

# ERGONOMICS AND LOCATION AS PREDICTORS OF LIBRARY UTILISATION BY SECONDARY SCHOOL STUDENTS IN OYO STATE, NIGERIA

**Samuel NSSIEN**

*Achievers University, Owo  
Ondo State, Nigeria*

and

**Olaniran JOHNSON**

*Centre for Educational Media Resource Studies  
University of Ibadan, Nigeria*

## **Abstract**

*The study focused on examining the extent to which ergonomics and library location predict library location. The correlational type of research design was adopted for the study while questionnaire was used as the major instrument of data collection. Findings from the study revealed that the location of school libraries in Ona Ara is moderately adequate while the library ergonomics is also fair. Major purposes of library utilization by the students are to avoid classroom punishment, borrow books, meet with friends and copy missed class notes though a regular utilization of the school libraries was established. Positive relationships were established among ergonomics, library location and utilisation.*

**Keywords:** *Ergonomics, Library Location, Library Utilisation, Secondary school students, Oyo State, Nigeria*

## **Background to the Study**

Library utilisation is key to effective teaching and learning activities in schools as it focuses on the practical and maximum use of library information materials either in book or electronic format by a user for pleasure, research and in-depth study or for the purpose of solving a problem, hence the resources in the library are acquired for use by the students. UNESCO (2004) report highlighted inappropriate, poorly stocked and unattractive libraries which lack potentials to encourage anyone to utilise as major constraints to library utilization among students. The library as a repository of knowledge and a dynamic social institution for reliable information is established to preserve the recorded knowledge of man for use. According to Aina (2004), a library is concerned with the collection, processing, storage and dissemination of recorded information for the purpose of reading, study and consultation.

Based on the definitions above, a library can be referred to as a collection of information materials and also as a place specially designed for the purpose of keeping information materials and gadgets such as computers for easy access and consultation either within the premises or otherwise borrowed out for a period of time after meeting up with the terms and conditions of the library. Therefore, for the purpose of this research, we are considering library as a media center, which is a place for consultation of information materials by library users for the satisfaction of their information needs.

The school library plays a key role in the cultural and social life of the school. It can be a central point for engagement with all kinds of reading, cultural activities, access to information, knowledge building, deep thinking and lively discussions. The school library environment encompasses all the circumstances, people, things, and events around the library that can have potential effects both positively and negatively on its patronage. The design of a library can influence user's behavior and satisfaction in the same way that the physical environment and organization of a library can.

The facilities, material, equipment and staff of the school library as well as its operations should be organized in such a way that they support learning within the pedagogic goals of the school. School libraries make a difference to students' understanding and achievement and provide support for teaching and learning throughout the school, hence, Arua and Chinaka (2011) stated that school library information resources are all inputs which are utilized in the library in order to provide good learning environment for students and teachers to achieve the intended educational goals. The school library is an important part of the school community, so it reflects and welcomes its community but a decline in library utilization is being observed among secondary students recently probably due to environmental issues within and around the school libraries

According to Odunaiya, et al., (2014), the learning environment is similar to other work environments because there is interplay of both "static work" and "force." Static work refers to the muscular-skeletal exertion required to maintain or hold a certain position, while force refers to the amount of tension generated in the muscles in order to move or maintain the body in a particular posture. For example, sitting and keeping the head and torso upright when reading in the library requires static work while keeping or maintaining this position for a given time requires the application of a force. Therefore, proper implementation of ergonomics factors is needed to ensure library utilization by secondary school students (Patron, 2009).

Ergonomics is all about proper fit (Mahalakshmi & Sonam (2011) as well as the development and behavioural strategies interfacing with human capabilities (physical, mental and psychological) in order to optimise the human-work relationships. In research, ergonomics methodologies can be applied in determining how work and other general tasks can be best designed to maximise individual's performances and how the working environment which includes the tools and equipment fits to promote safety, comfort, effectiveness and efficiency of the worker in performing the tasks. Within the context of library utilization, ergonomics can be considered in the light of how well the facilities and resources within the library fits to promote safe school libraries utilization by secondary school students.

Furniture plays a very important role in both learning environment and process especially the school libraries. It is as important as equipment, buildings, and other learning resources. Imagine a scenario where you check in at a library and you notice the different types and sizes of chairs and tables orderly arranged at different sections. What comes to your mind? Do you ever ask for the reason(s) why this is done? Or do you ever deduce any meaning from such scene? Ergonomics in its holistic view is the

study of the relationship between people, the work they do and the environment in which such mental and physical activities are been carried out. Literature established that different sizes, types and sizes of chairs and tables were orderly arranged at different sections in school libraries for easy sitting and reading environment for effective utilization of school libraries. And as a learning environment, library exerts a powerful influence on learning and behaviour, though we may not be aware of it or sometimes choose to disregard it. Libraries consists of all those physical-sensory elements such as lighting, color, sound, space, furniture and so on. The use of ergonomically unsuitable furniture can therefore lead to muscular-skeletal loads and strains, deterioration in health, and a decrease in library utilization by students. Hence, the ergonomic requirements for library facilities should be given adequate attention.

Library furniture and fittings are some of the most important pieces of equipment in the library, hence should be the first priority for equipment expenditures and there should be no compromise with comfort and durability. The set of furniture and fittings should be one that encourages movement and must fit correctly the user for lumbar support, and seat back. It should also protect the curvature of the spine to maintain good posture. Karanek (2005) and Clark (2006) suggested the most important features of a chair that it must have a lumbar support with adjustable height, with tilt ability, and tilt lock. Library patrons will sit for hours of intensive study and their comfort will determine their level of satisfaction with the library-study experience.

Studies have shown that, in Ghana the level of satisfaction with the library-study experience by students were comfort and durability while in Nigeria it was discovered through study the level of satisfaction with the library-study experience by students revealed otherwise as comfort and durability such as lumbar support from the chair used for reading in Nigeria needed support the lower back and a relax posture when reading were mostly compromised resulting in neck, arm, shoulder, and back pain.

Noise level is another important ergonomic factor that affects library utilization by students. Noise has a psychological effect and creates concentration problems in studying or work, (Chandra, 2009). The library's workstations are arranged in an environment, where multiple individuals work in the same room with or without dividers to separate them. There are several sources of noise in this kind of environment. The noise produced by ventilation and air conditioning equipment, movement sounds such as footsteps and conversations of other users all contribute to the sound level in the library. The predominant effects of too much noise in a library environment are distraction, disturbance of intellectual activities, and annoyance. Even when the library interior is quiet, there may be sound from outside that creates a problem. So, all these must be checked and corrected in library situations to enhance user's satisfaction.

According to Chandra (2009), illumination is also an important issue in library situations and there should be specifications for illumination of reading areas, staff work areas, and shelves. Reading or working under insufficient light for considerable time could cause eyestrain which may ultimately lead to eye disorders. Temperature and relative humidity are other crucial factors in library ergonomics. It affects the

comfort of users and the lifespan of library collections (Baking, 2008). Heat accelerates deterioration and humidity helps promote harmful chemical reactions on library resources such as books. Heat and humidity encourage mold growth and insect activity. Low humidity can also be a problem, and cause library materials to become brittle, thereby affecting the availability and accessibility of these materials in the library. All these elements/factors are what to look for in a place specially designed for students to adequately learn, especially when creating a space for library and they must be reviewed against the international standard in respect of the library to appraise it ergonomically.

Another important factor that affects library utilization by students is the library location. According to Erickson and Rolf (2007), when planning a school library building, the location should be discussed and recommendations given to the architect. The school library should be easily accessible from all learning areas of the school and centrally located for easy access by the host community. Often, this means placing the library in a central location. It should also be located away from noisy areas such as the cafeteria, industrial area, gymnasium, and music rooms. It should also be noted that having libraries near noisome areas such as confectionery companies, public toilets, eateries, etc. may affect the level of concentration of the library user(s).

Gojeh (2013) was much particular on the location of the school library as he posited that libraries should be located in a quiet area away from games fields, canteens and should be centrally located in the school for easy accessibility from student's hostels and classrooms. Library then is of no use to its community, even if by mathematical method achieves the highest level of self-analysis or through operations research, if it is unable to deliver within reasonable time the reading materials requested by its users. Therefore, proximity of library to its host community is very important in sitting a library as it affects user patronage and library utilization. Library users do consider how far or near a library is to them as this may pose a threat on them when comparing how far they would have to walk before getting to the library and returning to their destinations after using the library. Another factor that seems to pose treats on library users is taking care of their hunger after a long stay at the library. Library managers should make a provision for mini snacks shop when sitting a library.

Moreover, security of life and properties of the library users is also a key feature to be given adequate attention. According to Edwards (2009) in the second edition of his book titled "Libraries and Learning Resource Centers", security of libraries is essential to avoid the theft of books (a point obviously more acute in libraries with special collections) but the reader too needs to feel safe. Both staff and readers require a secure environment because their needs are as important as the study materials. Since libraries are long-lived buildings, attention to quality of materials, staff morale, reader's access and community well-being is important. The main threats today to the library collection are the theft of books, the removal of pages (particularly valuable pages) from books, fire and water damage. The main threats to library staff are personal attack and to readers of theft of personal belongings (wallets, briefcases, laptops). Security and safety are questions that must be addressed at the design stage and kept under

review when the library is in operation. To make this more effective, librarians and architects must be adequately involved in choosing a site for the library and in designing how the building should look like. However, because of new innovations and ideas that may be introduced into library situations and designs, it is still possible to turn a poor location into an acceptable design by addressing some of the points stated above.

Since, library helps the secondary school teachers to achieve the objectives of producing students that are information literate and are prepared for lifelong education, provision of easy access to available library resources and professional support to facilitate effective utilization of these resources must be taken serious. According to Rathinasabapathy (2005), library resources are important intellectual resources of the academic community. It helps to fulfill the curriculum requirements and to promote studies and research. Hence, it includes the totality of human and organized materials and resources available in both book and non-book format for providing and obtaining needed information (Ahuauzu, 2002). Library resources should be accessible to the users at the right time and in its appropriate format. Accessibility of library resources creates an enabling environment for the utilization of library resources. Accessibility of library resources means the ease of locating and retrieving a piece of information from the storage medium (Akobundu, 2008). The availability of these resources however may not necessarily means their accessibility because they may be there but physically can never be positioned in areas people or users can make use of them. Readers tend to use information sources that require the least effort to access so as to save time.

A lot of studies have been carried out on library utilisation because it is the users that make the library and its services come alive. A library that is not used is as good as dead as it cannot justify its existence. It is therefore the utilisation to which the library is put that infuses life into its resources and services; hence, use and user studies cannot outlive their usefulness. However, there seems to be few or no study that has considered the effect which ergonomics and location can have on library utilization, especially among secondary school students. Akinade (2000) opined that the expectations of people are high when sourcing and retrieving information and when such information needs are not met, frustration usually set in and this may drive the users away from the library. Akande (2003) therefore noted that the utilisation of library resources is of the greatest importance in the minds of the library managers as this will enable them know how best they can serve their users. Library users are a variable that influences the use of library resources. Therefore, it is reasonable to assume that the more the users use the library, the more familiar they will be with its resources. However, if library users use the library primarily as a quiet and convenient place to study, they may not be aware of its resources at all; as compared to those that never visits the library. Also, a furniture that is not ergonomically fit coupled with an in-appropriate school library combined with the characteristics of different library users can result in faster fatigue, defective posture, and the establishment of pathological states which could affect the level of concentration of patrons and equally

defeat the objective(s) behind a library user utilizing the facilities provided by a school library.

Though several researches had been carried out mostly on ergonomics as it concerns adults of various professions (including librarians) and their workstations while little was done to look into ergonomics and its effects on children or young adults as it relates to their library utilization. It is in the light of the foregoing that this study investigated the influence of ergonomics and location on library utilization among secondary school students in Ona Ara Local Government Area of Oyo State, Nigeria.

### **Objectives of the Study**

The objectives of this study are to:

1. determine the adequacy of location of library in secondary schools in Ona-Ara LGA of Oyo State;
2. find out the state of ergonomics factors in school libraries in secondary schools in Ona-Ara LGA of Oyo State;
3. establish the purpose of utilization of library by secondary school students in Ona-Ara LGA of Oyo State;
4. find out the frequency of utilization of library by secondary school students in Ona-Ara LGA of Oyo State;
5. determine the relationship between independent variables (ergonomics and location of library) and utilization of library by secondary school students in Ona-Ara LGA of Oyo State;
6. find out the contribution of ergonomics and location of library to utilization of library by secondary school students in Ona-Ara LGA of Oyo State; and
7. establish the relative contributions of ergonomics and location of library to utilization of library by secondary school students in Ona-Ara LGA of Oyo State, Nigeria.

### **Research Questions**

The following research questions were answered in this study:

1. How adequate is the location of libraries in senior secondary schools in Ona-Ara LGA of Oyo State?
2. What is the state of ergonomics in libraries in senior secondary schools in Ona-Ara LGA of Oyo State?
3. For what purposes do students in senior secondary schools in Ona-Ara LGA of Oyo State utilize the library?
4. What is the frequency of utilization of library among senior secondary school students in Ona-Ara LGA of Oyo State?
5. What relationship exists between independent variables (ergonomics and location of library) and utilization of library by senior secondary school students in Ona-Ara LGA of Oyo State?
6. What is the contribution of ergonomics and location of library on utilization of library by senior secondary school students in Ona-Ara LGA of Oyo State?
7. What is the relative contribution of ergonomics and location of library on utilization of library by senior secondary school students in Ona-Ara LGA of Oyo State?

### **Literature Review.**

Education is the process that consists not only the verbal presentation of ideas and materials to a group of pupils or students (learners), it includes among other things the provision of adequate sitting condition which gives room for the execution of some tasks without affecting negatively the health of the students. Learning process should be in a safe, efficiently comfortable as well as friendly and ergonomically fit area.

Ergonomics is the applied science of having an objective of adapting work or working conditions to enhance performance of the worker and It is concerned with the “fit” between the user, the equipment and their environment. According to Ogedengbe (2015), there are ergonomic design standard which has been established for any educational environment (library) in terms of conduciveness of the environment, suitability and adequacy of facilities provided within the library. In terms of sound level, relative humidity and temperature of the environment, the standard level of sound allowed for example in a library is 40decibel (Aaberg, 2014), while its relative humidity shall be set at a level of 35% and 50%. The maximum accepted total relative humidity variation or operating range shall be 5% on either side of the set point. The relative humidity therefore shall not go above 55% or below 30%. On the other hand, Ogedengbe (2015) stated that the temperature of any educational environment shall be set to a point not exceeding 72<sup>0</sup>F (21<sup>0</sup>C). Therefore, a temperature range of 5<sup>0</sup>F on either side of the set point was established as the maximum acceptable temperature variation. This implies that the air temperature shall not go below 67<sup>0</sup>F and it shall not go above 77<sup>0</sup>F (American National Standards Institute/National Information Standards Organization Z39.79-2001 standard).

There are several ways through which ergonomics can contribute to the suitability of library for use which include among others, the preservation of the health, creation of a comfortable environment and adjusting the process of library service delivery according to users' needs. Also, preservation of health of students is one of the primary conditions that must be met during establishment of any library (Zunjic, Papic, and Bojovic 2015). However, for various reasons, this condition is often not satisfied inadequately or not met at all in most schools. Zunjic, Papic, Bojovic (2015) further posited that human body measurements are an important aspect that should be taken into account in library furniture designs. Specific measurements such as popliteal height, knee height, buttock-popliteal and elbow height are essential in order to determine library furniture dimensions that enable the proper sitting posture by school library users.

In setting up a library with the expectation of it fulfilling its purpose of establishment, the ergonomic factors related to it should be considered. A library chair is one of the most important piece of equipment which its priority must not to be compromised. Its comfortability and durability should be adequately checked. This is so because library patrons are expected to sit for hours of intensive study and their comfort will determine their level of satisfaction with the library. In supporting this view, Ogedengbe (2015) stated that work surfaces that are too high or too low can lead to awkward postures such as extending the arms to reach the reading surface or library shelves, elbow held away from the body and elevated shoulders due to improper seating condition and

thereby resulting in neck, arm shoulder and back pain. As a result of all these, it could be concluded according to Ogedengbe that the ergonomic factors that could affect library users' comfort include reading table and chair parameters, thermal factors such as relative humidity and air temperature, sound or noise level and light intensity.

The location of school library is known to influence their utilisation and efficiency, as proximity to them does influence the decision to seek and receive education. This implies that the location of educational facilities particularly public ones which are more affordable and accessible may influence accessibility to educational opportunity (Inobeme and Ayanwole, 2009). The location of any library is found to play a significant role in its patronage. Libraries located either besides the principal's office or staff room might not attract students' patronage due to the fear of either the principal or the staff members, hence the usual recommendation is to centralise the school library. Hence it could be said that wrong locations constitute one of the factors responsible for the low patronage of school libraries. It could be inferred that the school libraries were not found adequate in meeting most of the needs of the students. The inadequacy also might result from poor funding and not placing a significant importance on the place of the library in achieving the goals of education in Nigeria. No wonder the poor performance of most students in public schools in the certificate examinations.

Libraries seek to enrich young people by introducing them to good reading literature which will increase their understanding, broaden their horizons, develop their aesthetic sense, and help them develop their moral, spiritual and psychological growth. Reading helps develop and promote local culture. Libraries help facilitate publication of good children literature based on culture and provide future reading public for such publications. Aanu and Olatoye (2011) reiterated the relevance and importance of library use and reading habit in predicting students' achievement in schools. According to them, the significant positive influence of library resources on students' achievement as revealed by findings from their study is not new. Lance (2000) reported that students in schools with good libraries and full time library staff performed at higher level than students in schools with minimal or no library use. Lonsdale (2003) corroborated this in his study by reporting that students in schools adequately staffed, resourced and funded had higher students' achievement. The positive relationship between library use and study habit has been reported by Dike (2008) and Abareh (1998). Use of library resources encourages good study and reading habit skills. It is therefore logical to expect high positive relationship between study habit, use of library resources and academic achievement as reported in the study of Aanu and Olatoye (2011). No doubt, students need the support of the library to carry out academic activities. Onatola (2004) considered libraries as fundamental to the design and implementation of excellent educational programme. He further explained that the level of support given to library by the government and the bqualification, experience and personality of library staff are very important in enhancing library services to students.

In their study on the utilisation of school library in Ijebu North local government area of Ogun state, Ogunbote and Odunewu (2008) reported reading of personal



books/lecture notes as the major purpose for which teachers make use of the library while reading of personal books/lecture notes and doing assignments are the major purposes for which the students make use of library resources. Aina cited in Ojebode (2008) described the library as a collection of books and non-book media for reading studying and consultation. This is corroborated by Ojebode (2008) findings which revealed that majority of the students in both public and private schools in Nigeria use the library for the purpose of reading and studying.

Ugah (2008) relates utilisation of library facilities to what stimulates excitement and instills confidence in the users in developing their talents, potentials and capabilities both academically and socially while Babalola (2004) observed that availability, accessibility and use of relevant, accurate and current library resources and services by the students are veritable means of accentuating sustainable development; and that all human activities that result in problem solving and production of goods and services depend on the availability, accessibility and utilisation of accurate information. In her own contributing to the utilisation of library facilities, Oyediran (2004) observed that there is low use of the library by students and this can be attributed to the expressed unavailability of the desired facilities in the libraries. Ajayi and Akineye (2004) also observed that there is frustration among students as a result of their inability to use the library facilities and this frustration could be as a result of the inability of the libraries to provide materials that suit their ways of learning. Also, Ugali (2007) in confirmation of the above assertion stated that the use of library has an approximately 80% dependence on the availability of the library facilities. It is also possible as noted by Tadesse (2008) and Iwara (2010) for library resources and services to be available and yet not accessible and where they are not accessible, effective utilisation would not be realized. Thus, there is connectivity between availability, accessibility, and utilisation of information and improved educational outcomes and general quality of life of students.

In a library-related situation, Buenrostro (2004) correlated ergonomics to man and machine which were symbiotically connected with each other and noted that, a library building that is ergonomically planned together with consideration of other physical aspects of the workplace makes the place conducive for work, thus achieving increased usage by students. To come up with increased productivity, library staffs should possess the needed technical skills in the performance of their duties. In the workstation, the staffs are expected to perform technical services such as cataloging, indexing and abstracting, selection and acquisitions and the processing of materials and the preparation of appropriate library records so that library resources will be made easily accessible to students. A library that is ergonomically designed and healthfully equipped is that which has adequate lighting, specified furniture like chairs and desks as well as adequate ventilation.

In a highly competitive academic environment, the library is an essential component of an institution's intellectual expression. Its location either in schools is germane to its utilisation. Thus, factors such as friendly environment, less noise, good air ventilation and the likes must be put into consideration while during the library. If human made environment can be connected to his mental totality, then the function and structure of the library as a place to stay, to read and recreate need a coherent design and planning

such that the environment in response to human needs can grow, change, evolve and be adapted for its intended purpose if use (Eynifar, 2000). Proshansky who is one of the pioneers in environmental psychology suggested that buildings and their architectures are social phenomenon as much as they are physical phenomenon, and because of physical and emotional mechanisms, space create certain psychological impact on users and affects the psychological nature of human and causes different behaviours in humans (Proshansky, 1987 cited in Javdani, Karami and Mehrpouyan, 2015).

Also, environmental studies suggest that our responses to the physical environment and architecture can be described according to our desire to getting close or away from that environment (Mehrabian, 1976 cited in Javdani Karami and Mehrpouyan, 2015). If the environmental elements is not capable to meet behavioral patterns of individuals, environmental adequacy are minimized and people take sides from it and abandon the environment (Lang, 2012). Madanipour (2000) believe that library provide a space that welcomes different users of all categories and that takes care of all aspects of individual and social life of human, therefore, regarding studies of environmental psychology, it can be stated that a library environment designed without noticing the users' needs and psychological issues of users, in addition to depriving security and comfort will lead to low turnout of users of the library. Thus, the physical environment must support the expected needs of library users and physical space nature of libraries should be designed in such a way that current patterns of behaviours are achieved in these places. Hence, the physical environment of libraries is one of the factors that with a correct and proper layout can add to library dynamicity.

Another environmental capacity of libraries is to provide physiological comfort for people with different movement disabilities in the library community which includes senior citizens, children and physically challenged people (people on wheelchairs, walking sticks, the blinds etc.) so as to access its physical environment without any barrier (Lang, 1987 as quoted by Javdani et al, 2015). How accessible a library is to different kinds of users (able and physically impaired) is capable of affecting its rate of use. In a study carried out by Gehl (2009), he suggested that the effect of factors such as distance, quality of road, and transportation condition plays an important role on presence of people in public spaces. He also derived from his research's findings regarding distance and borrowing books that people who reside in locations nearer to libraries borrow most number of books compare to those living far off. Therefore, the location of a library can influence its use. Quoted by Orgem (2012) supporting Gehl (2009), the extent of library use is partly dependent on the distance between the library and users' home or office. It is clear that if a library is located far away from user's residence, its use will be low. On the other hand, proximity of the library to the user's residence is likely to maximize library use.

### **Methodology**

The study employed descriptive research design of the ex-post facto type. The population for this study comprise all the 5398 students, spread across secondary schools in Ona-Ara local government area in Ibadan, Oyo State. There are thirty-three (33) secondary schools in Ona-Ara local government (10 Junior Secondary Schools, 10

Senior Secondary Schools and 13 Senior and Junior Secondary Schools) (Preliminary Survey, 2018). The multi-stage procedure was adopted for this study. The purposive sampling procedure was adopted to select 10 out of the 33 secondary schools that have functional school libraries, either partitioned, purpose built libraries or otherwise). Respondents were drawn using simple random sampling technique to select ten percent (10%) of the total number of the SS2 students in these selected schools. Therefore, a total number of 148 SS2 students constitute the sample for the study (See Table 1).

**Table 1 Sample size for the study**

S/N	Name of School	Total Population of SS2 Students	Sample Size (10% of Total Population of SS2 Students)
1	Bioku Alaadun CHS(Snr)	218	22
2	Community Secondary School, Alaadun (Snr)	206	21
3	Elekuro High School (Snr.)	248	25
4	Ajia Secondary Grammar School Ajia	106	11
5	Anglican Grammar School, Ojebode	68	7
6	Community Grammar School, Akanran	42	4
7	Olorunda Ogunsola Community Grammar School	103	10
8	Community High School (Snr) Sawia	195	20
9	Abonde Community Grammar School (Snr)	148	15
10	Community Grammar School, Airport	132	13
	<b>Total</b>	<b>1466</b>	<b>148</b>

The instrument that was used for this study was a questionnaire tagged "Ergonomics and Location of Library as Predictors of School Library Utilisation by Secondary School Students Instrument (ELSLUI)". The questionnaire was used to evaluate the students' convenience in seating, nature of the library furniture, conduciveness in library use, type of library personnel, type of library in the schools, level of security in the school libraries, the environmental factors around the school libraries, the purpose for which the students utilise the school libraries and how frequent they visit the library in their various schools. The questionnaire for this study centred on ergonomics and location as predictors of school library utilisation by secondary school students in On-Ara LGA of Oyo State.

The instrument was given to the researcher's supervisor and professional librarians for rigorous scrutiny and necessary corrections and modifications to authenticate the reliability of the content, construct and face validity of the instrument before its administration. This needed to be done to ensure that the questionnaire measured up to the accurate and exact parameters initially targeted in the study. The instrument was trial-tested on twenty (20) students at Ibadan Christ Apostolic Grammar School, Ibadan. The data collected was analysed to get the reliability coefficient (Cronbach-Alpha). **Section A** was designed to retrieve data on the demographic information of the students such as name of school, age and gender of the respondents. **Section B** was crafted and designed to gather information on library ergonomics such as convenience in seating, nature of library furniture, conduciveness in library use and type of library personnel in the libraries in senior secondary schools in Ona-Ara LGA. It was constructed by the researcher and it comprises twenty-four (24) items measured on a four (4) point modified likert scale of 'Strongly Agree = 4', 'Agree = 3', 'Disagree = 2' and 'Strongly Disagree' = 1. The reliability coefficient of the scale was at 0.82. **Section C on the adequacy of library location** has fifteen (15) items used to evaluate the type of library, security of life and properties in the library, environmental factors in and around the library also measured on a four (4) point modified likert scale of 'Strongly Agree = 4', 'Agree = 3', 'Disagree = 2' and 'Strongly Disagree'. The reliability coefficient of the scale was 0.94 while **Section D** is categorised into two sub-sections. The first sub-section comprises ten (10) items used to evaluate the purpose of library utilisation by the respondents while the second sub-section also comprises of ten (10) items evaluating the frequency of library utilisation among the respondents based on four (4) point likert scale of 'Daily = 4', 'Weekly = 3', 'Occasionally = 2' and 'Never = 1'. The coefficient of reliability of the scale was 0.75. The questionnaires were administered by the researcher with the help two trained research assistants and the period of administration was five (5) weeks which was the time spent for the field work.

### Method of Data Analysis

For proper analysis of the data gathered from the instruments, all responses were subjected to descriptive statistics which include frequency counts, percentages, mean and standard deviation and inferential statistics such as Pearson's product moment correlation and multiple regression. Seven research questions were answered in the study. was used to answer the seven (7) research questions. Research questions 1 to 4 were answered using descriptive techniques of frequency counts, percentages, mean and standard deviation while research question five was answered using Pearson moment product correlation. Research questions 6 and 7 were answered using multiple regression technique.

### Results and Discussion of findings

This chapter presents the findings of this study. The results obtained from the administered questionnaires were presented and discussed in the following order: demographic characteristics of the respondents, answers to research questions and discussion of findings presented in a tabular form below. One hundred and forty-eight

copies of questionnaire were administered to the respondents and all were returned with useful and usable data.

### **Demographic Characteristic of Respondents**

Demographic information of respondents revealed that there are more female 65.5% than male 34.5% students among the respondents. The frequency distribution according to age range reveals that there are more respondents within the of age range of 16 to 20 years (75.7%) than those within the age range of 10 to 15 years (18.2%) and age range of 21 to 25 years (6.1%) of the total respondents. This shows that respondents with age range of 16 to 20 years have the highest percentage. The table also showed the distribution of respondents across surveyed schools as follows: Elekuro High School (Snr) (16.9%), Bioku Alaadun CHS (Snr) (14.9%), Community Secondary School Alaadun (Snr) (14.2%), Ajia Secondary Grammar School (7.4%), Anglican Grammar School, Ojebode (4.7%), Community Grammar School, Akanran (2.7%), Olorunda-Ogunsola Community Grammar School (6.8%), Community High School (Snr), Sawia (13.5%), Abonde Community Grammar School (Snr) (10.1%) and Community Grammar School, Airport (8.8%). However, this implies that majority of the students were from Elekuro High School (Snr).

**Research Question 1:** How adequate are the location of school libraries in Senior Secondary Schools in Ona-Ara LGA of Oyo State?

**Table 2: Adequacy of libraries location**

Key=Strongly Agree (SA=4) Agree(A=3) Disagree (D=2), Strongly Agree (SD=1)

S/N	Items	SA (%)	A (%)	D (%)	SD (%)	Mean	SD
1	The library can be approached from two entries	87 (58.8)	29 (19.6)	24 (16.2)	8 (5.4)	3.28	0.96
2	The library in my school is located in a separate building different from all classrooms and offices	19 (12.8)	25 (16.9)	27 (18.2)	77 (52.0)	3.09	1.09
3	The library does not accommodate sitting arrangement	16 (10.8)	35 (23.6)	44 (29.7)	53 (35.8)	2.91	1.01
4	The relative humidity of the library is not adequate and appropriate for its use	19 (12.8)	45 (30.4)	49 (33.1)	35 (23.6)	2.68	0.98
5	The library is rodent free	26 (17.6)	50 (33.8)	36 (24.3)	36 (24.3)	2.55	1.05
6	The location of the library is not safe to prevent theft of users' personal belongings	25 (16.9)	51 (34.5)	39 (26.4)	33 (22.3)	2.54	1.02
7	The location of the library is good enough to protect the personnel from attack	30 (20.3)	51 (34.5)	34 (23.0)	33 (22.3)	2.47	1.05
8	The school library is sited in a room demarcated from the school principal's office	39 (26.4)	39 (26.4)	33 (22.3)	37 (25.0)	2.46	1.13
9	The location of the library is suitable enough to prevent users from all forms of attack	25 (16.9)	54 (36.5)	46 (31.1)	23 (15.5)	2.45	0.95
10	The location of the library is not suitable to encourage evening usage	22 (14.9)	64 (43.2)	39 (26.4)	23 (15.5)	2.43	0.92
11	The school library is sited in a room demarcated from the staff room	33 (22.3)	54 (36.5)	27 (18.2)	34 (23.0)	2.42	1.08
12	The library is nauseous free	31 (20.9)	48 (32.4)	48 (32.4)	21 (14.2)	2.40	0.97
13	The library is conducive to use all seasons of the year	35 (23.4)	57 (38.5)	33 (22.3)	23 (15.5)	2.30	1.00
14	The library is noise free	38 (25.7)	46 (31.1)	49 (33.1)	15 (10.1)	2.28	0.96
15	The location of the library is good enough to prevent theft of library resources	44 (29.7)	51 (34.5)	32 (21.6)	21 (14.2)	2.20	1.02
<b>Grand mean: 38.46</b>							

Table 2 presents results showing that majority of the respondents indicating that "The library can be approached from two entries ( $\bar{x} = 3.28$ ), the library in my school is located in a separate building different from all classrooms and offices ( $\bar{x} = 3.09$ ), The library does not accommodate sitting arrangement ( $\bar{x} = 2.91$ ), and the relative humidity of the library is not adequate and appropriate for its use ( $\bar{x} = 3.28$ ) ranked highest among the list of items on the scale for measuring the adequacy of library location while items such as the library is nauseous free ( $\bar{x} = 2.40$ ), the library is conducive to use all seasons of the year ( $\bar{x} = 2.30$ ), The library is noise free ( $\bar{x} = 2.28$ ) and the location of the library is good enough to prevent theft of library resources ( $\bar{x} = 2.20$ ) were ranked least. This implies that libraries in senior secondary schools in Ona-Ara LGA of Oyo State have no security concerns about the location, the environment where the libraries are located is moderately good though they are not purpose built but were mere demarcations from either the principal's offices or the staff rooms. By implication, this further confirms lack of space for library use by the library users in senior secondary schools in Ona-Ara LGA of Oyo State as the libraries could not accommodate sitting arrangement.

A test of norm was conducted on the adequacy of location of libraries in senior secondary schools in Ona-Ara LGA of Oyo State. The maximum score for each respondent on the fifteen (15) items scale is sixty (60) ( $15 \times 4$ ), meaning the number of items on the scale multiplied by the number of possible response. Adequacy of library location can be classified in Not adequate, Moderately adequate and Adequate. Therefore, to establish an interval score, the maximum score was divided by the number of levels, that is,  $60/3 = 20$ . This is the interval score which was used to chart the norm table.

Table 2.1 Test of norm table on adequacy of libraries in senior secondary school in Ona-Ara LGA of Oyo State

Interval	Total mean score	Remark
1 - 20		Adequate
21 - 40	38.46	Moderately adequate
41 - 60		Not adequate

According to the norm table, the overall mean score falls within the interval distribution of 21 - 40 which indicates that the location of school libraries in senior secondary schools in Ona Ara LGA, Oyo State, Nigeria is moderately adequate.

**Research Question 2:** What is the state of ergonomics factors in libraries in senior secondary schools in Ona-Ara LGA of Oyo State?

**Table 3: Ergonomics factors in libraries****Key=Strongly Agree (SA=4) Agree(A=3) Disagree (D=2), Strongly Agree (SD=1)**

S/ N	Ergonomic factors	SA(%)	A(%)	D(%)	SD(%)	Mean	SD
1	The reading area is well arranged for easy movement.	52 (35.1)	36 (24.3)	18 (12.2)	42 (28.4)	3.29	0.96
2	The reading area is well lighted.	61 (41.2)	27 (18.2)	44 (29.7)	16 (10.8)	3.29	0.96
3	The armrest of the chairs in the library is adequate	92 (62.2)	13 (8.8)	23 (15.5)	20 (13.5)	3.26	1.09
4	In case of power failure, the library has a power backup.	9 (6.1)	25 (16.9)	28 (18.9)	86 (58.1)	3.06	0.99
5	The chairs and tables are well constructed to suit individual personnel.	13 (8.8)	39 (26.4)	34 (23.0)	62 (41.9)	3.01	1.02
6	The library building is well oriented in relation to light, noise and climate.	26 (17.6)	55 (37.2)	21 (14.2)	46 (31.1)	2.97	0.89
7	The library building is noise proof.	18 (12.2)	53 (35.8)	36 (24.3)	41 (27.7)	2.98	1.06
8	The library is well equipped with adequate and appropriate furniture fittings	9 (6.1)	34 (23.0)	58 (39.2)	47 (31.8)	2.98	1.02
9	There are chairs and tables for the different categories of library users.	18 (12.2)	30 (20.3)	37 (25.0)	63 (42.6)	2.80	0.99
10	The library is designed to accommodate physically challenged users.	13 (8.8)	30 (20.3)	40 (27.0)	65 (43.9)	2.66	0.94
11	The library resources are well arranged to enhance easy access	31 (20.9)	35 (23.6)	43 (29.1)	39 (26.4)	2.61	1.09
12	Type of library shelves	14 (9.5)	107 (72.3)	14 (8.8)	13 (8.8)	2.59	1.11
13	The backrest of the chairs in the library is adequate	43 (29.1)	26 (17.6)	30 (20.3)	49 (33.1)	2.57	1.22
14	The library does not encourage easy movement of users because the chairs are bench typed	50 (33.8)	30 (20.3)	28 (18.9)	40 (27.0)	2.39	1.21
15	The library chairs are not separated from each other to encourage individual use	53 (35.8)	28 (18.9)	28 (18.9)	39 (26.4)	2.36	1.22
16	The chairs in the library are of moderate height to make seating convenient	46 (31.1)	39 (26.4)	34 (23.0)	29 (19.6)	2.31	1.11
17	Type of tables in the library	6 (4.1)	134 (90.5)	2 (1.4)	6 (4.1)	2.18	0.72
18	The tables in the library have enough space to accommodate reading materials	49 (33.1)	49 (33.1)	28 (18.9)	22 (14.9)	2.16	1.05
19	The library is not spacious enough to encourage much users	44 (29.7)	61 (41.2)	29 (19.6)	14 (9.5)	2.09	0.93
20	Type of chairs in the library	4 (2.7)	135	5 (3.4)	4 (2.7)	2.05	0.46



Table 3 presents results on the ergonomics factors in libraries in senior secondary schools in Ona-Ara LGA of Oyo State. Its findings showed that majority of the respondents indicated that, the reading area is well arranged for easy movement (88, 59.4%), the reading area is well lighted (88, 59.4%) and the armrest of the chairs in the library is adequate (105, 71.0%). On the other hand, majority of the respondents affirmed that there is no power back-up in case of power failure in the libraries (114, 70.0%) and that the chairs and tables are not well constructed to suit individual personnel (95, 64.9%). It can be deduced from the above that the ergonomics of the libraries surveyed is not good enough. Likewise, the table also revealed that majority of the respondents indicated that in their school libraries, the type of chairs, tables and shelves were wooden typed. This indicate lack of ergonomically good furniture in the libraries under study.

The test of norm was carried out on the overall state of ergonomics of libraries in senior secondary schools in Ona-Ara LGA of Oyo State. The maximum score for each respondent on the twenty-three (23) items scale is ninety-two (92) ( $23 \times 4$ ), meaning the number of items on the scale multiplied by the number of possible response. The state of library ergonomics can be classified into poor, fair and good. Therefore, to establish an interval score, the maximum score was divided by the number of levels, that is,  $92/3 = 31$ . This is the interval score which was used to chart the norm table.

**Table 3.1 Test of norm table on the state of ergonomics in libraries in senior secondary schools in Ona-Ara LGA of Oyo State**

Interval	Total mean score	Remark
1 - 31		Poor
32 - 62	59.32	Fair
63 - 92		Good

According to the norm table, the overall mean score falls within the interval distribution of 32 - 62 which indicates that the state of ergonomic factors of libraries in senior secondary schools in Ona-Ara LGA of Oyo State is fair.

**Research Question 3:** For what purposes do students in senior secondary schools in Ona-Ara LGA of Oyo State utilise the library?

Table 4: Purposes for which Students utilise the library

S/N	Purpose of Library Utilisation	Daily(%)	Weekly(%)	Occasionally (%)	Never (%)	Mean	SD
1	To avoid classroom punishment	5 (3.4)	19 (12.8)	31 (20.9)	93 (62.8)	3.43	.84
2	To borrow books.	10 (6.8)	19 (12.8)	27 (18.2)	92 (62.2)	3.36	.95
3	To meet with friends.	17 (11.5)	16 (10.8)	24 (16.2)	91 (61.5)	3.28	1.06
4	To copy missed class notes	13 (8.8)	16 (10.8)	38 (25.7)	81 (54.7)	3.26	.97
5	To read newspaper.	12 (8.1)	30 (20.3)	21 (14.2)	85 (57.4)	3.21	1.03
6	To avoid idleness during free periods	13 (8.8)	19 (12.8)	59 (20.6)	59 (39.9)	3.09	.94
7	To do my assignment	20 (13.5)	26 (17.6)	41 (27.7)	61 (41.2)	2.97	1.07
8	To study for examination.	26 (17.6)	19 (12.8)	42 (28.4)	61 (41.2)	2.93	1.12
9	For recreation and leisure purpose.	19 (12.8)	34 (23.0)	39 (26.4)	56 (37.8)	2.89	1.06
10	For acquisition of knowledge.	29 (19.6)	27 (18.2)	32 (21.6)	60 (40.5)	2.83	1.16

Table 4 presents information on the purposes for which students in Senior Secondary Schools in Ona-Ara LGA of Oyo State utilise the library. The results revealed that majority of the students affirm, avoidance of classroom punishment ( $\bar{x}$  =3.43), borrowing of books ( $\bar{x}$  =3.36) meeting with friends ( $\bar{x}$  =3.26) and copying of missed class notes ( $\bar{x}$  =3.21) as ranking highest among the purposes for which they utilise the libraries while studying for examination ( $\bar{x}$  =2.93), recreation and leisure purposes ( $\bar{x}$  =2.89) and acquisition of knowledge ( $\bar{x}$  =2.83) ranked as the least purposes. By implication, it can be deduced that the major purposes for which secondary school students in Ona Ara LGA utilise school libraries are to avoid classroom punishment, borrow books, meet with friends and copy missed class notes.

**Research Question 4:** What is the frequency of utilization of library among senior secondary school students in Ona-Ara LGA of Oyo State?

**Table 5: Frequency of utilization of library**

S/N	Items	Daily (%)	Weekly (%)	Occasionally (%)	Never (%)	Mean	SD
1	I visit the library to meet with friends.	14 (9.5)	13 (8.8)	26 (17.6)	95 (64.2)	3.36	0.99
2.	I visit the library to make use of its resources to do my assignment.	19 (12.8)	11 (7.4)	35 (23.6)	83 (56.1)	3.23	1.05
3.	I visit the library to make use of its resources during examination periods.	17 (11.5)	15 (10.1)	46 (31.1)	70 (47.3)	3.14	1.01
4.	I visit the library to borrow books.	16 (10.8)	23 (15.5)	33 (22.3)	76 (51.4)	3.14	1.04
5	I do not visit the library to avoid class punishment	22 (14.9)	17 (11.5)	29 (19.6)	80 (54.1)	3.13	1.11
6	I visit the library to read newspapers.	20 (13.5)	24 (16.2)	22 (14.9)	82 (55.4)	3.12	1.12
7	I visit the library to make use of its resources for recreational and leisure purpose.	16 (10.8)	24 (16.2)	42 (28.4)	66 (44.6)	3.07	1.02
8	I do not visit the library to copy missed class notes	26 (17.6)	19 (12.8)	32 (21.6)	71 (48.0)	3.00	1.15
9	I make use of the library to make use of its resources for the acquisition of more knowledge in my studies.	15 (10.1)	36 (24.3)	36 (24.3)	61 (41.2)	2.97	1.03
10	I do not visit the library to avoid been idle especially during free periods	23 (15.5)	26 (17.6)	38 (25.7)	61 (41.2)	2.93	1.10
<b>Grand mean: 31.09</b>							

Table 5 shows the frequency of utilization of library among Senior Secondary School students in Ona-Ara LGA of Oyo State. It was discovered from the table that 56.1% of the respondents never visit the library to make use of its resources to do their assignment, 47.3% were never frequent in the library to make use of its resources during examination periods, 41.2% never make use of the library to make use of its resources for the acquisition of more knowledge in their studies and 51.4% never visit the library to borrow books. Moreover, majority of the respondents indicated never to

visit the library to avoid class punishment (54.1%), visit the library to avoid been idle especially during free periods (41.2%) and visit the library to copy missed class notes (48%). This result buttresses the fact that the students have no library education and this may be as a result of trained librarians that were not employed and present at the school libraries. It further implies that the frequency of utilisation of school libraries in senior secondary schools in Ona-Ara LGA of Oyo State is not well established.

Test of norm was carried out on the frequency of library use by students in senior secondary schools in Ona-Ara LGA of Oyo State. The maximum score for each respondent on the ten (10) items scale is forty (40) ( $10 \times 4$ ), meaning the number of items on the scale multiplied by the number of possible response. The frequency of library use can be classified into Not used, occasional and regular. Therefore, to establish an interval score, the maximum score was divided by the number of levels, that is,  $40/3 = 13.3$ . This is the interval score which was used to chart the norm table.

**Table 5.1 Test of norm table on frequency of library utilisation by senior secondary school students in Ona-Ara LGA of Oyo State**

Interval	Total mean score	Remark
1 - 13		Not used
14 - 26		Occasional
27 - 40	31.09	Regular

From the norm table, the overall mean score (31.09) falls within the interval distribution of 27 - 40 which indicates that senior secondary schools in Ona-Ara LGA of Oyo State make regular use of school libraries.

**Research Question 5:** What relationship exists between independent variables (ergonomics and adequacy of library) and utilisation of library by senior secondary school students in Ona-Ara LGA of Oyo State?

**Table 6: Inter-correlation Matrix of independents and dependent variables**

Variable	Utilization of library	Ergonomics	Location of library
Utilization of library	1		
Ergonomics (P value)	.256** .002	1	
Location of library (p value)	.125 .131	.506** .000	1
Mean	62.34	60.76	38.45
Standard Deviation	10.44	7.56	5.21

Table 6 showed that: there was a significant relationship between independent variables (ergonomics and location of library) and utilization of library by senior secondary school students in Ona-Ara LGA of Oyo State. That is, Ergonomics ( $r = .256$ ,  $N = 148$ ,  $p < .05$ ) adequacy of library ( $r = .125$ ,  $N = 148$ ,  $p > .05$ ) has positive relationships with utilization of library by senior secondary school students in Ona Ara LGA. This

implies that an improvement in ergonomics and adequacy of library resources and location would lead to an improvement in the utilization of libraries by senior secondary school students in Ona Ara LGA, Oyo State, Nigeria. It implies that, the ergonomic state of libraries in senior secondary schools in Ona-Ara LGA of Oyo State is capable to affect the rate of utilisation by the students.

### **Summary and Conclusion**

The study centered on ergonomics and location as predictors school library utilisation by Senior Secondary School students in Ona-Ara LGA of Oyo State. The findings revealed that there were no purpose built libraries in secondary schools in Ona-Ara LGA of Oyo State. They are demarcated from either the principal's offices or the staff rooms just as the libraries in secondary schools in Ona-Ara LGA of Oyo State was found to be moderately adequate in location and other areas. Also, the ergonomic state of libraries in secondary schools in Ona-Ara LGA of Oyo State was found to be fair. The major purposes of library utilisation by senior secondary school students in Ona-Ara LGA of Oyo State are to avoid classroom punishment, borrow books, meet with friends and copy missed class notes. A regular utilisation of libraries in senior secondary schools in Ona-Ara LGA of Oyo State. The ergonomic states of the school libraries in Ona-Ara LGA of Oyo State is the leading contributor to library utilization by secondary school students in the LGA. The location of libraries in senior secondary schools in Ona-Ara LGA of Oyo State has no significant effect on their utilisation. A joint contribution of both ergonomics and location on utilisation of libraries in senior secondary schools in Ona-Ara LGA of Oyo State.

The conclusions that could be drawn from this study include and not limited to the fact that there were no purpose built libraries in Senior Secondary Schools in Ona-Ara LGA of Oyo State, there were security in the libraries, there were no environmental factors affecting the libraries, there is no convenience in seating as an ergonomic factor in the libraries and the nature or type of furniture in libraries in Senior Secondary Schools in Ona-Ara LGA of Oyo State were wooden. It was also established that there is no conduciveness in the libraries, there were no specific purpose(s) students in Senior Secondary Schools in Ona-Ara LGA of Oyo State utilize the library for and there were no specific frequency of utilization of library among Senior Secondary School students in Ona-Ara LGA of Oyo State. They use it at wish.

More so, there is a significant relationship between independent variable (ergonomics) and utilization of library by Senior Secondary School students in Ona-Ara LGA of Oyo State, there is a significant joint contributonal effect of ergonomics and location of library on utilization of library by Senior Secondary School students in Ona-Ara LGA of Oyo State and finally there is a significant relative effect of ergonomics on utilization of library by Senior Secondary School students in Ona-Ara LGA of Oyo State.

### **Recommendations**

Based on the findings and conclusion made above, the following recommendations are hereby suggested:

1. Government, stakeholders, librarians and architects should adequately be involved in choosing a site for libraries and in designing how the building should look like because of new innovations and ideas that may be introduced into library situations and designs.
2. Stakeholders should provide enabling environment for the accessibility and utilisation of library resources.
3. School management should make accessible library resources to students for easy retrieval of information from the storage medium
4. School administrators should provide an ergonomic friendly type of furniture for school libraries for effective patronage and utilization of the library.
5. School administrators should provide libraries that are attractive and conducive with less or no stress be it emotional, psychological, physical and physiological to encourage more utilisation of the libraries.

### References

- Aina, J. A. and Adekonye, E. A. 2013. Audio-visual resources availability and use for library services among colleges of education in Lagos state, Nigeria. *International Journal of Library and Information Science*. 5.10: 417-425.
- Aina, L. O. 2004. Ed. *Library and Information Science text for Africa*, Third World Information Services Limited, Ibadan
- Anguolu. C.C and Anguolu, I.E, 2002. *Libraries and information management in Nigeria*. Maiduguri; Ed-L information services.
- Daramola, C. F. 2013. *Issues and Options in Selected Secondary School Libraries in Akure South Local Government Area of Ondo State, Nigeria*. 2013
- Dike, V. W. 2004. The Rate of the School librarian in implementing the curriculum. *The Nigerian School Library Journal*. 5.1: 21-23.
- Elaturoti, D. F. 2010. Programme collaboration among educational agencies: A panacea for effective school library media programme in Nigerian schools. Nigeria, 2004. *National Policy on Education*, 4th ed. Abuja, FME, 55.
- Fayose, O. 2000. *Library resources and their Roles in Education and Resources Centre for External Studies*, AENI Educational Publishers.
- Knight, G. and Noyes, J.: Children's behavior and the design of school furniture. *Ergonomics*, Vol. 42, No. 5, pp. 747-760, 2000.
- Olaajo, P. O. 2010. Relevance of school library media centre on social Science Subjects Learning Outcome in Senior Secondary Schools of Oyo State, Nigeria. *Nigerian School Library Journals*. 9. 46-48.
- Olaajo, P. O. 2012. *Influence of Availability and Utilization of School Media Resources on Students learning outcomes in Senior Secondary Social Sciences subjects in Oyo State, Nigeria*. PhD Thesis, Faculty of Education, University of Ibadan.
- Panagiotopoulou, G., Christoulas, K., Papanckolaou, A. and Mandroukas, K.: Classroom furniture dimensions and anthropometrics measure in primary school, *Applied Ergonomics*, Vol. 35, pp. 121-128, 2004.
- Zunjic, A. Papic, G. Bojovic, B. Matija, L. Slavkovic, G. and Lukic, P.: The role of ergonomics in the improvement of quality of education. Vol. 43, No 1, January 2015