



Awareness of Forestry as a Career among Secondary School Students in Makurdi Metropolis, Benue State, Nigeria

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Authors' contributions

This work was carried out in collaboration among all authors. The authors collectively designed the study. Author MK collected field data, wrote the protocol and the first draft of the manuscript. Author PUA performed the statistical analysis and managed the analyses of the study. All authors read and approved the final manuscript.

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ABSTRACT

Over the years enrolment of students in to forestry programme is always low and many of the students in forestry programme do not always choose the programme. This underpinned the need for a comprehensive knowledge about the reasons behind the low enrolment in Forestry and forestry-related disciplines, with a view to provide the needed data that will guide stakeholders in taking an informed decisions that will help in addressing the challenges that resulted in the shortage of manpower in the forestry and wildlife sector. Stratified random and purposive sampling techniques were used in the selection of secondary schools in Makurdi metropolis. A total of 195 students were selected for interview from six schools using Taro-yamane formula. Data were subjected to descriptive and inferential analysis. The study shows that 61.5% were male and majority of the students (68.2%) were within the age bracket of 11-15 years with mean age of 14 years. The students strongly agreed that they were aware of forestry as a course of study in high institutions (MWS =3.99, >3.05) and the career opportunities in forestry (MWS =3.67, >3.05). The

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level of students' awareness of forestry as a course differ significantly ($H=16.85$ $P<0.05$) with type of school the students attended. Also, there was a significant difference ($H=18.46$, $P<0.05$) between the students' level of awareness of career opportunities and types of school attended. The students' strongly agreed that they will not choose forestry as a course of study in the high institutions because it is not their family choice ($MWS =3.52$, <2.95). The study recommends that parents should allow their children to choose any course of their choice instead of parents determining career choice for their children so as to enable effective study of career choices. Also government should make forestry agencies active and strong so that forestry graduates will be sure of job opportunities after school. There is need for massive public enlightenment on the importance and career opportunities in forestry.

Keywords: Enrolment; enlightenment; discipline; manpower; public.

1. INTRODUCTION

Nigeria is faced with many environmental problems which earned the country the status of a country with environmental problems [1]. As one of the strategies to address these problems, [2] suggested that, there is the need to create environmental programs (forestry inclusive) that would emphasize awareness, knowledge, attitude, value, skill development as well as participation at all level in the society, pupils and students inclusive. Forestry therefore, needs to be embraced as a course of study which will help to create awareness and knowledge to address environmental issues through sustainable forest management [3]. This is because sustainable forest management can only be achieved with adequate manpower armed with requisite knowledge and skill in forestry [4]. High deforestation rate and loss of internally generated revenue in the forestry subsector were attributed to the lack of professional manpower to manage the huge forest resources in Delta State [5]. In an attempt to reverse the poor revenue profile in the forestry sector through institutional framework, over 60% of the 2001 establishment proposal for the employment of forestry professional was unfortunately filled with the natural sciences graduates due to lack of forestry applicants and graduates in the State. Yet, these did not abate the decline in forest reservation and revenue as the "non-professional forestry officers" could not balance the deflected synergy between utilization and conservation of forest resources across the four ecological zones of the State.

While trying to address a similar situation, [6] observed that there are questions concerning forestry programme in Nigeria that are begging to be answered such as why enrolments in forestry programme are always low and why students do not choose forestry programmes as their career, though the number of higher institutions offering

forestry and forestry related programmes are on the increased in Nigeria. Alao [7] reported that over 28 universities in Nigeria are offering professional forestry and allied courses, this figure has since changed as many other universities has introduced forestry courses. Therefore, a comprehensive knowledge and proper understanding of the reasons for low enrolment in Forestry and forestry-related courses as a discipline will provide a stepping-stone necessary for addressing this challenge, especially the prevailing shortage of manpower in the forestry and wildlife sector. Thus, this study was conducted to assess awareness forestry as a career among secondary school students in Makurdi Local Government Area (LGA) of Benue State or decision making and policy.

2. MATERIALS AND METHODS

2.1 Study Area

The study was carried out in Makurdi LGA, the capital of Benue State situated within central Nigeria. Makurdi Local Government Area has a population of 300,000 Persons [8] and lies between latitude $7^{\circ}40'N$, $7^{\circ}53'N$ of the equator and between longitude $8^{\circ}22'E$, $8^{\circ}35'E$ of the Greenwich Meridian [9]. The map of study area is shown in Fig. 1. The major ethnic groups of Makurdi are the Tiv, Idoma, Igede and Itulo. The total area of Makurdi is $34,059 \text{ km}^2$ ($13,150 \text{ Sq.Mi}$), the local government has eleven (11) council wards.

Makurdi Local Government is located in the valley of River Benue hence experience warm temperature most of the year. The harmatan period which is relatively cool is experienced between November and January. The vegetation of Makurdi is typically guinea savannah. River Benue divides the town into North and South bank. Two bridges further connect both the North and South banks to each other having many secondary schools in its township.

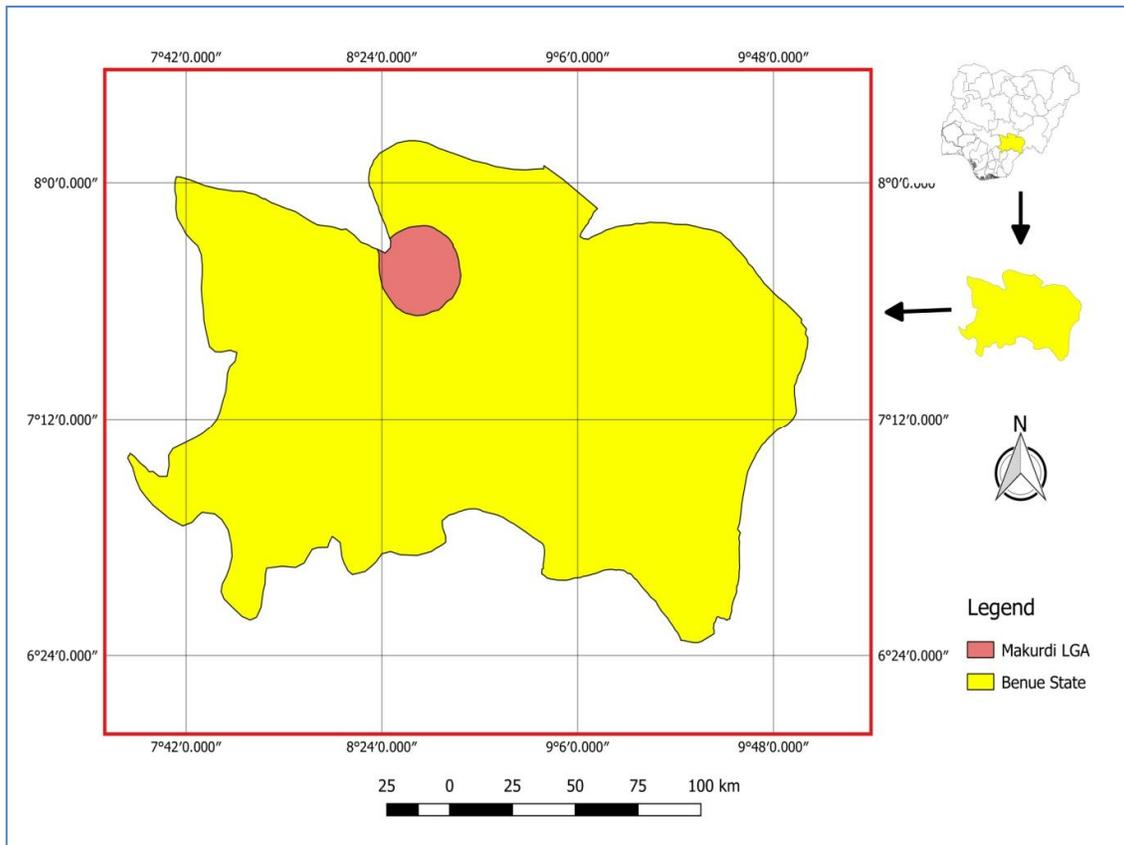


Fig. 1. Map of study area

2.2 Study Design

The study employed stratified random and purposive sampling techniques in the selection of schools in Makurdi metropolis. Yamane [10] was used to determine the sample size of the students. A list containing the names of the approved secondary schools in Makurdi was obtained from the Ministry of Education. The secondary schools in Makurdi metropolis were stratified into public and private schools; they were further stratified into mixed and single sex schools. Mixed sex schools for both public and private schools were randomly selected while single sex schools were purposively selected. Two single sex schools (one boys and one girls' secondary school) were purposively selected while four mixed schools (comprising of 2 public and 2 private schools) were randomly selected, this gives a total of 6 schools. The total population of the students was 381. Yamane [10] was applied to determine the sample size of 195 students for interview as shown in Table 1.

The [10] formula is expressed as:

$$n = \frac{N}{1 + N(e)^2}$$

Where,

n = Students' population sample size
 N = Total size of students' population
 1 = Constant
 e = Error degree of tolerance 0.05

The sample size of each class of student was determined using the formula:

$$nh = \frac{n \times Nh}{N}$$

Where,

nh = Class sample size
 n = Students' population sample size
 Nh = Number of students' in each class
 N = Total size of students' population

Table 1. Summary of sampling procedure and sample size selection for the study

| School | School status | School type | Class of student | No. of students | No. of students selected |
|--------|---------------|------------------|------------------|-----------------|--------------------------|
| 1 | Private | Mixed Sex | Senior | 25 | 13 |
| | | Mixed Sex | Junior | 27 | 14 |
| 2 | Public | Mixed Sex | Senior | 31 | 16 |
| | | Mixed Sex | Junior | 31 | 16 |
| 3 | Private | Mixed Sex | Senior | 26 | 13 |
| | | Mixed Sex | Junior | 28 | 14 |
| 4 | Public | Mixed Sex | Senior | 27 | 14 |
| | | Mixed Sex | Junior | 29 | 15 |
| 5 | Private | Single Sex Girls | Senior | 39 | 20 |
| | | Single Sex Girls | Junior | 37 | 19 |
| 6 | Public | Single Sex Boys | Senior | 38 | 19 |
| | | Single Sex Boys | Junior | 43 | 22 |
| Total | | | | 381 | 195 |

2.3 Data Analysis

Descriptive statistics such as frequency and percentage and mean were used to analyze the socio economic characteristics of the respondents. Spearman rank correlation analysis was used to determine the significant relationship between socioeconomic variables of the students and their knowledge and awareness of forestry as a course of study in the study area. Five point Likert scale rating format as used by [11] was adopted to measure knowledge and awareness of forestry as a course of study among secondary school students in the study area. The weighting scale was derived from the following values with respect to awareness of forestry as a course of study; Strongly Agree (SA) = 5, Agree (A) = 4, Undecided (UD) = 3, Disagree (D) = 2, Strongly Disagree (SD) = 1.

The Likert rating Mean Score (MS) of knowledge and awareness of forestry as a course of study was expressed as:

$$MS = \frac{\sum f}{n}$$

Where,

f = Summation of the five point rating scale and
n = Number of points

Therefore, for a five point Likert scale, MS is expressed as:

$$MS = \frac{1 + 2 + 3 + 4 + 5}{5}$$

$$MS = 3.0$$

The Likert Weighted Mean Score (WMS) of knowledge and awareness of forestry as a course of study was expressed as:

$$WMS = \frac{\sum_{i=1}^n f_i x_i}{n}$$

Where,

f = frequency of respondent
x = Likert scale point
N= Total Number of respondents

Using the interval scale of 0.05, the Upper Limit (UL) cut-off is MS+0.05 (3.0+0.05 = 3.05). The Lower Limit (LL) cut-off is MS - 0.05 (3.0-0.05 = 2.95). Based on these two extreme limits any variable with WMS below 2.95 (WMS<2.95) was considered 'Disagree'. Variable with MWS between 2.95 and 3.05, 'Undecided' any variable MWS greater than 3.05 (MWS>3.05), 'Agree'.

Kruskal-Walis (H) test was used to test for significant difference between level of awareness of forestry as a professional career and Class of the students as well as school status of students and awareness of carrier opportunities in forestry. Kruskal-Walis is express as:

$$H = (N - 1) \frac{\sum_{i=1}^g n_i (\bar{r}_i - \bar{r})^2}{\sum_{i=1}^g \sum_{j=1}^{n_i} (r_{ij} - \bar{r})^2}$$

Where,

H = Kruskal-Walis

n_i = Number of observations in group i
 r_{ij} = the rank of observations j from group i
 N = Total number of observations across all groups

The Mann-Whitney U test (U) was used to test for the significant difference between Gender and the students' level of awareness forestry as a professional career as well as awareness of carrier opportunities in forestry in the study area.

The Mann-Whitney U test (U) is expressed as:

$$U = n_1 n_2 + \frac{n_2(n_2 + 1)}{2} - \sum_{i=n_{11}+1}^{n_2} R_i$$

Where,

U=Mann-Whitney U test N_1 = sample size one
 N_2 = Sample size two R_i = Rank of the sample size

3. RESULTS

3.1 Socio Economic Characteristic of the Students

The result of the socio economic characteristic of the students interviewed as presented in Table 2 shows that 61.5% of the students were male while 38.5% were female. The age category of the students shows that 68.2% were between the age bracket of 11-15 years, 30.3% were 16-20 years while 1.5% were below 11 years. The mean age of the students' was 14 years. The result on school status shows that 47.7% were from the Private schools while 52.3% were from the Public schools. In terms of type of school, 59% of the students were from mixed sex secondary schools, 21% from boys only secondary school and 20% were from girls only school. Result on the class of students' shows

that 51.3% of the students' were from the Junior classes while 48.7% of the students' were from the Senior classes.

3.2 Awareness of Forestry as a Course of Study among Secondary School Students

The result in Table 3 shows that the level of awareness of forestry as a course of study among the students in the study area. The students disagree (MWS =2.38, <2.95) that they have never heard of forestry before now. They also disagree (MWS =2.52, <2.95) that they are not aware of forestry as a course of study in high institution. Also, the students disagree (MWS =2.47, <2.95) with the statement that they are not aware of career opportunities that in forestry.

When the statements were asked in the opposite, the students' strongly agreed (MWS =3.67, >3.05) that they were aware of career opportunities in forestry such as carpentry, horticulturist, Timber managers, park warden among others. Also, the students strongly agreed (MWS =3.99, >3.05) that they were aware of forestry as a course of study in high institution. Also, the students strongly agree that trees and animals are obtain from forest (MWS =4.47, >3.05).

3.3 Level of Awareness of Forestry as a Course and Carrier Opportunities in the Schools

The result of the Krukal-Wallis test as presented in Table 4 show that there was a significant difference between level of awareness of forestry as a course of study and type of schools (H=16.85, P<0.05) in the study area. There was also a significant difference between awareness of carrier opportunities in forestry and type schools (H=18.46, P<0.05) in the study area.

Table 2. Socio- economic characteristics of the students in schools in Makurdi metropolis

| Characteristic | Category | F(n=195) | % |
|-------------------|------------|----------|------|
| Sex | Male | 120 | 61.5 |
| | Female | 75 | 38.5 |
| Age | <11 | 3 | 1.5 |
| | 11-15 | 133 | 68.2 |
| | 16-20 | 59 | 30.3 |
| School Status | Private | 93 | 47.7 |
| | Public | 102 | 52.3 |
| Type of School | Only Boys | 41 | 21 |
| | Only Girls | 39 | 20 |
| | Mixed sex | 115 | 59 |
| Class of Students | Junior | 100 | 51.3 |
| | Senior | 95 | 48.7 |

Table 3. Awareness of forestry as course of study among secondary school students in Makurdi metropolis

| Variable | SA | A | UD | DA | SDA | N | WS | WMS | Decision |
|--|----------|---------|--------|---------|--------|-----|-----|------|----------|
| I have never heard of forestry before now | 27(145) | 35(140) | 4(12) | 40(80) | 87(87) | 195 | 464 | 2.38 | SDA |
| I am not aware of career opportunities that in forestry | 25(125) | 33(132) | 16(48) | 55(110) | 66(66) | 195 | 481 | 2.47 | SDA |
| I am not aware that forestry is a course of study in high institutions | 27(135) | 32(128) | 16(48) | 62(124) | 58(58) | 195 | 493 | 2.52 | SDA |
| I am aware of career opportunities in forestry | 73(365) | 59(236) | 14(14) | 23(46) | 26(26) | 195 | 715 | 3.67 | SA |
| I am aware that forestry is a course of study in high institutions | 86(430) | 64(256) | 14(42) | 19(38) | 12(12) | 195 | 778 | 3.99 | SA |
| I am aware that trees and animals are obtained from the forest | 120(600) | 60(240) | 7(21) | 2(4) | 6(6) | 195 | 871 | 4.47 | SA |

Note: SA= Strongly agree, A=Agree, UD=Uncertain, DA= Disagree, SDA= Strongly disagree, N= Frequency, WS = Weighted score, MWS = Mean weighted score. Figure outside the bracket are the frequency of the students while figures in the bracket are product of Likert scale value and frequency of students. (N)=195, Mean Score (MS) =3.0, Upper Limit (UL) =3.05 and Lower Limit (LL) =2.95

Table 4. Relationship between level of awareness of forestry as a course and the carrier opportunities in forestry with type of school in Makurdi metropolis

| Kruskal-wall test variable | H Test | df | P.Value | Decision |
|--|--------|----|---------|-------------|
| Awareness of forestry as a course of study VS type of school | 16.85 | 3 | 0.001 | Significant |
| Awareness of carrier opportunities in forestry Vs Type of school | 18.46 | 3 | 0.001 | Significant |

Table 5. Relationship between awareness of forestry as course of study and gender and class of students in Makurdi metropolis

| Mann-Whitney Test Variable | U-Test | P.Value | Decision |
|---|--------|---------|-----------------|
| Awareness of forestry as a course of study Vs gender | 4125 | 0.301 | Not significant |
| Awareness of carrier opportunities in forestry Vs gender | 4225 | 0.457 | Not significant |
| Awareness of forestry as a course of study Vs class of students | 4706.5 | 0.977 | Not significant |
| Awareness of carrier opportunities in forestry Vs class of students | 4352.5 | 0.336 | Not significant |

3.4 Relationship between Students Awareness of Forestry as Course of Study and their Gender and Class of Students

The result of Mann-Whitney test as presented in Table 5 shows that there was no significant difference between the students awareness of forestry as a course and gender (U=4125.00, p>0.05). Also there was no significant difference between awareness of carrier opportunities in forestry and gender (U=4225.00, P>0.05). Similarly, there was no significant difference between students' level of awareness of forestry as a course and class of the students (U=4706.50, P>0.05). The result also show no significant difference between students' level of awareness of carrier opportunities in forestry and class of the students (F=4352.50, P>0.05).

3.5 Duration of Awareness and Affinity to Forestry Course

The result on duration of awareness and affinity of the course is presented in Table 6. Majority (95.9%) of the students were aware of forestry as a course of study for the past 1-5 years while 4.1% of the students were aware for the past 6-10 years. On affinity of the course, 53.8% of the students like forestry as a course of study while 46.2% do not like forestry as course of study. Majority of the students (74.4%) do not want to study forestry in the University while only (25.6%)

of the students were ready to study forestry in the University.

3.6 Source of Information about Forestry as a Profession

The result on source of information about forestry as a profession is presented in Table 7. The students' reported that school (74.9%) was the major source of information about forestry as a profession among the secondary school students in the study area, parents accounted for 15.4%, 6.7% of the students got their information from the media and 3.1% stated that their source of information about forestry was from friends.

3.7 Factors Militating against Forestry as a Choice of Profession among Secondary School Students

The result of factors militating against forestry as a choice of profession among secondary school students is presented in Table 8. The students' disagreed (MWS =2.30, <2.95) with the statement that there is no forestry or its related subjects in their school. They also disagreed (MWS =2.50, <2.95) with the statement that they have no basic knowledge of forestry as a career. However, the students' strongly agreed (MWS =3.64, >3.05) with the statement that they were uncertain about where to work if they choose forestry as their profession.

Table 6. Duration of awareness and affinity of the course in Makurdi metropolis

| Characteristics | Category | F (N=195) | % |
|---|--------------|-----------|------|
| How long do you know forestry as profession | 1-5 (years) | 187 | 95.9 |
| | 6-10 (years) | 8 | 4.1 |
| Do you like forestry as a course | Yes | 105 | 53.8 |
| | No | 90 | 46.2 |
| Do you want to study forestry in the university | Yes | 50 | 25.6 |
| | No | 145 | 74.4 |

N= Number of students

Table 7. Source of information about forestry as profession among secondary school students in Makurdi metropolis

| Sources of information | F | % |
|------------------------|-----|-------|
| School teaching | 146 | 74.9 |
| Parent | 30 | 15.4 |
| Watching television | 13 | 6.7 |
| Friends | 6 | 3.1 |
| Total | 195 | 100.0 |

Table 8. Factors militating against forestry as a choice of profession among secondary school students in Makurdi metropolis

| Variable | SA | A | UD | DA | SDA | N | WS | WMS | Decision |
|--|---------|---------|---------|---------|--------|-----|-----|------|----------|
| There is No forestry or its related subjects in my school | 22(110) | 32(128) | 9(27) | 53(106) | 79(79) | 195 | 450 | 2.3 | SDA |
| I have NO basic knowledge of forestry as a career | 20(100) | 43(172) | 20(60) | 50(100) | 62(62) | 195 | 494 | 2.53 | SDA |
| I am uncertain about where I will work if I choose forestry as my profession | 61(305) | 66(264) | 23(69) | 27(54) | 18(18) | 195 | 710 | 3.64 | SA |
| I will not choose forestry as a career because of its poor image | 34(170) | 29(116) | 38(114) | 49(98) | 46(46) | 195 | 544 | 2.78 | SDA |
| I do not like forestry because of the source of its awareness | 24(120) | 35(140) | 35(105) | 53(106) | 48(48) | 195 | 519 | 2.66 | SDA |
| I learnt it's a difficult course | 27(135) | 37(148) | 32(96) | 54(108) | 45(45) | 195 | 532 | 2.72 | SDA |
| My family will not allow me to study forestry | 63(315) | 50(200) | 33(99) | 24(48) | 25(25) | 195 | 687 | 3.52 | SA |
| My friends will laugh at me | 16(80) | 17(68) | 29(87) | 49(98) | 84(84) | 195 | 417 | 2.13 | SDA |

Note: SA= strongly agree, A=Agree, UD=Uncertain, DA= Disagree, SDA= strongly disagree, N= Frequency, WS= Weighted score, MWS= Mean weighted score, Figure outside the bracket are the frequency of the respondents while figures in the bracket are product of Likert scale value Number of respondents (N) =195, Mean score (MS) =3.0, Upper Limit (UL) =3.05, and Lower Limit (LL) M=2.95

Table 9. Role teachers in determining the attitude of secondary students in choosing forestry as a profession in Makurdi metropolis

| Variable | SA | A | UD | DA | SDA | N | WS | WMS | Decision |
|--|---------|---------|--------|---------|--------|-----|-----|------|----------|
| Our teachers uses various method in teaching forestry related subject to us interested | 92(460) | 64(256) | 11(33) | 13(26) | 15(15) | 195 | 790 | 4.05 | SA |
| Teachers in your school do make teaching of forestry related courses interesting | 16(80) | 32(128) | 22(66) | 62(124) | 63(63) | 195 | 461 | 2.36 | SDA |
| Our teacher like teaching forestry related subject than other courses | 29(145) | 40(160) | 33(99) | 49(98) | 44(44) | 195 | 546 | 2.80 | DA |
| Our teachers like to encourage us to study forestry in the university | 19(95) | 30(120) | 28(84) | 51(102) | 67(67) | 195 | 568 | 2.40 | DA |

Note: SA= strongly agree, A=Agree, UD=Uncertain, DA= Disagree, SDA= strongly disagree, N= Frequency, WS= Weighted score, MWS= Mean weighted score Figure outside the bracket are the frequency of the respondents while figures in the bracket are product of Likert scale value. Number of respondents (N) =195, Mean score (MS) =3.0, Upper Limit (UL) =3.05, and Lower Limit (LL) M=2.95

Furthermore, the students' strongly disagreed (MWS =2.78, <2.95) with the statement that they will not choose forestry as a career because of its poor image. Also, they strongly disagreed (MWS =2.66, <2.95) with the statement that they do not like forestry because of the source of awareness. The result also shows that the students' strongly disagreed (MWS =2.72, <2.95) with the statement that forestry is a difficult course. However, the students strongly agreed (MWS =3.52, >3.05) that their family will not allow them to study forestry as it is not their choice. The students strongly disagreed (MWS =2.13, <2.95) with the statement that their friends will laugh at them if they choose forestry as a course of study in the University.

3.8 The Role Teachers in Determining the Attitude of Secondary Students in Choosing Forestry as a Profession

Table 9 shows the result of the role teachers in determining the attitudes of secondary school students in choosing forestry as a profession. The students strongly agreed (MWS =4.05, >3.05) with statement that their teachers use various method in teaching forestry related subjects. However, they strongly disagreed (MWS =2.36, <2.95) with the statement that teachers in their school do make teaching of forestry related courses interesting. Also, the strongly disagreed (MWS =2.80, <2.95) that their teachers like teaching forestry related subject than other courses. They also strongly disagree (MWS =2.40, <2.95) with the statement that their teachers like to encourage them to study forestry course in the University.

4. DISCUSSION

4.1 Socio-economic Characteristic of the Students

The high number of male respondents recorded in the study area was an indication that male children continue to dominate child education in the study area. This finding is similar to that of [11] in the study area. The finding of this study agreed with the observation by other studies that enrollment in Nigerian schools is dominated by male children [12,13,14,15]. The mean age of the students was below 18 years, this was an indication that majority of the respondents were teenager and falls into group that is considered as the future leaders of our society. It also shows that early child education is embraced by the people in the study area. Similar age was reported by [11] in study area.

4.2 Awareness of Forestry as a Course of Study

The study revealed that there is a high level of awareness among secondary school students about forestry in the study area. This finding agrees with [4] that the secondary schools students in River State (Port Harcourt) were aware of forestry as a course of study. The high level of awareness of forestry as a course of study among secondary schools students in Makurdi local government was an indication that forestry related subjects are taught in secondary schools in the study area as reported by [16] that agricultural and animal husbandry subjects in secondary school improve the awareness of conservation status.

This study also shows that majority of the students in the study area were aware that trees and animals are obtained from forest. This indicates that the students in the area were not only aware of forestry as a course but they were also aware of the value of forest and the career opportunities in forestry. This finding is similar to that of [17] that most of the secondary school students in Ekiti State were aware of forestry as a course of study with only a marginal percentage of the students who claimed not to be aware of forestry as a course.

4.3 Source of Information about Forestry as a Course of Study

Studies have shown that, mass media is always an effective means of creating awareness concerning many environmental issues [18]. However in this study students got to know about forestry as a course of study through their teachers. This was similar to the finding of [11] in the study area, in which they report that teachers were the major source of information for students regarding awareness of environmental conservation. This could have been due to limited access of the students in the area to some electronic media (TV set, Radio and others). This experience was also demonstrated by [19] in Turkey, where they show a strong relationship between increased in environmental awareness and increased family income. Similarly finding by [20] indicates that most students got to know about forestry in their final year in secondary schools. However, the finding of this study differs from [18] who reported that mass media, particularly radio and television were the major source of creating awareness concerning environmental issues. However, [19] recognized that both school and mass media

played a key role in the promotion of environmental awareness among students.

4.4 Factors that Determine the Choice of Forestry as a Profession Career

Many of the students' indicated that they like forestry as a course; however they were not ready to study the course in high institutions. This was because majority of students were uncertain about where to work if they choose forestry as their profession. This finding was in line with the submission of [4] that secondary school students prefer other courses than forestry, because Forestry and Wildlife Management as a discipline is hardly known to the general public. Unfortunately this fear is not true as many establishment quotas for forestry professionals in the Ministries, Departments and Agencies (MDAs) of government have often been underutilized in the past two decades, which left the option of engaging natural science graduates and applicants as alternatives. The Delta State Senior Staff list 2002-2010 for the departments of Forestry and Environmental Conservation clearly depicted the observed trend which must allay all forms of fear on employment opportunities in Forestry [5]. In addition, over 40% of essential manpower required by the numerous United Nation Development Programme for the global climate change issues such as Carbon credit scheme, REDD⁺, SFM among others and World Bank intervention schemes as NEWMAP are forest back-grounded projects that seek degree holders in forestry as experts in every phase of the various program.

Furthermore, most of the students opined believed that their parents will not allow them to choose forestry because it is not their family choice. This finding agrees with [21] and [22] that family and other factors play key role in influencing students' choice of career. Paloua and Drobot [21] further stated that mothers are always at the centre stage of influencing their children.

4.5 The Role of Teachers in Determining the Attitude of Secondary School Students in Choosing Forestry as a Profession

Teachers also play a key role in the choice of forestry as a profession among secondary schools students. This was because students in the study area strongly agreed that teachers do not make the teaching of forestry interesting in

secondary schools and also agree agreed that teachers often do not used to encourage secondary school students to study forestry in high institutions as they often encouraged them to go for the so called juicy courses. This finding is in line with [23] who reported that the preference of other courses over Forestry among the students was probably because of the general notion that Forestry could only be practiced in rural areas as being taught by their teachers. This assertion also agreed with the submission of (4)) on students' reasons for not wanting to study Forestry in high institution, as forestry was ranked low compared to others courses like Medicine, Engineering, Law and Pharmacy which are the preferred professions in the society.

5. CONCLUSION AND RECOMMENDATION

The result of the study revealed that there is a high level of awareness of forestry as a course of study among the secondary school students in Makurdi Local Government Area. Both male and female students in the senior and junior classes in the private and public schools were fully aware of forestry as a course of study in high institution and the career opportunities in forestry through the teaching in schools. Many students in the study area like forestry as a course of study, however family and general public notion about forestry make them to decline the choice of forestry in high institutions.

The teachers' uninformed attitude in secondary schools is quite a critical factor for students' lack of interest in the study of forestry, as teachers in most cases tagged forestry a low ranked course in the society. Recommendation is made that parents should guide their children but not force careers on them. Government should, as a matter of necessity includes forestry as a subject into the Senior Secondary School curriculum to further broaden the students' knowledge on the course. Also government should make forestry agencies active and strong so that forestry graduates will have places to work. Also, relevant stakeholders in forestry should embark on massive public enlightenment on the importance and career opportunities in forestry. Media houses in areas such as Television and Radio stations should dedicate some times for forestry programmers. Secondary school teachers should be encouraged to have good knowledge of a course before teaching as they will stimulate students' interest in such a course.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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