Relationship between ICT skills and participation in Zoom meetings for professional development among librarians in universities in South-South, Nigeria

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Abstract
This study investigated ICT skills and participation in Zoom meetings for professional development among librarians in universities in South-South, Nigeria. Descriptive survey research design was used for the study. The population for the study was 158 librarians in the university libraries of 12 public universities in South-south, Nigeria. Total enumeration sampling techniques was used for the study. Data were collected using questionnaire. Pearson Product Correlation was used to analyse the data. The results revealed that there was significant relationship between ICT skills and frequency of participation in Zoom meetings for professional development among librarians in various areas of job; there was significant relationship between ICT skills and extent of the benefits librarians derive from participating in Zoom meetings for professional development; there was significant relationship between ICT skills and the extent of the barriers librarians encountered with participation in Zoom meetings for professional development. It was recommended that the librarians should improve their ICT skills through regular ICT training and computer practice so that they will be ICT compliant and maximally participate in Zoom meetings for professional development.

Keywords: ICT skills, Zoom meetings, professional development, librarians, South-South, Nigeria

Introduction
The need for professional development of librarians in the contemporary age is inevitable. This necessitates librarians to participate in virtual meetings. Librarians’ participation in Zoom meetings for professional development is a recurrent issue as issues affecting the libraries and librarians have to be deliberated upon so that decisive actions can be taken. Li (2009) noted that in the changing library environment, there is a need for librarians as managers of information to invest in their professional development so that they can manage the libraries meritoriously. This will necessitate librarians to continually develop themselves through diverse professional development programmes (Varalakshmi, 2007). Librarians in the modern era in which digital technologies are used for virtual meetings have significantly improved their thinking about their profession and the institutions they serve (Susan, 2011).

Across the nations of the world, COVID-19 has taught people to transit to online environment in the conduct of meetings. Well-known online platforms such as Skype, Zoom, Google Hangouts, Microsoft Teams, and Slack are used for online meetings (Kristóf, 2020). The use of Zoom for participating in meetings has advanced the professional development of librarians. Li (2009) averred that as technologies have saturated all areas of library operations and practice, the librarians in university libraries have to be flexible in adapting and adopting new technologies for meeting through which vital issues pertaining to their profession will be discussed.

In the modern days in which ICT is deployed in conducting and organizing meetings, there is a need for librarians to
possess relevant ICT skills for participating in virtual meetings as Zoom meetings are mostly organized to enable librarians to discuss issues that are vital to their profession (Kaltimani & Naik, 2013). Ayoku and Okafor (2015); and Batool and Ameen (2010) claimed that since ICT is highly used for meetings, librarians have to possess ICT skills. However, the extent of ICT skills possessed by librarians and frequency of librarians’ participation in Zoom meetings for professional development in various areas is of great concern as the platform is still novel. This study therefore investigates ICT skills and librarians’ participation in Zoom meetings for professional development in university libraries in South-South, Nigeria.

Hypotheses
The following hypotheses are tested at 0.05 level of significance in the study:

1. There is no significant relationship between ICT skills and frequency of librarians’ participation in Zoom meetings for professional development in various areas in university libraries in South-South, Nigeria.

2. There is no significant relationship between ICT skills and the extent of the benefits librarians derived from participating in Zoom meetings for professional development in university libraries in South-South, Nigeria.

3. There is no significant relationship between ICT skills and extent of the barriers librarians encountered with participation in Zoom meetings for professional development in university libraries in South-South, Nigeria.

Literature review
The advent of ICT has necessitated virtual meeting among librarians using diverse tools such as Zoom. Librarians therefore have to possess ICT skills to participate in Zoom meetings for their professional development. Kaltimani and Naik (2013) claimed that the possession of ICT skills by librarians has fundamentally aided Zoom meetings. Batool and Ameen (2010) described ICT skills for librarians to be a blend of competencies, aptitude and activities associated to library technologies. These skills are vital for the progress of the libraries and professional development and career building of librarians. Ayoku and Okafor (2015) averred that there is a need for librarians to have the understanding of how to use ICT for meeting. Mathews and Pardue (2009) gave a comprehensive analysis of ICT skills that librarians need for virtual meeting. These, according to them, include microcomputer applications, mainframe computer applications, CD-ROM products, computer languages or programming, computer hardware, networks such as LAN or WAN, Internet searching, resources in electronic formats and image technology and multimedia skills.

Librarians acquire and practice the skills of how to participate in Zoom meetings with increasing frequency (Spinuzzi, 2006). Among the skills needed to participate in Zoom meetings for professional development are computer skills, information literacy skills, communication skill (Kaltimani & Naik, 2013). Ademodi and Adepoju (2009) conducted a study which aimed at determining the extent of computer skills and proficiencies possessed by librarians in selected universities in Nigeria in participating in virtual meetings. It was found that the level of computer skills and
proficiencies of the librarians was low. Adeyoyin (2006) carried out a study which aimed at ascertaining the extent of ICT literacy skills among the staff of English-speaking university libraries staff and their counterparts in French-speaking university libraries. The study found that out of the 370 librarians in the universities covered, only 179 of them possessed the ICT skills for virtual meetings. Safahieh and Asemi (2008) assessed the computer literacy skills of librarians in Isfahan University, Iran. It was found that most of the librarians possess the required computer literacy skills to participate in virtual meetings.

Participation of librarians in Zoom meeting is getting increasing on continuous basis. This is because the mode of conducting meeting in the contemporary era is inconceivably different to that of the beginning of the 21st century. More so, the upsurge of COVID-19 necessitated professionals across diverse callings to meet online to deliberate on issues of imminent concern. Librarians are not left behind in this progressive move. Librarians participated in Zoom meeting in the areas of discovering new tools for teaching in virtual environment. Bhojwani (2020) claimed that a lot of librarians participated in virtual meetings to learn new tools like Google Classroom and discover methods to generate or connect with virtual library platforms so as to make collections digital to get to maximum users.

Librarians derive a number of benefits from participating in Zoom meetings. Anene and Idiedo (2021) conducted a study on librarians’ participation in professional development workshops using Zoom in Nigeria. Factors such as saving money, the free nature of workshops, reduction of travel risk, and prospect for all were identified as the benefits of participating in online workshops using Zoom. Richards (2014) reflected on the gains of employing virtual meetings within her library-related roles. She identified gains which include cost, time, and the ability to select the preferred format. Wasson (2016) made use of ethnographic method to study how virtual meeting participants felt about their computer-human experience and found that some participants treasured the ability to multitask.

If Zoom is set up appropriately, it is completely safe with regard to confidentiality (Vinayak, 2020). Positive attributes of Zoom comprise the capability to swiftly simplify problems, assist in decreasing social isolation and advance the union of the academic meeting’s community of members. Wan Hassan et al. (2020) stated that the benefits of using Zoom for meetings include: cost savings as a result of lower travel costs and travel time, participants’ information never depends on locations, easy management and automatic registration of participants through Zoom software.

Findings from a study conducted by Edet and Obi (2021) reflected that librarians frequently participated in meeting that will enhance their professional development. This means that librarians utilised the opportunity of the different online meetings to educate and prepare themselves for the changes ahead of them in their workplaces. Librarians participated in Zoom meetings in the areas of discovering new tools for teaching in virtual environment. Bhojwani (2020) claimed that a lot of librarians participated in virtual meetings to learn new tools like Google Classroom and discover methods to generate or connect with virtual library platforms so as to make collections digital to get to maximum users.

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Also, the work of Lowenthal and West (2020) revealed that Zoom can lessen the feelings of social seclusion and promote a sense of community among peoples. By conducting video conference meetings, the gathering and interaction become lively. Librarians can see their colleagues on screen and give concentration to instructor’s clarification.

Zoom meeting offers a wide freedom of meeting style. However, librarians confront a lot of challenges in participating in Zoom meetings. Anene and Idiedo (2021) conducted a study on librarians’ participation in professional development workshop using Zoom in Nigeria. They identified barriers such as high cost of buying data bundle, not having computer/Android phone/smartphone, lack of knowledge of up-coming workshops, lack of knowledge of time, power failure, indifferent attitude to the use of technology, and inconsistency of network failures. Baro and Godfrey (2015) found that challenges such as inadequate skills, power outage, lack of time, inadequate facilities (computers with Internet access), and conventional attitude of several librarians make it difficult for them to use Web 2.0 tools.

Seimode, Ejitagha and Baro (2017) reported that power outage, poor network/low bandwidth, inadequate time and lack of interest by some librarians are the key challenges in online meeting in Nigeria. Poor Internet bandwidth may give effect such as blurred voice in online platforms, awfully delivered resources, unavailability of direct interaction among the librarians, and noise. Edet and Obi (2021) investigated continuing professional development activities of librarians in Nigeria during COVID-19. The major confrontations encountered by librarians in participating in online professional development activities include paucity of funds for data subscription, over consumption of data, lack of time to partake, technophobia, over subscription, and lack of interest.

**Methods**

Descriptive survey research design was used for the study. The population for the study was 158 librarians in the university libraries of 12 public universities in South-south, Nigeria. Because of the manageable size of the study, total enumeration sampling techniques was used. Questionnaire was used as the instrument of data collection. The questionnaire comprised four sections: A-D. Section A: Extent of ICT skills possessed by librarians to participate in Zoom meetings for professional development; Section B: Frequency of librarians’ participation in Zoom meetings for professional development in various areas; Section C: Extent of the benefits derived from the Zoom meetings the librarians have participated in for professional development; Section D: Extent the librarians experienced barriers with the Zoom meetings they have participated in for professional development. A 5-point Likert Scale of Very Large Extent, Large Extent, Moderate Extent, Low Extent, and Very Low Extent was used for sections A and C. A 5-point Likert Scale of Always, Very Often, Sometimes, Rarely, and Never was used for Section B. A 5-point Likert Scale of Not a Barrier, Somewhat of a Barrier, Moderate Barrier, Great Barrier, and Extreme Barrier was used for Section D.

The questionnaire was validated by the researcher’s supervisor. To determine the reliability of the instrument, ten copies of the questionnaire were administered to librarians at Obafemi Awolowo University, Ile-Ife which was outside the sample of this
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study. This was done within the interval of two weeks. The paired scores generated from the test were analysed using Cronbach’s Alpha method through the Statistical Package for Social Science (SPSS). The index of correlation obtained Cronbach’s Alpha reliability coefficient of $r = 0.97$ which translated to a high reliability of the instrument and therefore considered adequate for the study. The data generated from the respondents were analyzed Person Product Moment Correlation.

**Results**

The results are presented according to the formulated hypothesis.

**Hypothesis 1:** There is no significant relationship between ICT skills and frequency of librarians’ participation in Zoom meetings for professional development in various areas of job in university libraries in South-South, Nigeria.

This hypothesis is tested with the data in Table 1.

**Table 1: Relationship between ICT skills and frequency of librarians’ participation in Zoom meetings for professional development in various areas**

<table>
<thead>
<tr>
<th>ICT skills</th>
<th>Participating in Zoom meetings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Correlation 1</td>
<td>.144</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.029</td>
</tr>
<tr>
<td>Frequency of participation N</td>
<td>111</td>
</tr>
<tr>
<td>Pearson Correlation .144</td>
<td>111</td>
</tr>
<tr>
<td>Sig. (2-tailed) .029</td>
<td>1</td>
</tr>
<tr>
<td>N 111</td>
<td>111</td>
</tr>
</tbody>
</table>

Table 1 shows that the Pearson Product Moment Correlation Coefficient $r = 0.144$. Since the significant value (Sig.2-tailed) is 0.029 (which is less than 0.05), it can therefore be concluded that there is significant relationship between librarians ICT skills and frequency of librarians’ participation in Zoom meetings for professional development in various areas of job in South-South, Nigeria. The null hypothesis is therefore rejected. This implies that an improvement in ICT skills may lead to corresponding improvement in the frequency of librarians’ participation in Zoom meetings for professional development in various areas in South-South, Nigeria.

**Hypothesis 2:** There is no significant relationship between ICT skills and the extent of the benefits librarians derived from participating in Zoom meetings for professional development in university libraries in South-South, Nigeria.

This hypothesis is tested with the data in Table 2.
Table 2: Relationship between ICT skills and the extent of the benefits librarians derived from participating in Zoom meetings for professional development

<table>
<thead>
<tr>
<th>ICT skills</th>
<th>Extent of the benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Correlation</td>
<td>.114</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.021</td>
</tr>
</tbody>
</table>

From Table 2, Pearson Product Moment Correlation Coefficient $r = 0.114$. Since the significant value (Sig.2-tailed) is 0.021 (which is less than 0.05), it can therefore be concluded that there is significant relationship between librarians’ ICT skills and extent of the benefits they derived from participating in Zoom meetings for professional development in university libraries in South-South, Nigeria. The null hypothesis is therefore rejected. This implies that an improvement in librarians’ ICT skills may lead to corresponding improvement in the extent of the benefits they derived from participating in Zoom meetings for professional development in university libraries in South-South, Nigeria.

Hypothesis 3: There is no significant relationship between ICT skills and extent of the barriers librarians encountered with participation in Zoom meetings for professional development in university libraries in South-South, Nigeria.

This hypothesis is tested with the data in Table 3.

Table 3: Relationship between ICT skills and extent of the barriers librarians encountered with participation in Zoom meetings for professional development

<table>
<thead>
<tr>
<th>ICT skills</th>
<th>Barriers encountered</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Correlation</td>
<td>.129</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.042</td>
</tr>
</tbody>
</table>

From Table 3, Pearson Product Moment Correlation Coefficient $r = 0.129$. Since the significant value (Sig.2-tailed) is 0.042 (which is less than 0.05), it can therefore be concluded that there is significant
relationship between librarians’ ICT skills and the extent of the barriers encountered with participation in Zoom meetings for professional development in university libraries in South-South, Nigeria. The null hypothesis is therefore rejected. This implies that an improvement in ICT facilities’ use may lead to corresponding reduction in the extent of the barriers encountered with participation in Zoom meetings for professional development in university libraries in South-South, Nigeria.

Discussion
This study found that there is significant relationship between ICT skills and extent of the benefits librarians derived from participating in Zoom meetings for professional development in university libraries in South-South, Nigeria. This is because Zoom is simple to use for meetings and that the librarians appreciate the importance of participating in professional development programmes. Zoom meeting facilitates feedback from librarians, enables librarians to be more in discussing crucial issues, and advances online communication with other librarians. This is in agreement with the finding of a study by Kavulya (2007) which found that participation in virtual meeting is highly beneficial as it brings people from different area together on real time. Possession of ICT skills will enhance the professional development of the contemporary librarians in many dimensions (Adekoya, 2020; Adekoya, & Adedimeji, 2021; Anunobi & Ukwoma, 2009).

This study found that there is significant relationship between ICT skills and the extent of the barriers librarians encountered with participation in Zoom meetings for professional development in university libraries in South-South, Nigeria. In actual fact, in the process of using ICT skills, certain unforeseen barriers will be encountered. These may include inadequate funds for data subscription, inadequate time, issue with data subscription, low level of technical expertise, poor internet connectivity, etc. these barriers may reduce the rate at which the librarians may want to participate in Zoom meetings. Anene and Idiedo (2021) surveyed Nigeria librarians’ participation in professional development workshop using Zoom. It was found that most of the librarians could not participate effectively due to their low level of ICT expertise. It was discovered that the librarians exhibited indifferent attitude to the use of technology, and this affected their participation in Zoom meetings.

Conclusion
The need for librarians to participate in virtual meeting for their professional development is incontrovertible. Zoom happens to be one of the major platform through which librarians can participate in virtual meetings for their professional developments. The extent of participation in Zoom meetings organized by various organisations within librarianship for the professional developments of their members is low. Meanwhile, to participate in Zoom meetings, there is a need for the 21st-century librarians to possess ICT skills and have some ICT facilities to use. Possession of moderate level of ICT skills as found in this study will enable librarians to minimally participate in Zoom meetings, more importantly that the extent of facilities’ use available for librarians to participate in Zoom meetings for professional development is high. Even at that, the frequency of librarians’ participation in Zoom meetings for professional development in various areas in university libraries will increase.
libraries in South-South, Nigeria is low. This may be because of the series of challenges encountered in the process of participation in the meetings.

In line with the findings of this study, the following recommendations are made:

1. Librarians should improve their ICT skills through regular ICT training and computer practice so that they will be ICT compliant and maximally participate in Zoom meetings for professional development.

2. Librarians should cultivate the habit of participating frequently in Zoom meetings as this will enable them to be conversant with the current trends in librarianship and they will be able to air their views on certain issues in library practice.

3. Library leadership should encourage librarians to participate in Zoom meetings for professional development organised by various organisations through sponsorship and paper presentation so that they can improve on their knowledge and competencies in library service and practice.

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