A quiet environment is essential for any meaningful academic work to be achieved in a university library. This paper, therefore, assessed the level of noise in federal university libraries in Nigeria to determine the extent to which it affects undergraduate students’ use of the university libraries. The survey research method was used for the study and the study population was 1,453 undergraduates from across Arts, Education, Engineering, Law, Science and Social Science faculties in the selected universities. The main instrument used for the data collection was a questionnaire. Descriptive statistics such as frequency and percentage tabulation were used in analyzing the data. Results revealed that level of noise in Nigerian federal university libraries is high and this has negative effect on undergraduate students’ use of the university libraries. To minimize the level of noise in Nigerian federal university libraries, majority of the respondents indicated the need for library management to instruct library users to put their mobile phones on silence 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.

Key words: Noise, undergraduate students, use, federal university libraries, Nigeria

Introduction

In every university institution it is expected that adequate use of the library should be made so that the learning objective of the library can be achieved. This objective would only be effectively achieved when university libraries are provided with quiet environment that is free from noise and conducive for meaningful study. A conducive environment of a library is that which the noise is controlled and where other factors such as lighting, library space, furniture and good ventilation are adequately provided to enhance learning. In other words, university libraries need to provide a conducive atmosphere in order to encourage and enhance research.

Noise as one of the environmental factors of university libraries could influence the students’ use of libraries. Students, for instance, who use the library resources in carrying out research work or doing any type of class assignment, such as writing of projects, term papers, seminar and workshop papers, and other practical assignments, will be encouraged to do so if the library
environment is quiet. Hence, university libraries are expected to provide noise-free environment in order to encourage and enhance learning and research. This is why Nock\(^1\) argues that, just as vision is important to learning so is auditory sense. To be able to concentrate on tasks in a library such as reading and writing, there is need for control of noise since it is generally agreed that noise and other distractions are fundamental obstacles to effective study in the library.

Generally, majority of the library users usually visit the libraries in order to avoid distractions or any type of noise, since all types of noise have negative effect on the students’ ability to learn. Noise in the libraries could be experienced in various ways such as noise from students’ discussions, the readers’ footsteps, mobile phone calls or even noise from the library staffs’ discussions. All these put together would always increase the level of noise in any university library and the effects on the library users would not be encouraging. No wonder, Evans\(^2\) argued that studies have confirmed that noise has a negative effect on the students’ ability to learn. However, in view of user’s requirement for provision of conducive reading atmosphere in order to enhance learning and research in universities, it is necessary to know the extent to which level of noise influences the use of university libraries by the undergraduate students in federal universities in Nigeria.

**Literature review**

Environmental noise could be observed in both academic institutions and industries. Sound which is not wanted or unpleasant to the ear is called noise. In factories for instance, a large amount of noise from engines or machinery can damage the ears of workers. People living near aerodromes have noise pollution from engines in aeroplanes. (Nelkon and Parker\(^3\)). Duncan\(^4\) equally argues that “unwanted sounds are called noises.” Noise can damage the ears, cause tiredness and loss of concentration and, if it is very loud, results in sickness and temporary deafness (Wright\(^5\) and Duncan\(^4\)). Some of the main noise “polluters” according to Duncan\(^4\) are aircraft, motor vehicles, very loud music and many types of machinery including domestic appliances. Similarly, in the university libraries, apart from the noise from users’ discussions, movements of the chairs of the libraries by the users as well as noise from the generating sets for the libraries, if the library building is close to the road, traffic noise can upset people when windows and doors are left open.

Ntui\(^6\) in another study expressed that environmental noise is any unwanted sound that constitutes a menace to the environment. It is sound at the wrong time and in the wrong place.
Environmental noise is as a result of human attitude and is increasing with industrialization and urbanization. Universities in Nigeria according to Ntui\textsuperscript{6} has a major role of providing high-level manpower for national development, and this role is achieved through its programmes of teaching, learning and research. The teaching, learning and research activities in the universities cannot be properly achieved without effective libraries that would acquire and disseminate information materials necessary for teaching, learning and research in the universities. The extent to which university libraries are able to perform these functions will depend on a number of factors, which include a quiet learning environment. The study revealed that the students in rating the level of noise in University of Calabar indicated that 35.51\% rated the university library as noisy, 38.47\% rated the library as very noisy, while 14.70\% rated the library as extremely noisy. The study also revealed that the disruptive effects of noise on activities in the library were very much. In a similar study, The Robert Gordon University, United Kingdom\textsuperscript{7} carried out a web-based survey to measure users’ perception of the library service. The findings revealed that noise in the library was a great nuisance. This situation in the library most of the time discourage the users from using the university library to satisfy their information needs.

Furthermore, in an academic environment a noise-free atmosphere is adequate for any serious academic work. This is why Shane\textsuperscript{8} stresses that the best sound for study is silence, especially when one needs to really concentrate. But if conversation must take place this has to be in a low tone and other readers have to be putting into consideration (Arizona Board of Regents\textsuperscript{9}). The Board further emphasized that in some libraries study groups are encouraged to meet in one area of the library for discussions, but they should be considerate of others. Generally, quiet study is enforced in the libraries and library users are encouraged to report any disturbances or distracting behaviours to the information services desk.

A number of research studies confirm that noise has a negative effect on the students’ ability to learn. We have known for a long time that noise, crowding and other forms of environmental stress in a library have a devastating effect on academic performance of the students (Evans\textsuperscript{2}). Dawson\textsuperscript{10} in his noise survey study revealed that noise in the library has become a pressing problem. His annual user survey centred on two forms of noise, that is, conversations and use of mobile phones in the library. A questionnaire was distributed to every student entering Queen Mother Library (QML) and Taylor Library (TL) both in Aberdeen University, United Kingdom. Majority of the respondents in both libraries were of the view that
students who have mobile phones should put them in vibration whenever they are using the library.

In a similar study, Bronzaft and McCarthy\textsuperscript{11} as cited by Gary\textsuperscript{12} revealed that in one New York City School, a study focused on the noise level among the students in grades two, four and six showed that the reading levels of the students on the noisy side of the building were behind the reading levels of their peers on the quiet side of the building. Some other studies in most university libraries have also reported that level of noise is high and this negatively affects use of libraries in the universities (Aston University Library\textsuperscript{13}; Appalachian School of Law, Grundy, United States of America\textsuperscript{14}; Glasgow Caledonian University Library (GCUL)\textsuperscript{15}; Dominy\textsuperscript{16}; Wright\textsuperscript{5} and Hanna\textsuperscript{17}). From the foregoing, one can, therefore, conclude that noise can affect learning and an effort to always minimize this is necessary in every university library.

Previous studies have concentrated on identifying the low level of use of university libraries in Nigeria. However, not much attention has been given to effects of noise as a factor to students’ use of university libraries in Nigeria. Exhaustive search of the literature showed that very few studies regarding the level of noise in university libraries have been conducted in Nigeria. This study, therefore, investigated the level of noise and its effects in Nigerian university libraries as perceived by undergraduate students. The study aimed to achieve the following objectives:

i. Investigate the effect of noise to undergraduate students’ use of federal university libraries in Nigeria.

ii. Investigate the sources of noise in federal university libraries in Nigeria and

iii. Identify ways of minimizing level of noise in federal university libraries in Nigeria.

**Methodology**

The descriptive survey research was adopted to collect data for the study. Purposive sampling technique was used to select six universities from the population of Nigerian universities owned by the Federal Government. Two universities were selected for the study according to the period they were established. Thus, there are the first generation universities (established between 1948 and 1969), second generation universities (established between 1970 and 1979) and third generation universities (established between 1980s to date). The universities are: University of Ibadan (UI), Ahmadu Bello University, Zaria (ABU) and University of Jos (UNIJOS). Others are
University of Maiduguri (UNIMAID), University of Uyo (UNIUYO) and University of Abuja (UNIABUJA). Six academic faculties were selected for the study and two academic departments were selected from each of the faculties. These faculties include Arts, Education, Engineering, Law, Science and Social Sciences. In order to ensure balanced representation of the undergraduate students in the universities, the students selected for the questionnaire survey were selected from each university based on their faculties, departments and levels of study. The students were selected for the study through random sampling methods from the following departments: Physics, Biochemistry, Chemistry, Microbiology, Biology, Economics, Geography, Theatre Arts, Music, History, Mass Communication, English, Public and International Law, Archival and Information Studies, Vocational and Technical Education, Private and Business Law, Physical and Health Education, Sharia Law, Political Science, Special Education, Science and Technology Education, Religious Studies, Archaeology and Anthropology, Communication and Language Arts, Computer Science, Statistics, Teacher Education, Human Kinetics and Health Education, Creative Arts, Chemical Engineering, Civil Engineering, Mechanical Engineering, Food Technology and Agricultural Engineering. The sample size for the six universities was: UI - 202, ABU - 199, UNIJOS – 342, UNIMAID-355, UNIUYO- 206 and UNIABUJA-149 giving a total of 1,453 respondents. Questionnaire, interview and observation instruments were used to collect data for the study. Questions were asked to obtain information on the effect of noise to students’ use of university libraries. The university librarians of the universities selected for the study were interviewed to find out their libraries’ policies concerning noise making in their libraries. Observation technique was also adopted in the study in order to assess the level of noise in the university libraries.

**Data analysis and Discussion**

In order to determine the level of noise in each of the universities selected for the study and the effect of noise to students’ use of library the following statements were provided for the respondents to reveal the perceptions of the level of noise in their university libraries. The statements include:

- The university library reading rooms are normally quiet
- Library users discuss in the library
- Readers are distracted by the footsteps of other users
- The fans in the library are noisy when in use

V1 V2 V3 V4
The library staff disturb the library users with their discussions \( V5 \)

Mobile phone calls disturb in the university library \( V6 \)

The chairs in the reading room are noisy under use \( V7 \)

(See also appendix 2).

The summation of the frequency of SA (4) and A (3) options as well as that of D (2) and SD (1) options in each of the universities selected for the study were calculated and used to present the results. SA stands for Strongly Agreed, A stands for Agreed while D stands for Disagreed and SD stands for Strongly Disagreed.

**Figure 1: Bar chart showing the undergraduate responses on level of noise in ABU library**

The responses from the undergraduate students of ABU, Zaria on whether the library reading rooms are normally quiet revealed that 25.1% of the students agreed that the university reading rooms are normally quiet, while 74.9% of them disagreed with the statement. This shows that majority of the respondents agreed that the reading rooms of ABU university library are usually not quiet and this would negatively affect the use of the university library by the
undergraduate students. From Fig. 1, the other sources of distracting noises in the reading room of ABU university library are discussions from the library users with 53.2% agreeing that library users talk in the library, noise from the footsteps of other users with 55.8% agreeing that footsteps contribute to level of noise, noise from the fans in the library when in use with 75.9% indicating that fans in the library are noisy, discussions of the library staff also contribute to noise in the library with 52.8% of the respondents agreeing, noise from mobile phone calls with 68.9% agreeing, and noise from the chairs in the reading room under use with 75.9% agreeing that chairs in the reading room are noisy when in use.

Figure 2: Bar chart showing the undergraduate responses on level of noise in UI library
Figure 2 summarises the perceptions of UI respondents’ view about the level of noise in the university library. To indicate whether the library reading rooms are normally quiet, 16.9% of the students reported that the reading rooms are normally quiet, while 83.1% of them disagreed. This shows that majority of the respondents agreed that the reading rooms of UI university library are usually not quiet and this would negatively affect the use of the university library by
the undergraduate students. Other sources that contribute to high level of noise in UI library are discussions from the library users with 95.6% agreeing that library users talk in the library, noise from the footsteps of other users with 95.5% agreeing that footsteps contribute to level of noise, noise from the fans in the library when in use with 94.6% indicating that fans in the library are noisy, discussions of the library staff also contribute to noise in the library with 78.7% of the respondents agreeing, noise from mobile phone calls with 94.0% agreeing, and noise from the chairs in the reading room under use with 90.6% agreeing that chairs in the reading room are weak and noisy when in use.

Undergraduate students’ perceptions of noise in UNIJOS

![Bar chart showing the undergraduate responses on level of noise in UNIJOS library](chart.png)

Figure 3: Bar chart showing the undergraduate responses on level of noise in UNIJOS library

The respondents of UNIJOS were also asked to indicate whether the library reading rooms are normally quiet. Some 71.6% of the students disagreed that the library reading rooms of UNIJOS library are normally quiet, showing that the library is usually noisy. Other sources of noise in UNIJOS library are discussions from the library users which 71.3% of the respondents indicated, followed by the footsteps of the users having 75.7% respondents agreeing to this,
noise from the fans in the library when in use with 78.6%, chatting of the library staff in the reading rooms with 65.5%, noise from mobile phone calls has 87.5% of the respondents indicating that mobile phone calls contribute to high level of noise in UNIJOS library, and 83.4% respondents indicated that the chairs in the reading room also contribute to noise level in the library.

**Undergraduate students’ perceptions of noise in UNIMAID**

![Bar chart showing the undergraduate responses on level of noise in UNIMAID](image)

**Figure 4: Bar chart showing the undergraduate responses on level of noise in UNIMAID**

In UNIMAID the respondents were requested to indicate whether the library reading rooms are normally quiet. To this, 29.6% of the students reported that the reading rooms are normally quiet, while 70.4% of them disagreed. Other sources that contribute to high level of noise in UNIMAID library are discussions from the library users with 66.5% agreeing that library users chat loudly in the library, distractions from the footsteps of other users with 63.4% agreeing that footsteps contribute to level of noise, noise from the fans in the library when in use with 84.7% indicating that fans in the library are noisy, discussions of the library staff also contribute to noise in the library with 70.2% of the respondents agreeing, noise from mobile
Undergraduate students’ perceptions of noise in UNIUYO

Figure 5: Bar chart showing the undergraduate responses on level of noise in UNIUYO library

In respect of the library rooms being quiet or not in UNIUYO, 52.4% of the respondents indicated that the library reading rooms are normally not quiet. This, however, would negatively affect the use of the university library by the undergraduate students. Other sources of noise in UNIUYO library are discussions from the library users which 56.4% of the respondents indicated, followed by the footsteps of the users having 55.4% of the respondents agreeing to this, noise from the fans in the library when in use with 78.6%, chatting of the library staff in the reading rooms with 64.1%, noise from mobile phone calls has 81.5% of the respondents indicating that mobile phone calls contribute to high level of noise in UNIUYO library, and 64.1% respondents indicated that the chairs in the reading rooms also contribute to high noise level in the library and needed some attention.
The respondents from UNIABUJA were requested to indicate whether the library reading rooms are normally quiet. To this, 26.9% of the students reported that the library reading rooms of UNIABUJA are normally quiet, while 73.1% of them disagreed. This shows that majority of the respondents agreed that the reading rooms of UNIABUJA university library are usually not quiet and this would negatively affect the use of the university library by the undergraduate students. From Figure 6, the other sources of distracting noises in the reading room of UNIABUJA university library are discussions from the library users with 66.4% implying that library users talk in the library and disturb other library users, noise from the footsteps of other users with 66.9% agreeing that footsteps contribute to level of noise, noise from the fans in the library when in use with 68.4% indicating that fans in the library are noisy, discussions of the library staff also contribute to noise in the library with 69.1% of the respondents agreeing, noise from mobile phone calls with 74.5% agreeing, and noise from the chairs in the reading room under use with 60.4% agreeing that chairs in the reading room are noisy when in use.

Figure 6: Bar chart showing the undergraduate responses on level of noise in UNIABUJA library
From the study, the level of noise in six Nigerian federal university libraries as perceived by the main users - the undergraduate students has been provided. The picture that has emerged is that noise is perceived as prevalent in the Nigerian federal university libraries. In any service oriented institution such as library, its effectiveness is usually evaluated through the perception of the users who many a time are regarded as kings. Though some of the users’ views may be very far from reality but the view of majority of such customers on certain variables cannot be wrong or taken for granted. Thus, the finding from this study revealed that there is high level of noise in Nigerian federal university libraries and this could always have some negative effects on the use of libraries. The result of the interview of some library staff and the observation of the physical facilities such as the reading chairs and tables in the selected universities corroborated the finding as it was obtained that there was high level of noise in the libraries. The seating capacities in the libraries for instance, were not adequate for studying. Majority of the students were observed standing in-between the book shelves reading their books because of inadequate number of reading chairs for the large population of students available in the universities. Thus, noise is bound to exist in the libraries in situations like this.

Generally, majority of the library users usually visit the libraries in order to read in a quiet environment where there are no distractions. No wonder, Shane stresses that the best sound for studying is silence, especially when one needs to really concentrate. All types of noise have negative effect on the students’ ability to learn. It could be noise from students’ discussions, the readers’ footsteps, mobile phone calls or even noise from the library staff s’ discussions. All these put together would always increase the level of noise in any university library and the effects on the library users would not be encouraging. These findings are similar to the findings of Evans who emphasised that studies have confirmed that noise has a negative effect on the students’ ability to learn.

Therefore, the university library management of the federal universities in Nigeria should always strive to reduce or minimize level of noise in their university libraries. Policies prohibiting noise- making in the university libraries should always be enforced on every library user. The library management should provide necessary noise absorbing materials for the floor of the libraries. Library staff should endeavour to check and advise the users to adhere to the library rules especially those that concern noise-making or leave the library environment.
**Sources of noise in the federal university libraries in Nigeria**

To indicate the sources of noise in the federal university libraries in Nigeria, the respondents were provided with some statements that enabled them to respond to the question. These statements include:

- The discussions of the students in the library  
- The footsteps of the library users  
- The movement of the students from one part of the library to the other  
- The noise from mobile phone calls  
- The noise from the ceiling fans in the library  
- The discussions of the library staff

![Figure 7: Bar chart showing the undergraduate responses on sources of noise in federal university libraries in Nigeria](image)

In responding to objective 2, majority of the respondents from the selected six universities studied as indicated in figure 7 revealed that the main source of noise in the federal university libraries in Nigeria is from discussions of students. Some of the students revealed that noise in the university libraries studied is from the footsteps of the library users and the movement of the students from one part of the library to the other. Others indicated that noise in the libraries are
usually from mobile phone calls, the ceiling fans in the reading areas of the library as well as noise from the discussions of the library staff in that hierarchy of importance.

From the foregoing, it is obvious that in the Nigerian university libraries investigated noise is perceived from discussions from students and staff, footsteps of users and mobile phone calls and all these to a great extent make the federal university libraries not to be conducive for users.

**Suggestions on how to minimize noise in Nigerian federal university libraries**

The respondents were provided with some statements to assist them recommend ways of minimizing noise in the libraries. The statements are:

- Enforce users to put mobile phones in silence once in the library \( R \ 1 \)
- Provide policies against noise in the library \( R \ 2 \)
- Instruct the noise makers to leave the library \( R \ 3 \)
- Cover the library floor with noise absorbing materials \( R \ 4 \)
- Replace the weak and noisy reading chairs \( R \ 5 \)
- Control noise from the library staff \( R \ 6 \)

![Figure 8: Bar chart showing the undergraduate responses on how to minimize noise in federal university libraries in Nigeria](image_url)
The response to objective 3 which demanded the respondents to identify ways of minimising noise in Nigerian federal university libraries revealed in figure 8 that majority of the respondents suggested the need to enforce library users to put their mobile phones in silence whenever they are in the library. A good number of them suggested that there is need for provision of policies against noise in the libraries as well as the need to instruct noise makers to leave the library. Some others indicated the need to cover the library floor with noise absorbing materials, replace the reading chairs that are weak and noisy and also control noise from the library staff. If these measures are taken in these Nigerian university libraries studied noise to a great extent would minimise and the students would always visit these university libraries to acquire knowledge.

**Recommendations**

i. The library management in Nigerian federal universities should provide rules that would minimise or completely eradicate noise in the libraries.

ii. The floors of the libraries should be covered with noise absorbing materials.

iii. Library users should be advised to put their mobile phones in silence inside the library.

iv. The chairs and fans in the libraries that are weak and old should be replaced with better ones.

v. Library staff should be queried once they make noise in the libraries. This would help to check and discourage this habit among the library staff in the libraries.

**Conclusion**

In conclusion, one can deduce that based on the findings of the study there is significant relationship between noise and students’ use of federal university libraries in Nigeria. The findings from this study revealed that there is high level of noise in the six Nigerian federal university libraries studied and this could always have some negative effects on the use of libraries by the undergraduate students. For effective use of the libraries there is need to control the level of noise in federal university libraries in Nigeria in order to attract students to use the libraries. Noise of any kind prevents readers in the library from achieving their learning objectives. Therefore, rules and policies of the university libraries that would reduce level of noise in the libraries should be enforced and implemented. It is only when this is done that
undergraduate students of Nigerian federal universities would make effective use of the university libraries for their academic purposes.

References


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