on acquisition of digital library skills by library staff in Benue State, Nigeria, The study showed that librarians accepted that they could download electronic information resource from the internet with (mean score of 2.80), save resources from the internet into files for easy retrieval with (mean score of 2.62). Ezema, Ugwuanyi, Musa and Safiyanu (2015) study showed that among the suggestions given by respondents for improving digital skills was that librarian should participate in digital skills training such as e-resources management, online publications, testing and installation of library software for digitalizing resources. Menzella (2015) also stated that some of the digital skills needed by librarians to effectively render library services as suggested among librarian used for the study titled digital skills and knowledge among librarians in public libraries in Kampala, it showed that online publishing, installation and use of digital software for e-resources management, trouble shooting systems, website management, virtual reference technology skills, subscribing of e-resources and digital learning. There could be more skills required but at the time of this study this could have been the skills needed for effective library services.

Furthermore, Siddike (2010) explored the digital literacy skills competencies among the library and information professionals of Bangladeshi. 40 questionnaire were distributed and all the

questionnaire were received. The respondents accepted low ability to design library web page, and use of HTML. Iskekor and James (2012) investigate the influence of digital literacy skills on career progression and work motivation of academic library staff in South-West, Nigeria, The finding of the study showed that academic librarians. Out of the 96 respondents only 29 respondents accepted that they can use the network via the computer to communicate, 31 respondents accepted that they can use the cyber space to search for online resources for their database.

In their study, Kumor and Narasappa (2016), stated that professional librarians need to be skilled in areas such as scanning of resources, database skills, video conferencing, website designing, computer security, electronic information presentation, software usage and libraries network. Weech (2016) considered the following digital skills as essential for effective online resource services, multimedia application, web application, digital archives, digital preservation, usability and evaluation of resources, electronic publishing, scholarly communication copy right issues and intellectual property right of online resources.

Again, Oyedokun, Oyewumi, Akanbi and Laaro (2018) conducted a study of 122 library staff ICT competencies in selected libraries in Kwara State, Nigeria. They found that 62 respondents accepted that they have high competency skills on documentation/databases management, 56 respondents accepted that they have very high level of competency skills on use of library management software, 57 respondents accepted that their programming (html and Java) skills is high, networking had 53 respondents that accepted having such skills. The study further revealed that database management, meta-data, semantic networking, library automation software, content creation and web management, users interface on library website are areas

librarians need to understand in order to perform effectively on the job.

Similarly, Ansari (2013) investigated ICT skills proficiency of library professional in Universities in Karachi, Pakistan. The findings showed that respondents had very low proficiency in web design, image digitalization. It was also seen in the study that respondents had high proficiency on networking skills and low proficiency in software programming. The respondents were asked areas why they need ICT skills training It was shown that software design, and installation/operations, digitalization and imaging technology, web designing, online cataloguing and classification, networking technologies and databases search techniques. Again, Bansode and Viswe (2015) explore the ICT literacy level of library professionals in University Libraries in Marathwada Region of Mahaashtra in India. The study consist of 26 professional library staff, questionnaire were used and personally distributed by the researchers. The result showed that library staff were skilled in reprographic services, abstracting and documentation translation services, electronic document delivery and multimedia services.

There is need for librarians to be trained in other to update their knowledge in ICT in this present information age. Peter (2016) study on ICT training among librarians shows that, librarians are not regularly trained and in most cases they use their personnel funds to attend conferences and workshops to up their knowledge. Kirschner (2017) also stated that library personnel should exploit the various training opportunities available in their institutions to update themselves with modern technologies to avoid been redundant. Pounder (2012) in his study identifying training opportunities for librarians revealed that librarians are not frequently training, they attend training once in two or three years. Those that are eager to gain ICT knowledge

and want to be relevant in the job fund themselves to training.

3.1 Methodology

The study made use of survey research design. The population comprised 26 academic and non-academic library personnel (higher library officers). The researcher decided to use both library personnel because they all work as a team to achieve effective management of online resources and services. The academic librarians males are 8 (eight) and females 4 (four). Non-academic librarians Male are 8(eight) and females 6 (six). The entire population was used for the study, since

it was not too large. Data were collected using self-design questionnaire. Scoring of items was based on a four point Likert scale, the research questions 1-2 were answered using mean score, research question 3 was answered using simple percentage while the hypotheses were tested using t-test statistic at a 0.05 level of significant.

4.1 Data Presentation

The questionnaires were distributed adequately, monitored and retrieved. All questionnaire were found useful for the study.

Research Question 1: What is the level of digital technology skills acquired among library personnel in managing online resources for effective library services

Table 1. Shows the level of digital technology skills acquired among library personnel in managing online resources for effective library services.

| Digital Technology Skills Acquired Among Library Personnel in Managing Online Resources for Effective Library Services | Highly skilled | Moderately Skilled | Low skills | No Skills | Mean | Std |
|--|----------------|--------------------|------------|-----------|--------|--------|
| Website design and management skills | - | - | 2 | 24 | 1.0769 | .2715 |
| File/ folder management skills | 2 | 14 | 5 | 5 | 2.4615 | .9478 |
| Scanning of documents and storing them in the library database for use. | 10 | 6 | 4 | 6 | 2.7691 | 1.210 |
| Knowledge and skills to protect library digital content. | 9 | 5 | 6 | 6 | 2.6535 | 1.1980 |
| Up-dating information on library website skills | 2 | - | 10 | 14 | 1.6154 | .8521 |
| Deigning online platform for scholarly communication skills | 2 | - | 13 | 11 | 1.7308 | .8274 |
| Managing off and online library databases | 2 | - | 15 | 9 | 1.8077 | .8009 |
| Searching free online databases skills | 8 | 4 | 4 | 10 | 2.3846 | 1.298 |
| Video conferencing among library users | 7 | 5 | 5 | 8 | 2.3846 | 1.2353 |
| Download and up load materials online | 2 | - | 14 | 10 | 1.7692 | .8152 |

| | | | | | | |
|--|----|----|----|----|--------|--------|
| Subscribing online resources databases skills | 3 | 4 | 9 | 10 | 2.0001 | 1.019 |
| Storing library digital information in storage devices such as memory cards, CDROM, hard disk, flash drive and library server. | 10 | 5 | 4 | 7 | 2.6923 | 1.2575 |
| Ability to cope with any problem when managing digital content/ e-resources in library | 4 | 5 | 10 | 7 | 2.2308 | 1.0318 |
| Ability to select, organize and store digital content in library archives. | 10 | 12 | 2 | 2 | 3.1538 | .8806 |

It could be seen from table one that the ability to select, organize and store digital content in library archives had a mean score of 3.1538, scanning of documents and storing them in the library database for use had a mean score of 2.769, storing library digital information in storage devices such as memory cards, CD-ROM, hard disk, flash drive and library server had a mean score of 2.6923, knowledge and skills to protect library digital content had a mean score of 2.6535, file/ folder management skills had a mean score of 2.4615, searching free online databases skills had a mean score of 2.3846, video conferencing among library users had a mean score of 2.3846, ability to cope with any problem when managing digital content/ e-resources in library had a mean score of 2.2308 and subscribing online resources databases skills had a mean score of 2.0001.

Research Question 2: What are the various digital technology training skills needed among library personnel for effective online resources management and services.

Table 2. Shows the various digital technology training skills needed among library personnel for effective online resources management and services.

| Digital Technology Training Skills Needed Among Library Personnel For Effective Online Resources Management And Services | SA | A | SD | D | Mean | Std |
|--|----|----|----|----|--------|--------|
| Programing skills | - | - | 16 | 10 | 1.6154 | .4961 |
| Web site development and management software skills | 2 | - | 14 | 10 | 1.7692 | .81524 |
| Computer networking technology skills | 8 | 4 | 4 | 10 | 2.3846 | 1.2985 |
| Negotiating Online databases skills | 9 | 10 | 3 | 4 | 2.9231 | 1.0554 |
| Online publishing skills | 10 | 15 | 1 | - | 3.3462 | .5616 |
| Digital creation, problem solving and innovation skills | 11 | 8 | 3 | 5 | 2.8846 | 1.1429 |
| space technologies such as 3D printing and scanning skills | 12 | 5 | 4 | 5 | 2.9231 | 1.1974 |
| Installation and testing running of digital resources software | 15 | 4 | 3 | 4 | 3.1538 | 1.1556 |

| | | | | | | |
|---|----|----|---|---|--------|--------|
| Data management sharing skills | 13 | 5 | 2 | 6 | 2.9615 | 1.2484 |
| Digital learning and development skills | 10 | 9 | 4 | 3 | 3.0000 | 1.0198 |
| E-resources mobile applications skills | 9 | 11 | 3 | 3 | 3.0000 | .9798 |
| Virtual reference technologies for digital resources skills | 11 | 12 | 3 | - | 3.3077 | .6794 |
| Digital records preservation and management skills | 12 | 7 | 7 | - | 3.1923 | .8494 |
| Digital asset management skills | 10 | 9 | - | 7 | 2.8462 | 1.2229 |

From Table 2 it could be seen that online publishing skills had a mean score of 3.3462, virtual reference technologies for digital resources skills had a mean score of 3.3077, digital records preservation and management skills had a mean score of 3.1923, installation and testing running of digital resources software had a mean score of 3.1538, digital learning and development skills had a mean score of 3.0000, e-resources mobile applications skills had a mean score of 3.0000, had a mean score of 2.9615, negotiating Online databases skills had a mean score of 2.9231, space technologies such as 3D printing and scanning skills had a mean score of 2.9231, digital asset management skills had a mean score of 2.8462.

Research Question 3: How often do library personnel undergo digital technology skills training for effective online resources management and services.

Table 3. Shows how often do library personnel undergo digital technology skills training for effective online resources management and services

| Library Personnel Undergo Digital Technology Skills Training For Effective Online Resources Management And Services | Yes | No |
|--|------------|-----------|
| Once in three months | - | 26 |
| Once in six months | - | 26 |
| Once in a year | 9 | 17 |
| Twice in a year | - | 26 |
| Non- in a year | 17 | 9 |

From Table 3, it could be seen that only nine (9) respondents accepted that they attend digital technology skills training for effective online resources management and services once in a year. None of the respondents accepted attending digital skill training once in three months, once in six months and twice in a year.

Research Question 4: Is there is a difference in male and female digital technology skills acquired among library personnel in managing online resources for effective library services.

Table 4: Descriptive Statistics of Mean Showing the Difference in Male and Female

Digital Technology Skills Acquired among Library Personnel in Managing Online Resources for Effective Library Services

| Gender | N | Mean | Mean difference | Standard Deviation |
|--------|----|--------|-----------------|--------------------|
| Male | 10 | 2.3231 | 0.3568 | .8656 |
| Female | 16 | 1.9663 | | .8203 |

Table 4 showed the difference male and female digital technology skills acquired among library personnel in managing online resources for effective library services. It is seen that for males which are 10 in numbers had a mean of 2.3231 and females which is 16 in numbers had a mean score of 1.9663. With a mean difference of 0.3568, males had higher means scores than females. To determine if the difference is significant, hypothesis one was formulated and tested using independent sample T-test as shown in table 6.

Research Question 5: Is there a difference in the various digital technology skills needed in male and female library personnel for effective library services

Table 5: Descriptive Statistics of Mean Showing the difference in the various digital technology skills needed in Male and Female library personnel for effective library services

| Gender | N | Mean | Mean Difference | Standard Deviation |
|--------|----|--------|-----------------|--------------------|
| Male | 10 | 3.1286 | 0.5259 | .6750 |
| Female | 16 | 2.6027 | | .9240 |

Table 5 showed the difference in the various digital technology skills needed in male and female library personnel for effective library services. It is seen that for males which are 10 in numbers had a mean of 3.1286 and females which is 16 in numbers had a mean of 2.6027. With a mean difference of 0.5259 males had higher means scores than females. To determine if the difference is significant, hypothesis two was formulated and tested using independent sample T-test as shown in table 7.

Testing the Null Hypotheses

Hypothesis 1.: There is no significant difference in male and female digital technology skills acquired among library personnel in managing online resources for effective library services.

6. T-test analysis showing the difference in male and female level of digital technology skills acquired among library personnel in managing online resources for effective library services.

| Gender | N | Mean | SD | t-Critical | t-Calculated | df | Decision |
|--------|----|--------|-------|------------|--------------|----|-----------------|
| Male | 10 | 2.3231 | .8656 | 1.960 | 1.057 | 24 | Not Significant |
| Female | 16 | 1.9663 | .8203 | | | | |

Table

It could be seen from table five that there is no significant differences in the mean rating of male and female library users` satisfaction with the CHS library facilities in Niger Delta University. This is shown by the calculated "t" of 1.057 which is less than 1.960 t-critical value at 0.005 level of significance and 24 degree of freedom. The null hypothesis which states that there is no significant difference in male and female level of digital technology skills acquired among library personnel in managing online resources for effective library services was retained.

Hypothesis 2. There is no significant difference in the various digital technology skills needed in male and female library personnel for effective library services.

Table 7.: T-test analysis showing the difference in the various digital technology skills needed in male and female library personnel for effective library services

| Gender | N | Mean | SD | t-Critical | t-Calculated | df | Decision |
|--------|----|--------|--------|------------|--------------|----|-----------------|
| Male | 10 | 3.1286 | 0.6750 | 1.960 | 1.672 | 24 | Not Significant |
| Female | 16 | 2.6027 | 0.9240 | | | | |

It could be seen from Table 7 that there is no significant difference in the various digital technology skills needed in male and female library personnel for effective library services. This is shown by the calculated "t" of 1.672 which is less than 1.960 t-critical value at 0.005 level of significance and 24 degree of freedom. The null hypothesis which states that there is no significant difference in the various digital technology skills needed in male and female library personnel for effective library services was retained.

5.1 Discussion of Findings

Research Question One: What are the various digital technology training skills needed among library personnel for effective online resources management and services. Majority of the respondents have the ability to select, organize and store digital content in library archive, scanning of documents and storing them in the library database for use, storing library digital information in storage devices such as memory cards, CDROM, hard disk, flash drive and library server, knowledge and skills to protect library digital content, file/folder management skills, video

conferencing among library users, ability to cope with any problem when managing digital content/ e-resources in library. This study is not in line with the study of Emiri (2015) that majority of the respondents used for the study have low proficiency of digital literacy skills.

Research Question Two: What are the various digital technology training skills needed among library personnel for effective online resources management and services? The findings shows that majority of respondents accepted that they need to be trained on online publishing skills, virtual reference technologies for digital resources skills, digital records preservation and management skills, installation and testing running of digital resources software, digital learning and development skills, negotiating Online databases skills, space technologies such as 3D printing and scanning skills and digital asset management skills. According to Musa and Safiyanu (2015) and Menzella (2015) this researchers studies showed that some of the digital technologies skills training needed and suggested by respondents used for their study are re-

resources management, online publishing, installation and use of digital resource library software, website management, virtual reference skills trouble shooting library systems, subscribing to e-resources and digital learning.

Research Question Three: How often do library personnel undergo digital technology skills training for effective online resources management and services. The findings shows that majority of the respondents used for this study accepted that they attend digital technology skills training for effective online resources management and services once in a year. None of the respondents accepted attending digital skill training once in three months, once in six months and twice in a year. Peter (2016) study on ICT training among librarians shows that, librarians are not regularly trained and in most cases they use their personnel funds to attend conferences and workshops to up their knowledge. Pounder (2012) also stated that they attend training once in two or three years. Those that are eager to gain ICT knowledge and want to be relevant in the job fund themselves to training.

Research Question Four: Is there is a difference in male and female digital technology skills acquired among library personnel in managing online resources for effective library services? The result shows that males had higher means scores than females with a mean difference of 0.3568

Research Question Five: Is there a difference in the various digital technology skills needed in male and female library personnel for effective library services? The result of this analysis shows that males had higher means scores than females with a mean difference of 0.5259.

Hypotheses

It was seen from the analysis that in hypothesis one The null hypothesis which states that there is no significant difference in male and female level of digital technology skills acquired among library personnel in managing online resources for effective library services was retained.

Hypothesis two also showed that the null hypothesis which states that there is no significant difference in the various digital technology skills needed in male and female library personnel for effective library services was retained.

Conclusions

After careful investigation of on the digital technology training among library personnel for effective management of online resources and services in Federal University, Otuke, Bayelsa State, it was revealed that the level of digital technology skills acquired among library personnel in managing online resources for effective library services is high. However, it was accepted that they still need more training on their digital technology skills to manage and improve the online resources and services. It was also seen both male and female library personnel are eager to acquire more digital skills because this are the skills that can enable them render effective library services in this digital age.

Recommendation

1. University library should organize in-house training for library personnel where they can share skills and knowledge in digital technologies.
2. Library personnel should be sent to under study other personnel library in other libraries within and out-side Nigeria where digital technologies are been used to render effective services, this will practically enhance their digital skills and knowledge.

- Library personnel should be encouraged to apply for grants from university or agencies such as Tertiary Education Trust Fund (TETFund) to attend workshops on digital skills or ICT skills and knowledge. This will help to update their knowledge in this current information age.

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