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Use of Mobile Devices in Academic Libraries in Nigeria: are Students Distracted?

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Abstract
The use of mobile devices has the potential for distraction in libraries is undeniable despite the excellent enhancement they have brought to learning and life in general. Librarians are still searching for evidence-based solutions to tame this emergent tide. The study is a feedback exercise to find out in specific terms whether the burden of noise generated by the use of mobile devices in libraries weighs down the students' concentration to harvest their individual views on effective control measures. It is a descriptive survey study that used a structured questionnaire to elicit data from three hundred and forty (340) students of Chukwuemeka Odumegwu Ojukwu University, Nigeria. A simultaneous face-to-face approach was adopted in the classroom setting for data collection. SPSS was used to analyse the quantitative data. Findings reveal that 62.06% of the students feel disturbed and distracted by mobile phone use especially noise from answering of calls and ringing tones. As a solution, the majority of respondents (71%) recommend an outright ban on the use of mobile devices in the library. It is recommended that library management battling with noise control may consider a ban on mobile devices use in the library for possible relief.

Keywords: mobile distraction, academic libraries, noise reduction, university students, mobile devices, digital devices.

INTRODUCTION

Today mobile devices are ubiquitous amongst students. Ross et.al (2020) define and explain a mobile device as a portable computing device that has a small form factor such that it can easily be carried by a single individual; is designed to operate without a physical connection; possesses local, data storage; and includes a self-contained power source. Mobile devices may also include voice communication capabilities, on-board sensors that allow the devices to capture information or built-in features that synchronise local data with remote locations. According to Rouse (2018), mobile devices simply mean handheld computers that are made for portability and are therefore both compact and lightweight. Examples of mobile devices widely used today include

smartphones, tablets, E-readers, wearables (like smart- watches and smart- glasses), laptop computers and gaming consoles.

Common characteristics of mobile devices as summarised by Saigo (2023) include that:

- are small enough to be carried easily
- operate without a physical connection to electricity; uses a battery to store power
- can send and receive information wirelessly, using cellular data, Bluetooth, or Wi-Fi
- feature a user interface, such as a touchscreen or keyboard
- include internal data storage
- often include communication functions for voice or video calling
- may include sensors to record and store information, such as a camera, compass, or activity monitor.

In facilitating wireless communications, mobile devices usually support Wi-Fi cellular or Bluetooth connectivity. These devices can also be used to access internet resources, participate in online platforms (such as social media) and stream content. In addition, they can be used to send emails or texts, as well as participate in video conferencing. Mobile operating system that manages the software and hardware resources are also features of mobile devices. Some of these mobile operating systems allow users to download apps from an app store for their specific device types. Mobile devices also provide features such as touchscreen interface, GPS and location services, built-in cameras and ever-growing facilities (Sheldon, 2024). However, mobile devices and digital devices are used interchangeably in this work as in the literature. A digital device is defined as equipment that contains a computer or microcontroller that includes toys, game consoles, digital cameras, media players and smartphones as well as handheld, laptop or desktop computers (Palaiologou, 2016). Among other intricate relationships is that all of what is regarded as mobile devices are driven by digital data. Mobile devices are powered by digital configurations. This means that at the heart of the mobile devices are the digital components and this makes them inseparable.

In the academic environment, these devices hold immense potential as instruments for research and scholarship as modern libraries increasingly offer vast collections of e-books, online databases, and educational apps, readily accessible on mobile platforms. Mobile devices can bridge the gap between the physical library and the boundless digital information landscape as they empower students to conduct research and access knowledge resources anytime, anywhere. Splendid as these may sound, mobile devices pose potential challenges to individuals and the larger community. This research explores whether mobile devices impact students' concentration in libraries in real time. Today, the once-hallowed halls of the academic library, bastions of focused study and scholarly contemplation, reverberate with a new symphony – the soft chimes and gentle buzzes of ubiquitous mobile devices.

Students, perpetually connected through smartphones and tablets, navigate a digital world brimming with information, entertainment, and a constant stream of notifications. This digital metamorphosis presents a fascinating challenge for academic libraries: are these mobile devices on the flip side harbingers of distraction, eroding concentration?

The rising trend in mobile device use is inversely proportional to rising noise levels in university libraries. The challenges are enormous for librarians struggling to create a library environment that fosters focused study while acknowledging the potential benefits these devices offer. Over the

years library administrators have come up with strategies including policies, signage, adjustment of service points, management of reader spaces, and structural improvements. This research probes into individual students' views from experience on mobile device distraction in libraries. Respondents are students who have spent at least three years in the university.

Objective of the study

It is designed mainly to fine out:

1. whether students are distracted by the noise generated from the use of mobile devices in the library.
2. respondents' opinion on mobile devices noise control measures for a quiet library.

REVIEW OF LITERATURE

Worldwide, there is an epidemic of mobile device availability and use with their attendant usefulness and nuisance values. This brings about the need for scholars to engage in the study of the implications of mobile devices use in serene spaces like libraries. Literature exists with reports of scholars on surging noise levels in university libraries, their sources of generation and control measures.

In a research paper titled *Effects of Digital Devices on Noise Levels in an Academic Library,* Chaputula (2021) explored the effect of digital devices on noise levels in the Mzuzu University Library and measures that have been taken to curb it. The study was anchored by the technology advancement model using qualitative and quantitative techniques. Questionnaires were used to collect data from a sample of 110 students, whilst an interview was conducted with one librarian responsible for managing service. The findings revealed that students owned several digital devices that included smartphones, laptops and augmented virtual reality headsets which they deployed for a variety of uses. The findings further indicated that the use of digital devices in the library has resulted in an upsurge in noise levels. Some solutions for combating the problem were proffered. It however reported limited success of measures so far taken to tackle the noise menace.

Mc Caffrey, and Breen (2016), carried out a research titled 'Quiet in the library: an evidence-based approach to improving the student experience'. It deals with the management of noise in an academic library by outlining an evidence-based approach taken over seven years by the University of Limerick in the Republic of Ireland. The objective of their study was to measure the impact on library users of noise management interventions implemented from 2007 to 2014 through retrospectiveanalysis of LibQUAL+®survey data. The findings indicate that readers' perceptions of the provision of quiet space in the library greatly improved in that period. The study also provides evidence showing the effectiveness of interventions, such as the development of a noise policy, zoning, rearranging of furniture, removal of service points from reader spaces, and structural improvements.

Egielewa, (2021) surveyed the 'Use of smartphones amongst undergraduates in Nigeria: aid or distraction to their studies?' The research investigates the role of smartphones in undergraduate studies using quantitative research design methods and questionnaires administered to 380 students of two Nigerian higher institutions. Its findings indicate that smartphones can

significantly be an aid but can also be a distraction to undergraduate studies if no institutional checks are put in place.
An investigation into Problems Caused by the Students' Use of Cell Phones in University Libraries in Anambra State, Nigeria was done by Nwankwo, Obiadazie and Ofordile (2018). Students of Chukwuemeka Odumekwu Ojukwu University were studied using descriptive survey design. Simple percentages and frequency were used for data analysis. The results of the findings revealed that all of the student population had cell phones, which they use mainly for communication. It was also discovered that the use of cell phones causes distractions in the library, yet the students do not want a ban on the use of cell phones in the library.

Oyedum (2012) assessed the level of noise in federal university libraries in Nigeria to determine the extent to which it affects undergraduate students' use of university libraries. The survey research method was used for the study which has a population of 1,453 undergraduates from the selected universities. Descriptive statistics such as frequency and percentage tabulation were used in analysing the data. Results revealed that the level of noise in Nigerian federal university libraries is high and this hurts undergraduate students' use of the university libraries. The majority of the respondents indicated the need for library management to instruct library users to put their mobile phones on silent whenever visiting the library, enforce rules and policies that would reduce noise-making in the libraries and cover the floor of the libraries with noise-absorbing materials.

The academic library should be student-centred and so shall its policies and services be oriented. The need for more intimate involvement of students in solving the seemingly defiant problem of rising noise from mobile device use remains fundamental. A good environment still plays an important role in the learning process of an individual. Resilience in problem-solving is one of the central competencies of the internet librarian. From the literature reviewed, years of trials of solutions do not seem to have yielded evidence-based answers to the mobile devices' noise menace in libraries. Further inquest into students' view of this problem will continue to be needful until solutions are found. Students' addiction to mobile devices in social circles tends to suggest that they are not perturbed by the generated noise. If this is so, do they transfer this same attitude to quiet and serene spaces? Are library Administrators labouring in vain to control the noise that disturbs no student? This study is to elicit answers to these unanswered questions- does noise from the use of mobile devices in the library distract students, do they care?

METHODOLOGY

It was a descriptive survey design. Data were simultaneously collected using a structured questionnaire that contained eleven questions. The research assistants made arrangements with the heads of units, lecturers and student representatives. Copies of the questionnaire were distributed to final-year students in Chukwuemeka Odumegwu Ojukwu University Igbariam Anambra state. Two (2) research assistants were engaged in the administration. The administration of the questionnaire lasted for six days, some simultaneously (10th Dec, 2019; 21st Jan 2020; 6th Feb, 2020; 20th Feb, 2020; and 24 Feb, 2020). Specifically, copies of the questionnaire were administered to library and information science students after their lecture - Automation in Library and Information Centers and Library Software Application on 10/12/2019. Law students' course representative assisted in the administration of the questionnaire by calling the researcher before

their lecture on 21/01/2020 The Secretary to the Head of the Department of Political Science helped in administering the questionnaire to the students on 06/02/2020. He distributed students' examination cards alongside the questionnaire. The students filled and returned to him. Accountancy students filled out the questionnaire after their examinations on executorships, trusteeship and bankruptcy on 20/02/2020. English language students also filled out the questionnaire on 24/02/2020.

Demographic

There are 340 respondents, out of which the majority (64.12%) are females. Drawn from five departments of five faculties of the university, a greater percentage of them (45.88%) are within the ages of 21-35, followed by those within the ages of 16-20 and 26-30 with 28.82% and 19.12%. Respondents of 31 years and above were the least with 6.18%. The ages are reflective of the fact that they are all final-year students.

DATA ANALYSIS AND DISCUSSION

The primary objective of this study is to investigate whether the noise from the use of mobile devices in academic libraries distracts the students. Noise from mobile devices is on the increase in libraries due to the popularity of their use especially among students who are the major patrons of university libraries, but whether or not they are distracted and disturbed is the question.

Table 4. Do you come to the Library with your devices?

	N	%
Yes	285	83.82
No	55	16.18
Total	340	100.0

With the availability and portability of mobile devices, it would have been assumed that most students carry them around including into the libraries yet the data collected reveals otherwise as up to 17.18 % of respondents do not visit the libraries with their devices. However Table 4 shows that most of the respondents (83.82%) affirmed they go to the library with their mobile devices.

Table 5: While in the library do you use it?

	N	**%**
Yes	204	71.58
No	81	28.42
Total	285	100.0

The usage of mobile devices in the libraries is part of what triggers the noise. Table 5 indicates that 71.58% of the respondents who go to the library with their devices affirmed they make use of them in the library while 28.42 indicated they do not.

Table 6. For what purpose do you use mobile devices in the library?

		N	%
1	Texting	103	11.59
2	E-mailing	65	7.31
3	Browsing the Internet	157	17.66
4	Social Networking	168	18.90
5	Checking Time	174	19.57
6	Playing Games	42	4.72
7	Selfies/Videos	69	7.76
8	Making/Answering Calls	111	12.49
	Total	889	100.0

Students use their phones for varying purposes while in the library. Time checking (19.57%) tops the list of what students use their devices for in the library as shown in Table 6. The era of traditional wristwatches is fast fading. Another purpose of using the devices is for social networking and browsing the internet (18.90% and 17.66%). Most of these have to do with communication. McCaffrey and Breen, (2016), in their report, agreed with these and also included the use of mobile devices for technology-enhanced learning, like group discussion sessions in libraries, and the sharing and downloading of multimedia clips through email and social networking sites such as YouTube. This trend was also attested to by Nyasulu and Chawinga (2019), in their study of the ICT and Land Management students at Mzuzu University who deployed their smartphones to access WhatsApp which was in turn used for communication and academic purposes.

Table 7. Why do you use digital devices in the library?

		N	%
1	Stay Connected	158	19.70
2	To fight sleep	134	16.71
3	For course work	119	14.84
4	For assignment	145	18.08
5	To fight boredom	102	12.72
6	For leisure	144	17.96
	Total	802	100

Table 7 indicates that respondents use digital devices in the library to fight both sleep (16.71%) and boredom (12.72%).This is an interesting trend to watch. Well-conditioned library environment tends to induce sleep, while boredom may be a result of many other factors. The responses also indicate that staying connected (19.70%), for assignments (18.08%), for leisure (17.96%), and for coursework (14.84%) are some of the other reasons students make use of digital devices in the library.

Table 8. Do you feel disturbed by the use of mobile devices in the library?

	N	%
Yes	211	62.06
No	129	37.94
Total	340	100.0

At the core of this project is the students' perception of mobile devices as sources of distraction in the library. The wild use of mobile devices and the multitasking that goes with it doesn't seem to bother this generation including students, but Table 8 shows that 62.06% of the respondents indicated they feel disturbed by the use of mobile devices in the library. The remaining 37.94% indicated they do not feel disturbed. This means that the majority of the respondents still value quiet space for effective reading.

Table 9. Which of these distracts you while reading in the library?

	N	%
1. Ringing tones	192	27.20
2. Music	154	21.81
3. Message Alert	82	11.61
4. Answering Calls	201	28.47
5. Beeps	42	5.95
6. None	35	4.96
Total	706	100

In Table 9, the majority of the responses indicate that answering calls (28.47%), ringing tones (27.20%), music (21.81%), message alerts (11.61%) and beeps (5.95%) in this order distracts them while reading in the library. However, only 4.9% of the responses insist that none of these listed items distracts them from reading in the library. Ringing tones normally precede answering calls, two of which top the list of sources of distraction in this study. This is similar to the observation of Lever and Katz (2007) that noise from mobile phone ringer tones has proven to be problematic to library patrons who desire to have quiet study places

Table 10. Does noise from digital devices affect reading negatively?

	N	%
Yes	291	85.59
No	49	14.41
Total	340	100.0

Distracted concentration impacts reading negatively because reading and studying are synonymous with a quiet environment. Table 10 shows that 85.59% of the respondents affirmed that noise from digital devices affects them negatively. The remaining 14.41% indicate that it doesn't affect them.

Table 11. To enhance concentration do you think students should be banned from using digital devices within the library?

	N	%
Yes	241	70.88
No	99	29.12
Total	340	100.0

In Table 11, 70.88% of the respondents affirmed that to enhance concentration students should be banned from using digital devices within the library. The remaining 29.12% indicate otherwise. A lot of studies on noise generation and management in libraries have recommended a series of strategies for noise control and librarians are battling with their implementation many of which have not recorded evidence-based successes. The work of Chaputula, A., H. (2021) also confirmed that measures taken by students and library staff to tackle noise surges have had limited success. Students in the study by McCaffrey, C. and Breen, M. (2016) recommend among other measures: the ban on patrons whose devices make noise, the designation of places for taking calls and the conduct of more awareness sessions. Here in this research, students themselves made far-reaching recommendations as a solution, which is, "the ban on the use of digital devices within the library". Library Administrators would have thought that such a blanket ban might face stiff resistance from the students themselves who form the majority of the end users. In no research from the literature have students shown such a strong preference for focused s. reading and learning in quiet library spaces. This surprising response may, to a good extent be the solution we are looking for!

Conclusions

This study investigated whether students are distracted by the surging noise levels in libraries, generated by the use of mobile devices and elicits control measures from them. Findings indicate that students are distracted while they study especially with the noise coming from ringing tones and answering of calls. It also found that students recommend a ban on the use of mobile devices in libraries. This preference is irrespective of the varied uses they make of the devices in the library. This reinforces the prime place of noiselessness in a study environment.

Recommendations

Based on the findings, it is recommended that present interventions for digital devices noise control should be stepped up in the direction of a ban on the use in libraries. Policies on this should be initiated by library administrators. The involvement of students and staff remains crucial. The aggressive and sustained awareness campaign is cardinal. Students' orientation programmes and other university-wide ceremonies are good platforms to exploit. Through such planning and well-supervised execution, the disruptive influence of these devices on focused learning can be checked. A conducive academic library environment is valueless and therefore not negotiable.

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