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# Determinants of Library Use Among Students of Agriculture: A Case Study of Lagos State Polytechnic

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## Introduction

There has been growing concern about students' use of the library in higher education institutions in Nigeria, due to the importance of the library in the successful completion of their studies. Academic libraries foster information literacy and provide resources to both students and staff. Libraries provide numerous services to users, addressing their diverse needs, characteristics, and interest (Andaleeb, 2001). Fowowe (1989) notes that a library can fulfill its function best by pursuing a policy of constant self-evaluation in order to be alert to the changing needs of its users. Library services must create a balance between specific research and information needs and a usable collection of information materials to meet the needs of the institution's academic programmes (Osaghale 2008).

According to Mason (2010), an academic library has the mission to build and maintain a collection that will support and enhance the instructional needs of the institution. He also supported other researchers that academic library is to provide access to all sources of information. The services of the library depend on processed data from users to understand their information need and make corrections on past mistakes and improve on the future. This can be achieved by library users; they determine the effectiveness and efficiency of the services provided by the academic library.

Franscotti, et al. (2007) say that libraries are trying to reinvent themselves to be more appealing to students. They are doing this by fostering literacy information through resources and services to encourage their clients visit and use the library. In spite of this, studies show that attitude of students to the use of library and what characterized their use, their reasons for using the library, and information used vary, and where there is low use, there are often pedagogic reasons for it.

The availability of the Internet and electronic resources may have a negative effect on the use of an institution's library by students, while socio-economic and demographic characteristics of students can also have a significant impact. It is possible that while some students go to the library to use the available services, others may not go to the library, perhaps due to the

availability of alternatives like personal e-resources and Internet connection.

Yusuf and Iwu (2010) found in their statistical study that 88% students in Covenant University visited the library to read for examination and Online Public Access Catalog is more used than manual cataloging. Adetoro (2008) explained and affirmed that statistics has become necessary for libraries to compile and gather data which is the basis for the establishment of standards Ifidon (1983). Oyesiku and Oduwole (2004) submitted that male students in Olabisi Onabanjo University used the library more than their female counterparts. Kamin (1984) showed the relationship between age, race, sex, income level and level of education and use of the library. There is negative relationship between library use and age but positively related to education attainment. Popoola (2008) established an inverse relationship between age and research output and invariably use of information sources and services otherwise called the library.

Ford (1986) as cited by Mason (2010) was of the opinion that library can be a stimulating place for some students and for others, may not be the case. He found that students come to university unprepared and unequipped to handle the demands of their course work primarily because they do not have experience with large research library, or that they do not understand how library work and are yet to acquire the skills needed to do meaningful research. George *et al* (2006) cited in Ossai (2009) noted that students library use pattern amongst others is influenced by the attitude of the university library staff. Franscotti *et al* (2007) conducted a survey to determine the level of usage by students and current resources of the library while Lange (1998) through Tear (1999) showed that distance from the library is an important factor in frequency of use and indicated that positive experience with library staff at early age is a determining factor of library use at adulthood.

Franscotti, et al. (2007) establish that the services of the library staff, introduction of better environment and availability of relevant collections will enable the student to use the library more. Students will use more of the library if they can do their home work, access information, listen to music, watch movies and use the internet. Time of opening and closing also affects students' library use. If library is opened whole day through, teachers will have more opportunities to do their lessons in the library and students can go into the library to work and do whatever they are interested in doing Franscotti *et al* (2007). Most of these studies used percentages, standard deviations, means and other descriptive statistics in their approach. There is therefore need to use simple probality regression model like probit or tobit models to investigate the effects of some of the factors that affect students library use to add to the knowledge gap and be able to elicit suggestions for improved library use among students.

## Methodology

The study was carried out in the School of Agriculture of the Lagos State Polytechnic, Ikorodu campus, Lagos in 2009/10 Session. Multi-stage sampling was used. First Stage involved the purposeful selection of four of five departments in the School.The second stage involved the selection of three of the four levels in the school. The three higher levels of NDII Agricultural Technology, HNDI, and HNDII levels of the Agricultural Extension and Management, Animal Production Technology and Crop Production and Horticulture Departments were chosen, resulting in seven of the eight classes. The last stage involved the random selection of students from each of the selected levels in the school by proportionality, giving a total of 145, of which 143 questionnaires were completed. The proportionality factor is as stated as follows:

$X_j = (p_j / P) * 145$ where

$X_j$ = the number of students sampled from each Departmental level, j

$p_j$ = the number of students in each Departmental level, j

P = the sum of all the number of students in the five levels of the selected four Departments

j = NDII, HNDI and HNDII.

Data analysis involved the use of descriptive statistics: frequency and percentages to analyze the respondents' socio-economic and demographic features. Probit regression model was used

for the analysis of the factors that affect students' library use. The probit model used estimated the probability of binary outcomes, that is, a dichotomous dependent variable which takes the value 1 or 0. The model is presented below following Gujarati and Porter, 2009; Aldrich and Nelson, 1984)

$Y_i = f(\beta_o, \beta_j X_j, U_i)$

$Y_i = \beta_o + \beta_1 X_1 + \beta_2 X_2 + \beta_n X_n + U_i)$

$Y_{i\,=}$ measures use of Library, L which exist in the form

LY* if L =1 (Student uses the Library)

Y* if L = 0 (Student does not use the Library)

i = the respondent = 1, 2, 3, …, 143

$X_j$ = socio-economic and demographic feature and library factors j, of respondent i, (where j = 1,2,…, 23 as defined below)

$X_{1\,=}$ Gender (Male = 0 and female = 1)

$X_{2\,=}$ Age (years)

$X_3$ = Marital Status (Single = 1, Married = 2, Divorce = 3)

$X_4$ = Level of Study (NDII = 1, HNDI = 2, HNDII =3)

$X_5$ = Membership of registered group (Yes = 0, No =1 )

$X_{6\,=}$ Group Type (Social group =1, Academic =2, Social and academic group = 3)

$X_7$ = Weekly allowance in Naira

$X_8$ = Alternative to library (Personal Internet connection =1, Personal E- Library =2, Personal, textbook and notes = 3)

$X_{\,9}$ = Library Use with Friend (Yes = 0, No = 1)

$X_{10\,=}$ Positive Impression about opening hours (High =1, Average = 2, low =3)

$X_{11\,=}$ Positive Impression about closing hours (High =1, Average = 2, low =3)

$X_{12\,=}$ Positive Impression about air-conditioner (High =1, Average = 2, low =3)

$X_{13\,=}$ Positive Impression about silence in the library (High =1, Average = 2, low =3)

$X_{14\,=}$ Positive Impression about power supply (High =1, Average = 2, low =3)

$X_{\,15}$ = Availability of relevant textbooks (Yes = 0, No = 1)

$X_{\,16}$ = Quick access to textbooks (Yes = 0, No = 1)

$X_{\,17}$ = Appropriate response from library staff (Yes = 0, No = 1)

$X_{\,18}$ = Availability of short-term overnight loan of books (Yes = 0, No = 1)

$X_{\,19}$ = Availability of long-term (2-week) loan period of books (Yes = 0, No = 1)

$X_{\,20\,=}$ Availability of photocopy services (Yes = 0, No = 1)

$X_{21}$ = Highest hours spent in the library

$X_{22}$ = Highest hours spent in the library

$X_{23}$ = Discouraged by the location of the library (Yes = 0, No =1 )

## Discussion of Results

Socio-economic and demographic characteristics of respondents

Table 1 shows the distribution of age, gender, and marital status across the level of study of respondents. 56.64% are male, 43.36% are female while 92.31% are single, 6.29% are married and 1.40% are divorcee. Most of the students are within the age range of 21-25 years constituting about 56.65% followed by 26-30 years which are 27.97%. Those within the age bracket of 31 years and above are 1.45% while those within 15-20 years are 10.50%. This implies that most of the students are in their majority age and single. Thus the distribution gives the features that are expected of full-time students in a typical higher institution in Nigeria.

Table 2 provides that 19.58% of the students belongs to social group, 37.06% are members of academic group while 43.36% are members of both social and academic group. Academic group here involves School of Agriculture Students' Association while social group include religious association and wine drinkers' club. The weekly allowance of the students are also shown as being 20.28%, 39.16%, 12.59%, 16.78% and 11.19% of respondents having ₦1000 and below, ₦1100 - ₦2000 , ₦2100 - ₦ 3000, ₦3110 – ₦4000 and, ₦4100 and above respectively.

## Factors Affecting Library Use

The probit regression as shown in table 3 reveals that alternative to library use and library use with friend are significant at 10% while highest hours spent in the library is significant at 1%. Other factors under consideration are significant at higher levels. If one moves from male to female, the use of library increases. As age increases among students, library use decreases; a finding confirming that of Kamin (1984) and Popoola (2008). The effect of each regressor is being explained assuming other factors or regressors are held constant.

As marital status changes from single to married, library use increases, meaning that married or divorced students tends to use library more than the un-married. As level of study increases, library use increases. Students who do not belong to registered group tend to use library more than those who do belong to any group. However, as membership of group type moves from social group to academic group and mixture of social and academic groups, use of the library reduces. As students alternative to library changes from personal internet through personal e-library to textbook and notes, use of library increases. This means that with textbook and notes, students use more of the library. This may be connected to the fact that almost all the students are using text-book and notes as internet connection and e-library are not common among the students and perhaps explain the significance of this variable and where available use of the library is lowered.

The use of the library with friend encourages use of the library. Students who use the library with friend are more and are encouraged. As the positive impression of students about opening hours, silence, and power supply increases, use of the library increases. But for closing hours and air-conditioner facilities, as students' positive impression wanes, the use of the library goes up. This indicates that closing hours and air-conditioner facility may not encourage library use and are not statistically significant. This may be due to the fact that students are aware that library must definitely close at a specified time every day of the week and it has been observed that students that patronize the library in the evening towards closing time are not many compared to the number of the students that use the library in the morning. If the library is air-conditioned or not, students will always have need to go their, though they may complain of the absence of air conditioner.

As relevant textbooks become available, the use of the library increases, similarly as response from library staff and long term loan of textbooks increase, library use also increases. Quick access to textbook, availability of short-term loan overnight loan and photocopy services do not encourage library use; if these are not there, students still use the library.

If one increase the library hours spent by students in the library, use of library increases. If the minimum hours spent by the students increase, library use goes down. The location of the library does not discourage the use of the library by students.

## Marginal Effects

If the student's population is increased by one female, the probability of library use will go up by 1.96%. If age of the students goes up by 1 year, probability of library use will decline by 4.13% on the average. If marital status appreciates by one unit, probability of library use increases by 4.47%. Also if level of students increase by 1 level, probability of library use will on the average increase by 8.15%. If membership of registered group decline by 1 unit, probability of library us will increase by 5.21%. If one reduces the membership of academic group; invariably increasing membership of social group by 1 unit, library use probability will increase by 4.99% on the average.

If students allowance is increased by one unit, in the range of ₦ 1000 – ₦2000, probability of library use will decline by 5.0% on the average. If one increases alternative to library facility to textbook and notes, library use probability will increase by 12.4%. Here one moves from personal internet facility through personal e-library to textbook and notes. The more the internet facility available to the students the probability of using the library depreciates. Alternative to library facility is significant at 10%.

If one reduces going to the library with friend by one unit, the probability of library use goes down by 19.5%. This is an indication that peer usage of the library among students is of importance in library use and due to the fact that it is significant at 10%.

If the positive impression of students about opening hours, silence and power supply is increased by 100% for each, library use probability, on the average, will go up by 0.0852, 0.1047 and 0.1045 meaning 8.52%, 10.47% and 10.45% respectively. But if the students' positive impression of closing hours and air-conditioner facility is increased, the use of library probability

goes down by 1.48% and 4.08% respectively on the average. It was stated earlier that these factors do not encourage library use and are insignificant.

If availability of relevant textbook is increased by 1 unit, the probability of library use will increase by 8.28% on the average. Also if positive response of library staff and availability of long term loan of books increases by 1 unit, the probability of library use will increase by 4.20% and 0.001%; a finding that agrees with that of Tear (1999). This shows that library staff response tends to have more effect on students library use than long term loan availability. If services are available and the service provider's response is discouraging, it is as good that the services are not available. However, a unit increase in quick access to textbook, availability of short term – overnight loan, and photocopy services may lower the probability of library use by 2.64%, 13.41% and 9.74% respectively. These services could help in reducing the period spent in the library and may not translate necessarily as reducing library use.

Moreover, a unit increase in the library hours spent by students and the lowest hours spent , the probability of library use will go down by 6.86% and 6.24% respectively and if one increase the number of students that are not discouraged by the location of the library by 1, the probability of library use will increase by 1.69%.

Table 1. Gender, age, marital status, and level of study of respondents

| | Marital Status and Age (Years) | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Gender & Level | Single (S) | | | | Married (M) | | | | Divorce (D) | | | | Total | | | | |
| | 15-20 | 21-25 | 26-30 | 31-35 | 15-20 | 21-25 | 26-30 | 31-35 | 15-20 | 21-25 | 26-30 | 31-35 | S | M | D | Grand Total | % |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | II | 4 | 15 | 2 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 21 | 2 | 0 | 23 | 16.08 |
| Male (m) | III | 1 | 19 | 10 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 1 | 0 | 30 | 3 | 1 | 34 | 23.78 |
| | IV | 0 | 10 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 23 | 0 | 1 | 24 | 16.78 |
| | II | 8 | 15 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 25 | 1 | 0 | 26 | 18.18 |
| Female (f) | III | 1 | 12 | 5 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 18 | 2 | 0 | 20 | 13.99 |
| | IV | 1 | 8 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 0 | 0 | 16 | 11.19 |
| Total m | | 5 | 44 | 25 | 0 | 0 | 1 | 2 | 2 | 0 | 0 | 2 | 0 | 74 | 5 | 2 | 81 | 56.64 |
| Total f | | 10 | 35 | 13 | 0 | 1 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 58 | 4 | 0 | 62 | 43.36 |
| Grand Tot | | 15 | 79 | 38 | 0 | 1 | 2 | 4 | 2 | 0 | 0 | 2 | 0 | 132 | 9 | 2 | 143 | 100 |
| Percentage | | 9.80 | 55.25 | 26.57 | 0 | 0.70 | 1.40 | 2.80 | 1.40 | 0 | 0 | 1.40 | 0 | 92.31 | 6.29 | 1.40 | 100 | |

Table 2: Weekly allowance (Naira), membership of group type by gender

| Gender | Weekly Allowance (Naira) and Group Membership Type | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ≤ ₦1000 | | | ₦ 1100 - 2000 | | | ₦ 2100 - 3000 | | | ₦ 3100 – 4000 | | | ≥ ₦4100 | | | Total | | | | |
| | 1 | 2 | 3 | 1 | 2 | 3 | 1 | 2 | 3 | 1 | 2 | 3 | 1 | 2 | 3 | 1 | 2 | 3 | Total | % |
| Male | 4 | 8 | 5 | 7 | 8 | 17 | 1 | 5 | 0 | 4 | 3 | 7 | 4 | 4 | 4 | 20 | 28 | 33 | 81 | 56.64 |
| Female | 2 | 5 | 5 | 1 | 11 | 12 | 2 | 5 | 5 | 3 | 2 | 5 | 0 | 2 | 2 | 8 | 25 | 29 | 62 | 43.36 |
| Grand Total | 29 | | | 56 | | | 18 | | | 24 | | | 16 | | | 28 | 53 | 62 | 143 | 100 |
| Percentage | 20.28 | | | 39.16 | | | 12.59 | | | 16.78 | | | 11.19 | | | 19.58 | 37.60 | 43.36 | 100 | |

Group Membership Type: 1= Social Group, 2 = Academic Group, 3= Social and Academic Group

Table 3. Probit Regression

LR chi2 (23) = 49.51

Prob > chi2 = 0.0011

Likelihood = -58.07 Pseudo R2 = 0.2989

| Library Use | Expected Sign | Coefficient | Std. Error | Z | P>/Z/ | Marginal Effect |
|---|---|---|---|---|---|---|
| | | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| Gender | +/- | 0.0724 | 0.3030 | 0.24 | 0.811 | 0.0196 |
| Age | - | -0.1516 | 0.2729 | -0.56 | 0.579 | -0.0413 |
| Marital | - | 0.1639 | 0.4381 | 0.37 | 0.708 | 0.0447 |
| Level | + | 0.2988 | 0.2153 | 1.39 | 0.165 | 0.0815 |
| MemGrp | +/- | 0.1890 | 0.3364 | 0.56 | 0.574 | 0.0521 |
| GrpType | +/- | -0.1832 | 0.2220 | -0.83 | 0.409 | -0.0499 |
| WklAllow | +/- | -0.1834 | 0.1186 | -1.55 | 0.122 | -0.0500 |
| AlttoLib | - | 0.4553 | 0.1879 | 2.42 | 0.015** | 0.1241 |
| LibFriend | + | -0.7468 | 0.3417 | -2.19 | 0.029** | -0.1952 |
| OpenHours | + | -0.3124 | 0.2732 | -1.14 | 0.253 | -0.0852 |
| ClosngHour | + | 0.0544 | 0.2225 | 0.24 | 0.807 | 0.0148 |
| Aircondner | + | 0.1497 | 0.1846 | 0.81 | 0.417 | 0.0408 |
| Silence | + | -0.3838 | 0.2099 | -1.83 | 0.067 | -0.1047 |
| Powersupply | + | -0.3832 | 0.2182 | -1.76 | 0.079 | -0.1045 |
| Relvtxtbooks | + | -0.2855 | 0.4048 | -0.71 | 0.481 | -0.0828 |
| QuickAccess | + | 0.0979 | 0.3858 | 0.25 | 0.800 | 0.0264 |
| LibStaffRespse | + | -0.1514 | 0.3224 | -0.47 | 0.639 | -0.0420 |
| ShortLoan | + | 0.5254 | 0.3433 | 1.53 | 0.126 | 0.1341 |
| LongLoan | + | -0.00004 | 0.3515 | -0.00 | 1.000 | -0.00001 |
| PhotocopyServ | + | 0.3530 | 0.3408 | 1.04 | 0.300 | 0.0974 |
| HighestHours | + | 0.2515 | 0.0861 | 2.92 | 0.003* | 0.0686 |
| LowestHours | + | -0.0088 | 0.0123 | -0.71 | 0.478 | -0.0024 |
| DiscrgeLocatn | - | 0.0626 | 0.3192 | 0.20 | 0.845 | 0.0169 |
| Constant | | 0.8882 | 1.0898 | 0.82 | 0.415 | |

*Significant at 5% **Significant at 10%

## Conclusion

The study shows that female use the library more than male students, and that as the age of student increases, library use tends to decline. The study also revealed that most students use the library with their friends, textbook and notes remain important, and as electronic resources and the Internet are available as alternatives to library are available, students' use of the library decreases. Library use increases with the students' level of study. Closing hour and the location of the library do not have a negative effect on the use of the library in the institution. Therefore, if library use is to increase, more relevant textbooks would have to be made available in the library for the students since they do not use alternative to library which includes electronic resources and the Internet. The positive impression of the library staff's response to students is of importance in encouraging library use. The staff response to student needs must be constantly re-evaluating, and will help the library management in encouraging students' use of the library.

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