October 2023

# Use of Mobile Applications for Information Management among Library and Information Science Trainees in Federal Polytechnic Ede, Osun State, Nigeria

Blessing Babawale Amusan
*Federal Polytechnic Ede, Osun State, Nigeria*, blessingamusan@gmail.com

Adepero Olajumoke Odumade Mrs.
*Federal Polytechnic, Ilaro, Ogun State, Nigeria*, odumadeadepero@gmail.com

# Use of mobile applications for information management among Library and Information Science Trainees in Federal Polytechnic Ede, Osun State, Nigeria

Blessing Babawale AMUSAN
Department of Library and Information Science, Federal Polytechnic Ede, Osun State, Nigeria
blessingamusan@gmail.com


and


Adepero Olajumoke ODUMADE
Main Library, Federal Polytechnic Ilaro, Ogun State, Nigeria
odumadeadepero@gmail.com

**Abstract**
The study is an assessment of the use of mobile applications for information management among year two National Diploma students in the Department of Library and Information Science, Federal Polytechnic Ede, Osun State, Nigeria. The study adopted a survey method and questionnaire were administered on the 164 students from which 152 were completed and returned. The study discovered that the students commonly used mobile applications for managing information relating to their academic activities and were highly skilled in using mobile applications for streaming videos, sharing of documents and uploading of information using social media apps, but majority. The study also discovered that personal efforts were the major means through which the students acquired relevant skills in using mobile applications for information management. However, majority of the students claimed that lack of required skills and inadequate instructions from lecturers were common challenges they experienced. The study recommends, among others, that there is need for more practical training on the use of mobile applications for information management by the lecturers in the Department and the institution's Library, and also institution's management should provide adequate teaching aids to enhance the learning process.

**Keywords: Mobile applications, information management, LIS trainees, Federal Polytechnic Ede, Library School**

## Introduction

Information resources are packaged in various formats and are significant to planning and decision making activities. More so, access to useful information gives one an edge to accomplish a given task. Information resources are available in print format such as textbooks; electronic formats such as e-books; and multimedia like web contents, audio and videos. Information are managed to facilitate their optimal use. Information management, according to University of Washington (2021) are processes involved in the creating, capturing, designing, collection, organization, preservation, storing, and sharing of information. Information

management practices are activities that revolve around making the right information available to the right user and at the right time; the totality of what it takes to create information till the time such information is discarded as not being useful again.

Information management focuses on acquisition of information from one or more sources, organization and even the distribution of that information to those that may need it. Effective management of information allows the information to be presented to the audience or the right group of people at the right time. Also, information need to be managed throughout its lifecycle, irrespective of the format or source, (be it data, paper documents, electronic documents, audio, video, web contents etc) and channels which may include web, phones, book etc.

Managing information for optimal use is not an easy task as there are lots of activities that need to take place as well as tools and facilities that need to be used. Also, whoever that needs to manage information need to possess certain skills and competence. The proliferation in the use and application of ICT in this 21st Century has engendered a new approach to information management. Information is now available in large quantities and need to be managed effectively for it to be useful. The increase in the use of smartphones and smart technologies (GMI, 2019) has also opened a new paradigm in the application of information management techniques. Mobile technologies are altering the ways we communicate, conduct businesses, hold meetings, teach, learn, socialize, relate with friends and families, entertain ourselves, and even make decisions that affect our daily lives. The use of smartphones has equally given rise to increase in the use of mobile applications.

One of the contemporary tools used for information management is mobile applications. Mobile applications are type of applications that are designed to run on mobile devices, which can be smartphones and tablets. Mobile applications are also called mobile apps and functions just like application software run on computers. Mobile applications provide users with similar services and experience to those accessed on computer. Also, there are different mobile applications for different tasks such as: capturing, editing, storage, organization and sharing of information.

Among the users of mobile applications are students of higher institutions which has also altered their learning styles (Darko-Adjei, 2019). Students, like those undergoing Library and Information Science training at the universities or polytechnics, are expected to demonstrate

mastery over the use mobile applications to manage information effectively. Library and Information Science students need to receive training that can enhance their information management activities when they start working as professionals.

Polytechnics in Nigeria run Diploma programmes which are in two folds- National Diploma (ND) and Higher National Diploma (HND). National Diploma is the first stage which runs for two years for a full time study or three years for a part time (weekend) study. Diplomates are expected to go for a year Industrial Training to acquire relevant hands-on experience before they can apply for HND programme, which also run for two or three years, just like the ND programme. Many polytechnics in Nigeria offer Library and Information Science course at both ND and HND level. One of such is the federal Polytechnic, Ede, Osun State, which incidentally is the first Federal Polytechnic in South-West Nigeria to offer such programme.

**Statement of the problem**

The use of smartphones and mobile applications for information management is one of the major characteristics of this 21st Century. Graduating students of library schools are expected to have acquired relevant information management skills in preparation for kick-starting their career. Therefore, it is expected that they have mastery of the use of mobile applications for managing information, such as downloading, creating, organizing, storage and sharing of information.

However, observations and studies have shown that many Library and Information Science (LIS) trainees do not possess necessary skills in using mobile applications for information management. This may be as result of the type of training currently receiving or lack of necessary leaning facilities and tools. This is detrimental to the LIS profession  as such trainees, upon graduation, may not be able to apply the use of mobile applications effectively to managing and rendering information services to their potential users who are increasingly relying on electronic channels of information retrieval.

In view of the foregoing, this study set out to assess the use of mobile applications for information management among the National Diploma (ND) II students of the Department of Library and Information Science, Federal Polytechnic Ede, Osun State.

**Research Questions**

The following research questions will guide the study:

1. What types of mobile applications are commonly used for information management by the ND II LIS students of Federal Polytechnic Ede?
2. What is the level of skills possessed by the ND II LIS students Federal Polytechnic Ede in using mobile applications for information management?
3. Through what means did the students acquire relevant skills in using mobile applications for information management?
4. What factors motivate the use of mobile applications for information management among the ND II LIS students in Federal Polytechnic Ede?
5. What are the effects of the use of mobile applications on information management activities among the students?
6. What are the challenges facing the ND II LIS students of Federal Polytechnic Ede in using mobile applications for information management?

**Research Methodology**

The study adopted survey research design. The population of the study consisted of all 164 students in NDII Library and Information Science Department, Federal Polytechnic Ede, Osun State, Nigeria. Total enumeration of all the population was adopted. Data for the study was collected through questionnaire. The questionnaire was self-designed and it covers all the research questions raised by the study. Questionnaires were administered on the students during their lecture periods.

**Findings**

**Response rate/ demographic variables of respondents**

Out of the 164 sets of questionnaire that were administered, 152 was duly completed and retuned, representing 92.7% response rate. The 152 completed sets of questionnaire formed the basis for this analysis. Demographic variables of the respondents are presented in Table 1.

Table 1: **Demographic variables of respondents**

| Variables | Frequency | Percentage |
|---|---|---|
| **Gender** | | |

| | | |
|---|---|---|
| Male | 62 | 40.79% |
| Female | 90 | 59.21% |
| **Total** | **152** | **100.00%** |
| **Age** | | |
| 16-18 years | 2 | 1.32% |
| 19-21 years | 66 | 43.42% |
| 22 years and above | 84 | 55.26% |
| **Total** | **152** | **100.00%** |

From Table 1, it is evident that 40.79% of the respondents were male while the remaining 59.21% were female. Also, in term of age, majority of 55.26% were 22 years and above while 43.42% claimed to be between 19-21 years of age and 1.32% were between 16-18 years old.

**What types of mobile applications are used for information management by the NDII LIS students in Federal Polytechnic Ede?**

The respondents were asked to identify different types of mobile applications that they used for information management, as well as the level of usage. The result is presented in Figure 1.
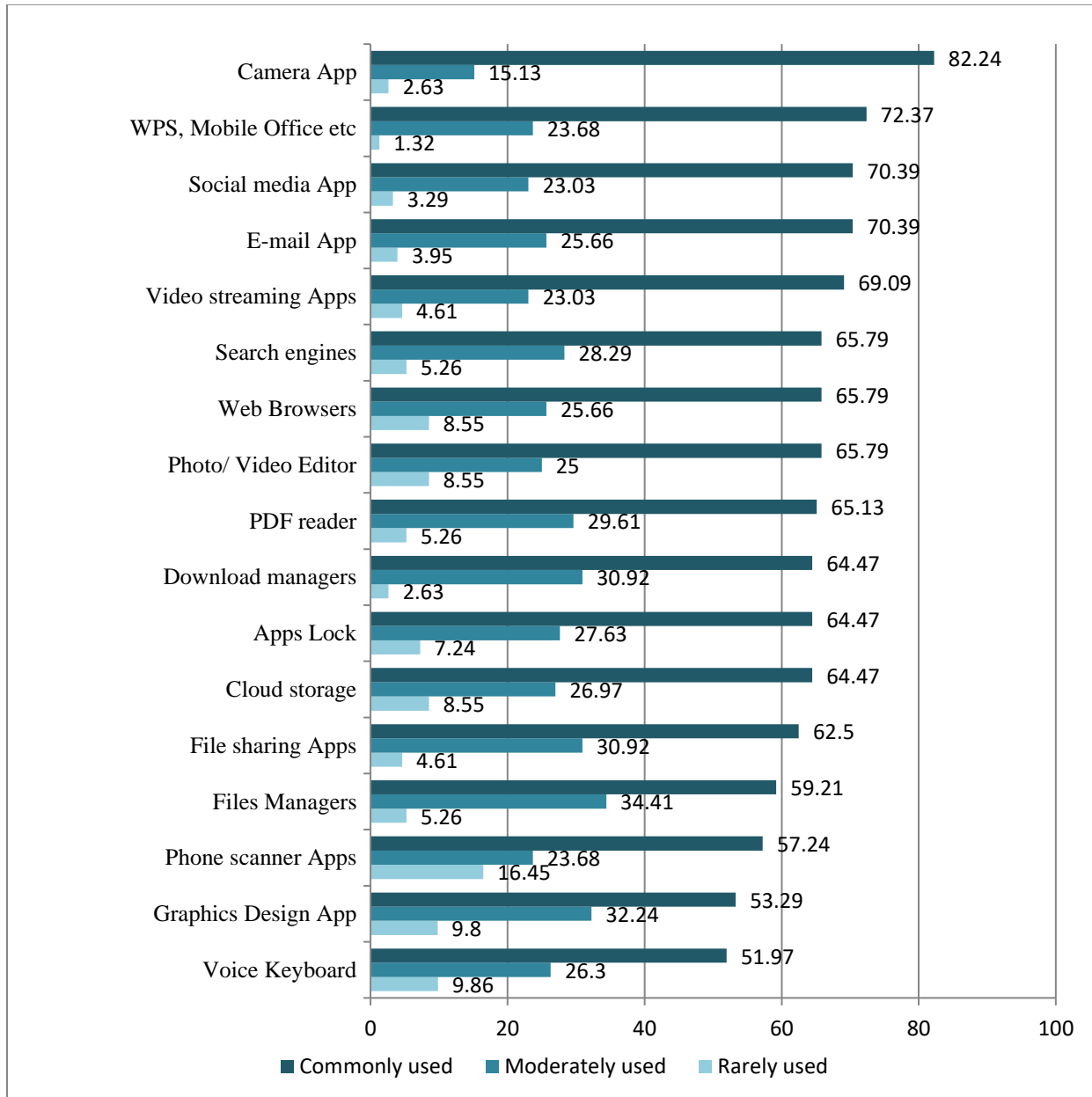


**Figure 1: Types and level of mobile application use for information management**

Figure 1 shows different types of mobile applications that are used by the respondents for information management activities. Top on the list was camera App (82.24%), followed by Mobile office such as WPS and Mobile Word processors (72.37%); Social media apps (70.39%); E-mail App (70.39%); video streaming Apps (Such as YouTube) (69.09%); and Search engine apps and browsers (65.79%). Others include PDF reader (65.13%); download managers and App lock (64.47%), respectively. The least commonly used mobile application are graphic design apps (53.29%) and voice keyboard (51.97%). It is evident from Table 1 that the students used camera app most of the times to capture information such as using it for smart scanning.

**What is the level of skills possessed by the NDII students of LIS in Federal Polytechnic Ede in using mobile applications for information management?**

**Table 2: Level of information management skills possessed by the respondents**

| S/N | I can use mobile applications to: | High skill (%) | Moderate Skill (%) | Low skill (%) | No skill (%) |
|---|---|---|---|---|---|
| 1 | Stream video/ audio | 99 (65.13) | 34 (22.37) | 5 (3.29) | 14 (9.21) |
| 2 | Share documents to other people through social media such as WhatsApp | 98 (64.47) | 50 (32.89) | 4 (2.63) | -- |
| 3 | Upload information on social media apps | 98 (64.47) | 46 (30.26) | 4 (2.63) | 4 (2.63) |
| 4 | Edit Image, audio or video | 92 (60.53) | 49 (32.24) | 9 (5.92) | 2 (1.32) |
| 5 | Type or create new contents | 92 (60.52) | 37 (24.34) | 19 (12.50) | 4 (2.63) |
| 6 | Send and read emails | 89 (58.55) | 50 (32.89) | 9 (5.92) | 4 (2.63) |
| 7 | Store information/ files using mobile apps | 88 (57.89) | 49 (32.34) | 10 (6.57) | 4 (2.63) |
| 8 | Download e-journals/ e-books, or films | 88 (57.89) | 59 (38.82) | 3 (1.97) | 2 (1.32) |
| 9 | Copy documents or files from phone to other devices such as computer | 82 (53.94) | 51 (33.55) | 1 (0.66) | 5 (3.29) |
| 10 | Search for information online | 79 (51.97) | 47 (30.92) | 19 (12.50) | 7 (4.61) |
| 11 | Organize or arrange files on my phone for easy retrieval | 68 (44.75) | 57(37.50) | 8 (5.26) | 19 (12.50) |
| 12 | Hide files or applications on the phone | 64 (42.11) | 65 (42.76) | 11 (7.24) | 12 (7.89) |
| 13 | Do graphics design | 54 (35.53) | 56 (36.84) | 20 (13.16) | 27(17.76) |
| 14 | Do data analysis/ presentation | 11 (7.24) | 16 (10.53) | 48 ( 31.58) | 77 (50.66) |

**n=152**

Table 2 shows the level of information management skills possessed by the respondents while applying the use of mobile applications. It is evident from the Table that majority of the respondents claimed to be highly skilled at using mobile applications for tasks like: streaming of videos/ audio (65.13%); information sharing through social media apps (64.47%); image/audio/video editing (60.53%); typing of documents (60.52%); and information storage

(57.89%). Also, some 38.82% claimed to possess moderate skills in downloading of ebooks and ejournals; and searching for information online (30.92%). However, 50.66% of the respondents claimed that they do not have skills in using mobile applications for performing data analysis. This implies that the respondents were highly skilled in activities such as online streaming of videos, sharing and uploading of information through social media apps, but were less skilled in activities such as graphic design and data analysis/ presentation.

**Where did the students acquire relevant skills in using mobile applications for information management?**
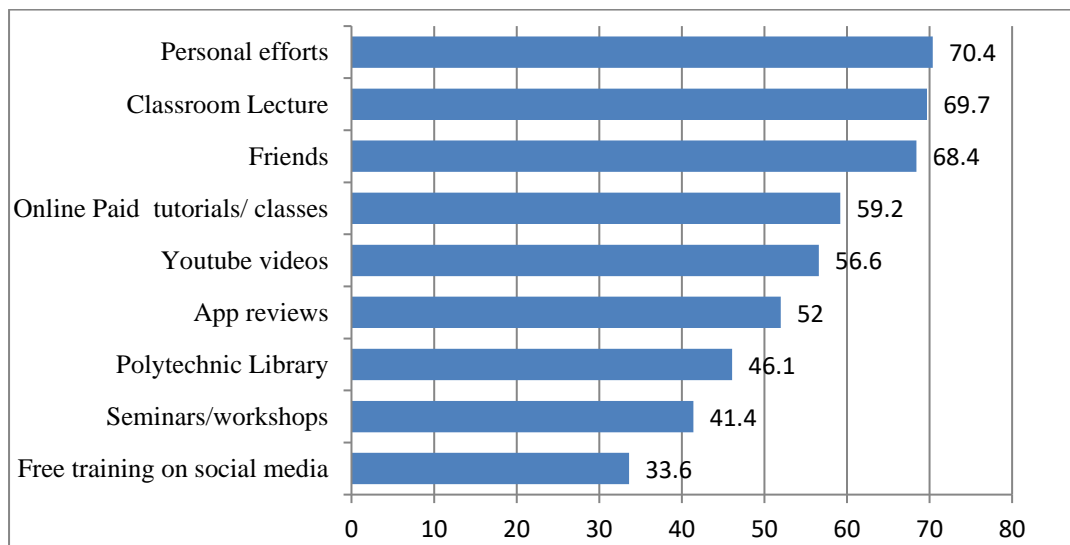


**n = 152**

**Figure 2: Sources of acquiring relevant skills in using mobile applications for information management activities**

Figure 2 indicates various sources where the respondents acquire relevant skills in using mobile applications for information management. It is evident that majority (70.4%) of the respondents claimed they acquire such skills through personal efforts; followed by 69.7% that claimed it was through classroom lectures. Also, some 68.4% claimed it was through friends while 59.2% claimed such skills were acquired through online paid tutorials/ classes. Also, some 56.6% claimed it was through Youtube videos while 46.1% claimed to acquire the skills through the institution's Library. While one would expect classroom and the Institution library to top the list, however, many of the respondents claimed to acquire the skills through personal efforts.

**What factors motivate the use of mobile applications for information management among the NDII students of LIS in Federal Polytechnic Ede?**
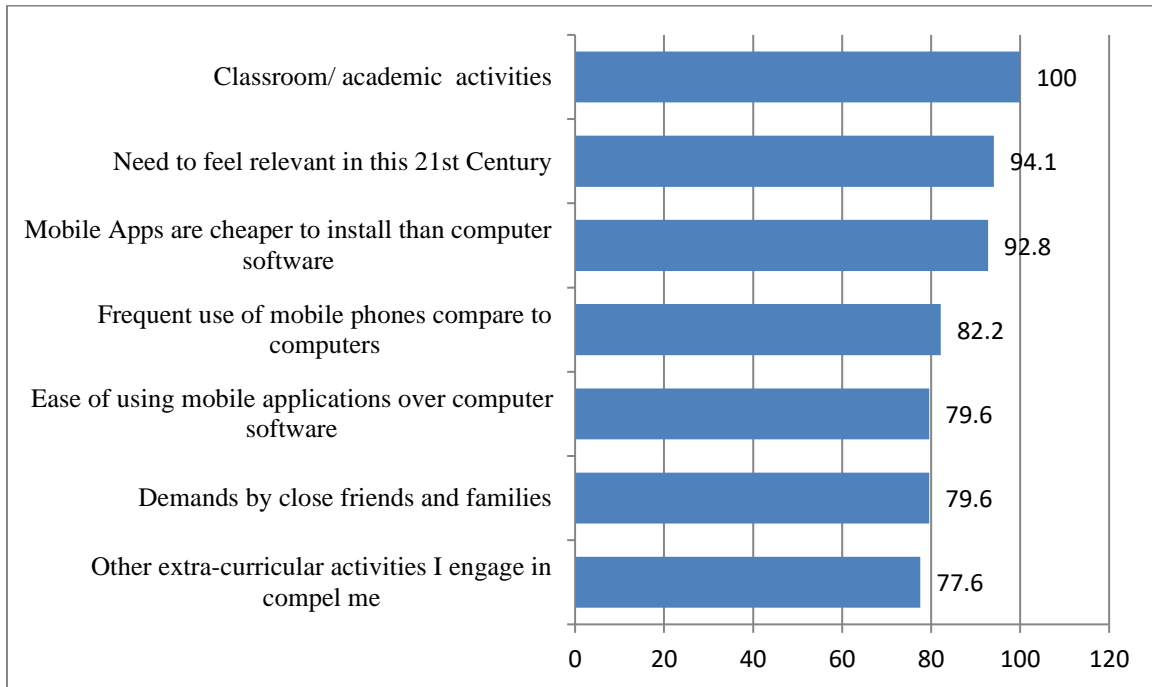


**Figure 3: Factors motivating the use of mobile applications for information management**

From Figure 3, it is evident that there are various motivating factors for the use of mobile applications for information management among the respondents. All the respondents (100%) claimed that it was classroom/academic related activities that was the major reason for using mobile applications for information management; followed by the need to feel relevant (94.1%). Also, 92.8% respondents claimed it is because mobile applications are cheaper to install than computer software; while 79.6% also claimed that mobile applications are easier to use than computer software. This implies that the respondents found mobile applications a contemporary technology which made the users feel relevant in the 21st Century; and also mobile applications have advantages over computer software.

**What are the effects of the use of mobile applications on information management activities among the NDII students of LIS in Federal Polytechnic Ede?**
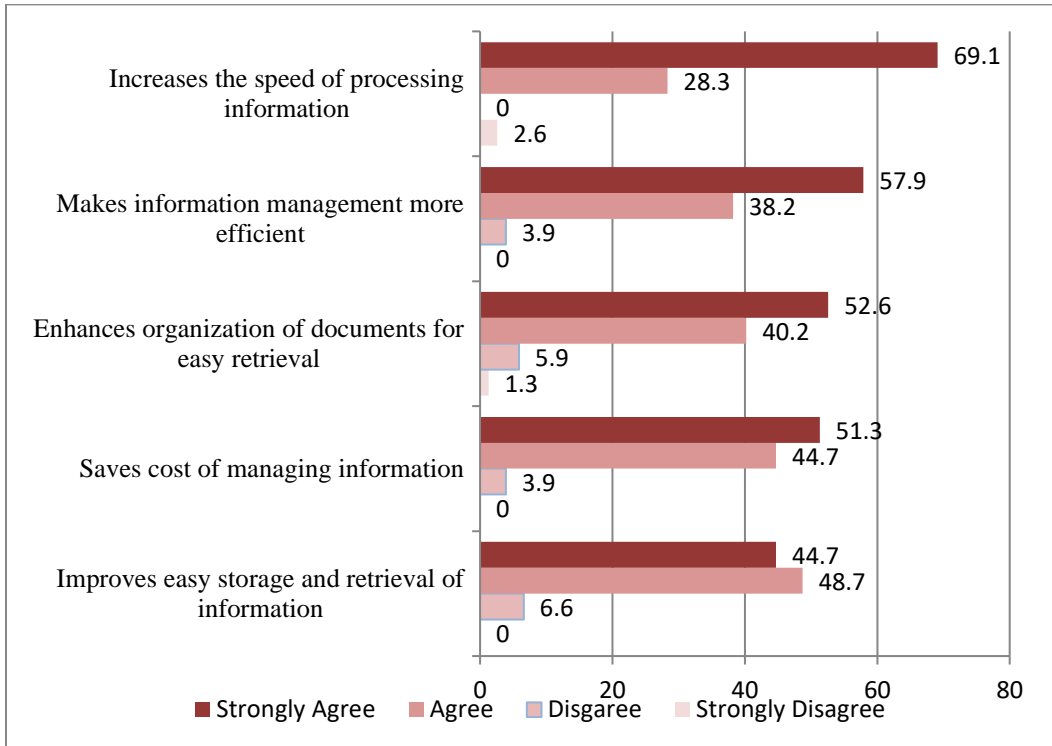


**Fig. 4: Effects of mobile application use on information management**

Figure 4 shows the effects of the use of mobile applications on information management activities among the respondents. Majority of 69.1% strongly agreed that use of mobile applications increases the speed of processing information; while 57.9% also strongly agreed that it make information management more efficient. Also, some 52.6% of the respondents also agreed that it enhances organization of documents for easy retrieval, while 51.3% strongly agreed that it saves cost. Similarly, 44.7% also claimed that it improves easy storage and aided easy retrieval of information. This shows that use of mobile applications has positive effects on information management activities among the respondents.

**What are the challenges facing the NDII students of LIS in Federal Polytechnic Ede in using mobile applications for information management?**
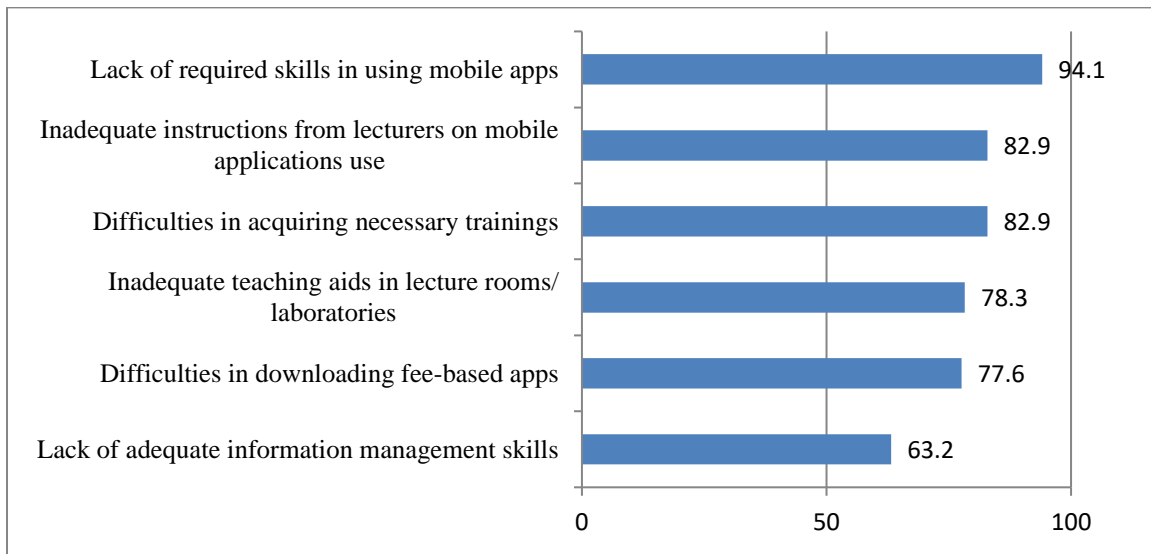


**n = 152**

**Figure 5: Challenges facing the use of mobile applications for information management**

Figure 5 shows various challenges faced by the respondents in using mobile applications for information management. The Figure shows that lack of required skills in using mobile applications (94.1%) was the major challenge facing the respondents, followed by inadequate instructions (82.9%), difficulty in acquiring necessary trainings (82.9%), and inadequate teaching aids in classrooms/laboratories (78.3%). Also, 77.6% claimed that they experienced difficulties in downloading fee-based applications, just as 63.2% also claimed that they lack adequate information management skills. This implies that the respondents need more training on using relevant mobile applications and also need for adequate instructional materials.

**Discussion of findings**

The results have given exposure to the type of mobile applications commonly used by the students. Findings by the study revealed that students have access to and use several mobile applications for various information management processes. Such mobile applications include Camera Apps, WPS/ Word processors, social media applications, e-mail applications etc. This is in line with Adekunmisi, Akinbode and Oyedipe (2017). Furthermore, it was also discovered that the respondents possess high level of skills in using mobile applications for information management practices such as online video/audio streaming, sharing of documents, uploading of

information, and image editing. However, many of them had no skill in using mobile application for graphic designs and data analysis.

The study further revealed that personal effort (self-teaching) was the major source where the respondents acquired relevant skills in using mobile applications for information management practices. This was closely followed by classroom lecture and friends. The Polytechnic Library which is expected to also play a crucial role came behind online paid tutorials and Youtube videos. This clearly shows that the students showed interest in learning new information management skills as demonstrated by their personal efforts in learning and even paying for such training online. This indicates a call for action from both the lecturers and the institution's Library to provide the required training.

Also, it was discovered that the respondents' academic activities was the major factor motivating the use of mobile applications for information management among the students. This is similar to Oliveira, Pedro, & Santos (2021) and Olalere and Soyemi (2022) discoveries. This is followed by the need to feel relevant in this 21st Century information ecosystem. Also, majority of the respondents equally claimed that they used mobile applications as they are cheaper to install and easy to use compared to computer software. The trainees are students who are mostly engrossed with various academic activities that may require the use of mobile applications. Also, possession and use of smartphones may come with attendant attempt to use certain associated mobile applications so as to feel relevant and contemporary in the information ecosystem.

On the effects of the use of mobile applications on information management, it was discovered that many of the respondents claimed that mobile applications increases the speed of processing information and also make information management more efficient. This indicates that many of the respondents perceived the use of mobile application to be advantageous to their information management activities and have positive attitudes towards its use. This is similar to Al-Takhyneh (2018) findings. Such positive attitudes may be responsible for their personal efforts in learning relevant skills in using mobile applications as shown in Figure 2. This is also in line with Šuman and Pšunder (2008) discovery that the use of mobile applications leads to access to real-time data and also save time of information management.

Similarly, the respondents face different challenges in using mobile applications for information management activities. Such challenges include lack of required skills in using mobile applications; inadequate instructions from lecturers; difficulties in acquiring necessary trainings; and inadequate teaching aids. This is in line with Waithaka and Mnkandla (2017)

This shows that need for more training on the use of mobile applications for information management becomes imperative. However, such training may not be effectively delivered if there is dearth of teaching aids. Ordu (2021) observes that teaching aids stimulates learning processes.

**Conclusion**

This study has provided a comprehensive empirical data on the use of mobile applications for information management among the students. The data will be useful to the institution's library, the institution's management, lecturer's and technologists in the Department and other relevant stakeholders in taking informed decisions. The data has provided evidence about the impact of the use of mobile applications on information management, challenges encountered and the need for provision of teaching aids more training for the students.

**Recommendations**

Based on the findings of the study, the followings are hereby recommended:

1. There is need for more practical training on the use of mobile applications for information management by the lecturers in the Department. This is necessary as the findings revealed that personal effort was the major way through which the students acquire such skills.
2. Also, the Polytechnic management should provide adequate teaching aids to enhance the learning process. Furthermore, lecturers and technologists should also improvise where the need arises.
3. The institution's library need to device means to enable users learn new ICT skills. This could be achieved by not only providing access to related information, but also by organizing related ICT trainings on such areas as: data analysis, online information

searching, downloading of e-resources etc. This will also assist as the students claimed to experience difficulties in acquiring necessary trainings.

4. There is need for developers of mobile applications to develop related apps for learning, especially targeting Library and Information Science trainees, as classroom activities and relevance were the two major motivating factors for using mobile applications. This will enable the students to have mastery over such LIS related apps which may be useful for providing library services when they start practicing.

**Authors' contributions**

Odumade wrote the introduction and conducted the literature review. Amusan wrote the method section, findings and discussion of findings. Both authors conducted the data analysis together, and wrote the conclusion and recommendations. Also, both authors read, reviewed and approved the final manuscript.

**Declarations**

The authors declare that there are no competing interests

# References

Adekunmisi, S.R., Akinbode, R., & Oyedipe, W. J. (2017). Use of Smart Phone among Para-Professional Librarians in OlabisiOnabanjo University Library, Nigeria. *New media and mass communication, 59*, 1-10

Al-Takhyneh, B. (2018). Attitudes towards Using Mobile Applications in Teaching Mathematics in Open Learning Systems. *International Journal of E-Learning and Distance Education, 33*(1), 1-16. https://files.eric.ed.gov/fulltext/EJ1180063.pdf

Darko-Adjei, N. (2019). The use and effect of smartphones in students' learning activities: Evidence from the University of Ghana, Legon. *Library Philosophy and Practice (e-journal).* 2851. https://digitalcommons.unl.edu/libphilprac/2851

GMI. (2019). Mobile Learning Market Size | Global Growth Statistics 2020–2026. https://www.gminsights.com/industry-analysis/mobile-learning-market

Olalere, J. O. & Soyemi, O. D. (2022). Use of Mobile Learning Applications and Academic Engagement of Library and Information Science Students in Universities in South-West, Nigeria. *Library Philosophy and Practice (e-journal). 7122.* https://digitalcommons.unl.edu/libphilprac/7122

Oliveira, D.M., Pedro, L. & Santos, C. (2021). The use of mobile applications in higher education classes: a comparative pilot study of the students' perceptions and real usage. *Smart Learning Environments, 8*(14), 1-15. https://doi.org/10.1186/s40561-021-00159-6

Ordu, U. B. (2021). The Role of Teaching and Learning Aids/Methods in a Changing World. *BCES Conference Books*, 19, 210-216. https://files.eric.ed.gov/fulltext/ED613989.pdf.

Šuman N. and Pšunder, M. (2008). "Mobile computing changing the traditional ways of organizing the construction company," *American Journal of Applied Sciences*, 5(1), pp. 42–47. View at: Publisher Site | Google Scholar

Waithaka and Mnkandla (2017). Challenges Facing the Use of Mobile Applications for E-Commerce in Kenya's Manufacturing Industry. *Electronic Journal of Information Systems in Developing Countries*, 83(1), 1-25. DOI: 10.1002/j.1681-4835.2017.tb00609.x