Factors Determining Students' Enrolment in Forestry Studies in the University of Ibadan, Ibadan, Oyo State

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Abstract
This research study aimed to investigate the determinants of students' enrolment in forestry studies in the University of Ibadan. The study also explored the influence of gender and socioeconomic status on enrolment decisions and identified the challenges faced by forestry students.
Data for this study was collected through questionnaires distributed to 80 forestry students enrolled in the Forest Production and Products and Social and Environmental Forestry departments. The collected data were analyzed using various statistical methods, including frequency, percentages, mean, standard deviation, and chi-square test.
The findings of the study revealed that the majority of forestry students at the University of Ibadan are male, indicating potential gender imbalances within the program. However, gender did not have a significant influence on the enrolment decision in forestry. On the other hand, socioeconomic status was found to be a determining factor, suggesting that students' financial backgrounds and social circumstances play a role in their decision to pursue forestry. Furthermore, the study identified several challenges faced by forestry students. Poor funding for forestry students emerged as a significant issue, potentially hindering students' access to resources and opportunities within the program. In addition, students reported experiencing high levels of stress and health impacts, highlighting the need for support systems and interventions to address these concerns.
Based on these findings, the study provides several recommendations. Efforts should be made to address the gender imbalance within the forestry program through targeted recruitment strategies and scholarships or grants specifically aimed at attracting and retaining female students. Additionally, there is a need to improve the funding allocation for the forestry program, ensuring adequate resources are available for students' educational needs. Lastly, the university should establish support systems such as counseling services and stress management workshops to address the challenges faced by forestry students and promote their overall well-being. Overall, this study contributes to the understanding of the factors influencing students' enrolment decisions in forestry and provides important insights for universities and policymakers in developing strategies to enhance the enrolment experience for future forestry students.

INTRODUCTION

Forestry education in Nigeria has a rich history and has undergone significant development over the years. It can be traced back to the early 20th century when the colonial government recognized the need for trained personnel in forest management (Adebayo & Awodiran, 2017). The first forestry education institution, the Nigerian College of Forestry, was established in 1948 in Ibadan. Since then, forestry education has expanded to various universities and colleges across the country. The scope of forestry education in Nigeria is broad and encompasses multiple aspects of forest management. Students are exposed to subjects such as silviculture, forest ecology, forest inventory and measurement, forest economics, and forest policy (Musa, 2017). The curriculum is designed to equip students with theoretical knowledge and practical skills required for sustainable forest management.

Forestry education in Nigeria has evolved to address emerging challenges and priorities. In recent years, there has been a greater emphasis on issues such as climate change, biodiversity conservation, community-based forest management, and agroforestry (Oke & Atowino, 2019). This shift in focus reflects the changing needs of the forestry sector and the recognition of the importance of sustainable forest management. Furthermore, forestry education in Nigeria is not limited to academic institutions but also incorporates practical training through fieldwork, internships, and attachments (Adebayo & Awodiran, 2017). These hands-on experiences provide students with real-world exposure and enhance their practical skills and understanding of forest management. Collaboration and partnerships with international organizations and institutions have also played a crucial role in shaping forestry education in Nigeria (Oluwalana, 2016). These collaborations have facilitated knowledge exchange, capacity building, and exposure to best practices in forestry education and research.

However, challenges persist in the field of forestry education in Nigeria. Limited funding, inadequate infrastructure, outdated curricula, shortage of qualified teaching staff and most importantly, poor students' enrolment have been identified as key challenges (Mamman *et al.,* 2019; Oyewole *et al.,* 2018). Several factors may contribute to the declining enrolment of students in forestry studies. These factors include lack of awareness and understanding of career prospects, inadequate resources and facilities, financial constraints, societal perceptions, lack of role models and mentorship, and curriculum design and teaching methods. Addressing these factors is necessary to attract more students and ensure the development of forestry expertise for continued improvement and relevance of forestry education in Nigeria.

One of the primary factors influencing students' enrolment in forestry studies could be the lack of awareness and understanding of the field's career prospects and job opportunities. Many students may be unfamiliar with the diverse range of career paths available in forestry, such as forest management, wildlife conservation, agroforestry, and climate change mitigation. This lack of awareness can discourage students from considering forestry studies as a viable option for their future careers (Larson et al., 2001). Another critical factor influencing students' enrolment in

forestry studies is the availability and accessibility of relevant resources and facilities. Students may be discouraged from pursuing forestry studies if they perceive a lack of well-equipped laboratories, field research sites, and modern forest management tools. Insufficient resources may also impact the quality of education and training provided, further deterring potential students from enrolling (Adams, 2002).

Furthermore, financial constraints can play a significant role in deterring students from pursuing forestry studies. The cost associated with tuition fees, textbooks, field trips, and equipment can be substantial for many students, especially considering the economic conditions in Nigeria. Scholarships, grants, and other financial assistance programs are vital in ensuring that capable students can afford forestry studies (Ezeuduji et al., 2013). Additionally, societal beliefs and perceptions can influence students' enrolment in forestry studies. Forestry may be perceived as a less prestigious field compared to other disciplines, thus deterring high-performing students from considering it as a career option. The lack of recognition and appreciation of forestry's importance in society can contribute to this perception (Ngwamah & Embong, 2019).

Gender is another crucial factor that affects students' enrolment in forestry studies (Nejang *et al.,* 2019; Ali *et al.*, 2017). In many cases, forestry programs are perceived as male-dominated fields, resulting in lower participation of female students (Nejang *et al.,* 2019). Addressing gender-related biases and promoting gender inclusivity in forestry education is crucial for attracting and retaining female students in this discipline (Ali *et al.,* 2017). The role of career counseling and guidance is essential in influencing students' enrolment choices in forestry programs (Bawa, 2018; Obasoro, 2015). Adequate information and guidance about forestry careers can help students make informed decisions and understand the potential prospects in this field (Bawa, 2018). Awareness programs, career fairs, and mentorship opportunities can play a pivotal role in this regard (Obasoro, 2015). Students' prior knowledge and interest in forestry are significant determinants of enrolment in forestry undergraduate programs (Adekunle *et al.,* 2020; Ferreira *et al.,* 2016). Students who have been exposed to environmental education or have engaged in activities related to nature conservation are more likely to enroll in forestry programs (Adekunle *et al.,* 2020). Enhancing environmental awareness and providing opportunities for hands-on experiences can foster interest and attract potential students to forestry studies (Ferreira *et al.,* 2016).

Moreso, lack of role models and mentorship in the field can also impact students' enrolment in forestry studies. If students do not have access to successful and respected individuals who have pursued careers in forestry, they may have limited exposure to the potential benefits and rewards of the field. This lack of mentorship can diminish students' motivation and interest in forestry studies (Olajire & Ochu, 2018). Government policies and regulatory frameworks also influence students' decision to enroll in forestry courses (Umar *et al.,* 2018; Maina & Oricha, 2016). The existence of a supportive policy environment contributes to the growth and development of forestry education in Nigeria (Umar *et al.,* 2018). Adequate funding, curriculum development, and incentives for both students and faculty are critical aspects that policymakers need to consider for strengthening forestry education (Maina & Oricha, 2016).

Finally, academic support programs and mentoring have been found to positively impact students' enrolment in forestry programs (Ajala, 2019; Bawa, 2018). Providing students with academic assistance, study materials, and mentorship opportunities enhances their learning

experience and increases their likelihood of enrolling and staying enrolled in forestry programs (Ajala, 2019). By addressing the awareness, accessibility, and availability of resources and facilities, the university can enhance the appeal and quality of forestry programs. Moreover, the findings can guide curriculum development and establish collaborations with relevant stakeholders, contributing to the overall growth and relevance of forestry studies in Nigeria.

Research Hypotheses

$H_0 1$: Gender will not significantly influence student's choice of forestry and enrolment in forestry studies.

$H_A 1$: Gender will significantly influence student's choice of forestry and enrolment in forestry studies.

$H_o 2$: Socio-economic status of students does not significantly influence their choice of forestry studies.

$H_o 2$: Socio-economic status does significantly influence students choice of forestry studies.

METHODOLOGY

Study Area

This study was carried out in the Departments of Forest Production and Products and Social Environmental Forestry, Faculty of Renewable Natural Resources, University of Ibadan, Oyo State. The University of Ibadan (UI) is a public research University in Ibadan, Nigeria. It was said to be the first Nigerian forestry education institution and was established in 1948 in Ibadan. The University became an independent University in 1962 and is the oldest degree awarding Institution in Nigeria. However, the department of forestry and wildlife was established in August, 1981.

Population of the Study

The population for the study consists of all students in the departments of Forest Production and Products and Social Environmental Forestry, Faculty of Renewable Natural Resources, University of Ibadan, Oyo State.

Sample and Sampling Techniques

Eighty (80) students were selected from the total population of students available in the two forestry departments under study. Forty students were randomly selected from each of the two departments. The selected students include both undergraduate and postgraduate students.

Method of Data Collection

The study made use of primary data collected through a self-designed questionnaire. The researcher personally visited the study area for administration, collection, coordination and monitoring of the whole exercise. The questionnaire was collected back from the respondents and collated by the researcher for data analysis.

Method of Data Analysis

Data obtained were analyzed using descriptive statistics such as frequency and percentages and standard means analysis and inferential analysis such as Chi-square. Responses of the Likert-type were analyzed using arithmetic meanwhile 3.0 was used as yardstick for the acceptance or rejection of an item.

DATA PRESENTATION AND ANALYSIS

Demographic Characteristics of the Respondents

The table below revealed that majority of the respondents comes from Department of Forest Production and Product (67.50%) while 32.50% of the respondents are from the Department of Social and Environmental Forestry (SEF). Fifty One (51) respondents were male while twenty nine (29) were female. This implies that we have more male students studying forestry than female students. This agrees with the findings of Stanbury and Whitaker (2015) who explored the influence of gender on students' enrolment in forestry undergraduate programs. In his study, females were under-represented in forestry programs, with male comprising the majority of enrolments. He attributed the gender disparity and cultural norms that discourage females from pursuing careers in traditionally male-dominated fields.

Also, majority of the respondents were between the age of 26 and 30years (Table 1). This implies that majority of the respondents are young adults. The study also revealed that majority of the respondents are Christians (68.80%) while others are Muslims and Traditional worshippers with 28.70% and 2.5% respectively. The study also considered the socio-economic status of forestry students in the University of Ibadan. It was revealed that eighteen, fifty-four and eight students fall within the social classes; higher class, middle class and lower class respectively. This implies that majority of the respondent falls within the lower socio-economic class. Several socio-economic factors have been considered crucial in determining students' enrolment in forestry programs. These include parental occupation, family background, parental level of education etc. The socio-economic status of students and their families plays a role in their decision to enroll in forestry programs. For example, financial constraints can be a significant barrier for students from lower socio-economic backgrounds (Mamat *et al;* 2018). The cost of living, education, including tuition fees may deter students from pursuing forestry studies, especially if they lack access to scholarships and financial aid.

Table 1: Demographic Characteristics of Forestry Students

Variables	Frequency	Percentage (%)
Department		
FPP	54	67.50
SEF	26	32.50
Total	80	100.00
Gender		
Male	51	63.70
Female	29	36.30
Total	80	100.00
Age		
16-20	04	5.00
21-25	23	28.70
26-30	40	50.00
31-35	13	16.30
Total	80	100.00
Religion		
Christianity	55	68.80

Islam	23	28.70
Traditional	02	2.50
Total	80	100.00
Socio-Economic Status		
High	18	22.50
Middle	54	67.50
Low	08	10.00
Total	80	100.00

Source: Field Survey, 2023.

Students' Knowledge about Forestry

From the table below, it is evident that most of the respondents (43.80%) only got to know about forestry studies at the point of gaining admission into the University. Others got to know about forestry studies through UTME brochure (20%), parents and relatives (13.80%), Secondary School (12.50%), though friends (7.50%) and through mass media (2.50%).

Table 2: How Students know about Forestry Studies

Source of Knowledge	Frequency	Percentage (%)
Secondary School	10	12.50
UTME Brochure	16	20.00
During Admission	35	43.80
Through a friend	06	7.50
Parents/Relatives	11	13.80
Mass Media	02	2.50
Total	80	100.00

Source: Field Survey, 2023.

Determinants of Students' Enrolment Decision in Forestry Studies

Table 3 shows that there was no much difference in the number of students who have personal interest in forestry (23.0) and students who had forestry studies admission against their will (22.0). This implies that, although we have students who willingly chose forestry studies as their course of study, we still have a lot of students who were only admitted into forestry due to reasons such as proportionate admission distributions, lack of enough enrolment figure in forestry studies while the enrolment figure in other science subjects are on the high side etc. Also, all the factors examined contribute to students' enrolment decision in forestry. These include personal interest, peer influence, job prospect, family background, parental interest and school interest (Table 3).

There are several studies that support these findings. According to Mamat *et al* (2018), students from families with a background in forestry and or related fields tend to be more inclined towards enrolling in forestry programs. Also, students' prior knowledge and interest in forestry are significant determinants of enrolment in forestry undergraduate programs (Adekunle *et al,* 2020, Ferreira *et al,* 2016). In addition, the findings of this study is in alignment to that of Johnson (2018) who found that students who have friends or acquaintances in forestry programs were more likely to perceive forestry as an attractive field of study. This is because peer networks provide students with firsthand information and positive experiences, influences their decision-making process and

increases the likelihood of enrolling in forestry programs. The findings of Leavitt *et al,* (2017) also support the findings of this study that some students enroll in forestry studies due to scholarship opportunities. He found that students who receive scholarships were more likely to enroll in forestry studies compared to those without financial assistance.

Table 3: Factors Determining Students' Enrolment in Forestry Studies

S/N	Determinants	Frequency	Percentage (%)
1.	Personal Interest	23	28.80
2.	Peer Influence	18	22.50
3.	Job Prospect	05	6.30
4.	Family Background in Forestry and or agriculture	07	8.80
5.	Parental Interest	03	3.80
6.	My school gave me admission into forestry	22	27.50
7.	Scholarship Opportunities	02	2.50
	TOTAL	80	100.00

Source: Field Survey, 2023.

Problems Encountered by Forestry Students

Out of eight challenges examined under problems encountered by forestry students, six were found to be true at $\bar{X} \geq 3.0$. These include items one, three, four, five, six and seven (Table 4). Therefore, the major challenges faced by forestry students in the University of Ibadan include, poor funding for forestry students, school libraries not well-equipped with modern forestry texts, forestry is a stressful course and impacts much on human health, societal stereotype and poor recognition of forestry as a prestigious course of study, no adequate provision for female forestry students and lack of enough establishments ready to take forestry students for internship.

Table 4: Challenges faced by Forestry Students

S/N	Items	SA	A	U	D	SD	Mean	SD	Decision
1.	There are no enough funding for forestry students in Nigeria	32	35	11	02	00	4.21	0.77	Accept
2.	I always develop phobia for the forest	06	14	16	24	20	2.53	1.25	Reject
3.	School libraries are not well equipped with modern forestry texts	26	26	16	06	04	3.78	1.16	Accept
4.	Forestry is a very stressful course and impacts much on human health	15	39	11	09	06	3.60	1.14	Accept
5.	There is poor recognition of forestry as a	31	30	13	05	01	4.01	0.96	Accept

	prestigious course of study in Nigeria								
6.	There are no adequate provision for female forestry students	13	36	12	15	04	3.49	1.13	Accept
7.	There are no enough establishments ready to take forestry students for internship	23	39	08	10	00	3.94	0.95	Accept
8.	Forestry lecturers are strict and not accommodating	06	24	02	19	29	2.49	1.43	Reject

Source: Field Survey, 2023.

Perception of Forestry Students Regarding Job Prospect
From the table below, it is evident that out of seven variables examined only four were accepted to be true at $\bar{X} \geq 3.0$. These variables include items two to five. This implies that only these four items are true about forestry student perception regarding job prospects in forestry. Therefore, forestry graduates are self-reliant after graduation, there is priority for forestry graduates than graduates of agriculture while seeking for job, there are more job opportunities for forestry graduates than in any other vocation and the school always link graduates up for job placement after graduation.

Table 5: Forestry Students Perception Regarding Job Prospects in Forestry.

S/N	Items	SA	A	UN	D	SD	Mean	SD	Decision
1.	There are automatic jobs for forest graduates after graduation	09	09	14	34	14	2.56	1.23	Reject
2.	Forestry graduates are self-reliant after graduation	08	35	23	07	07	3.38	1.07	Accept
3.	There is priority for forestry graduates than graduates of agriculture while seeking for job	09	24	27	13	07	3.19	1.11	Accept
4.	There are more job opportunities for forestry graduates than in any other vocation	07	24	23	15	11	3.01	1.19	Accept
5.	My school always links us up for job placement after graduation.	10	27	14	15	14	3.05	1.32	Accept

| 6. | There are no white-collar jobs for forestry graduates | 06 | 19 | 22 | 23 | 10 | 2.85 | 1.15 | Reject |
| 7. | Forestry graduates are either employed as forest guards or saw-millers | 02 | 20 | 30 | 10 | 18 | 2.73 | 1..15 | Reject |

Source: Field Survey, 2023.

Testing of Hypotheses

Hypothesis One:

H$_0$1: Gender will not significantly influence student's choice of forestry and enrolment in forestry studies.

H$_A$1: Gender will significantly influence student's choice of forestry and enrolment in forestry studies.

From the table below, the Chi-Square value is 6.545 and the level of significance is 0.478. Since is higher than the acceptance level of significance (0.05), therefore, the null hypothesis is accepted and the alternative hypothesis is rejected. So, gender will not significantly influence the choice of forestry and enrolment in forestry studies in University of Ibadan. This finding is contrary to the findings of Nejang *et al,* (2019), who found out that forestry programs are male-dominated field resulting in lower participation of female students.

Table 6: Chi-Square Analysis of Gender Effect on Choice of Forestry.

	Value	Df	Asymptotic Significance (2-sided)
Pearson Chi-Square	6.545[a]	7	0.478
Likelihood Ratio	8.097	7	0.324
Number of Valid cases	80		

Source: Author's Computation, 2023.

Hypothesis Two:

H$_o$2: Socio-economic status of students does not significantly influence their choice of forestry studies.

Ho2: Socio-economic status does significantly influence students choice of forestry studies.

From the table below, the Pearson Chi-Square value is 30.972 while the level of significance is 0.006. The level of significance is lesser than the acceptable level of significance of 0.05. This implies that the null hypothesis is rejected and the alternative hypothesis will be accepted. Therefore, students' socio-economic status significantly influences students' choice of forestry and enrolment in forestry studies. This finding is in line with that of Mamat *et al,* (2018) who also found that the economic status of students and their families plays a role in their decision to enroll in forestry programs. Financial constraints can be a significant barrier for students from lower socio-economic backgrounds.

Table 7: Chi-Square Analysis of the Effect of Socio-economic Status on the choice of Forestry Studies.

	Value	Df	Asymptotic Significance (2-sided)
Pearson Chi-Square	30.972[a]	14	0.006
Likelihood Ratio	32.190	14	0.004
Number of Valid cases	80		

Source: Author's Computation, 2023.

CONCLUSION AND RECOMMENDATIONS

This study highlights several important findings. Firstly, it was found that the majority of forestry students in the university are male, indicating potential gender imbalances within the program. Secondly, while gender did not show any significant influence on the enrolment decision in forestry, socioeconomic status was found to be a determining factor. This suggests that students' financial backgrounds and social circumstances play a role in their decision to pursue forestry. Additionally, the study uncovered several challenges faced by forestry students at the University of Ibadan. Poor funding for forestry students was identified as a significant issue, which may hinder students' access to resources and opportunities within the program. The lack of well-equipped libraries with modern forestry texts is another challenge, which can restrict students' access to up-to-date information and hinder their academic progress.

Moreover, the study highlighted the stress and health impacts faced by forestry students, indicating the need for better support systems and resources to promote the well-being of students within the program. Societal stereotypes surrounding the forestry field were also observed as a challenge, which may contribute to the underrepresentation of female students in the program. Additionally, the lack of sufficient establishments willing to provide internships for forestry students adds another hurdle, limiting students' opportunities to gain practical experience and enhance their employability.

Based on the findings of this study, several recommendations are made to address the identified challenges and improve the overall enrolment experience for future students:

i. Efforts should be made to create a more inclusive and diverse learning environment, where both male and female students feel encouraged and supported to pursue forestry. This can be done through targeted recruitment strategies, scholarships or grants specifically aimed at attracting and retaining female students in the field.

ii. The university should prioritize improving the funding allocation for forestry students. Adequate financial resources should be allocated to meet the specific needs of the program, including updated equipment and textbooks for the library. Collaboration with industry partners and stakeholders can help provide additional funding and internship opportunities for students, facilitating practical learning experiences and future employment prospects.

iii. Steps should be taken to address the stress and health impacts faced by forestry students. The university could establish support systems such as counseling services, stress management workshops, and health promotion initiatives to ensure the well-being of students and create a conducive learning environment.

iv. Efforts should be made to challenge societal stereotypes surrounding forestry as a career choice. Increasing awareness about the value and importance of forestry in sustainable

development and natural resource management can help combat misconceptions and encourage more students to consider enrolling in the program.

REFERENCES

Adams, M. N. (2002). The attractiveness of forestry as a career choice for young Australians. Australian Forestry, 65(3), 199-204.

Adebayo, O., & Awodiran, O. (2017). Historical Trends and Reforms in Forestry Education in Nigeria. International Journal of Forestry Research, 2017, 1-9.

Adekunle, V. A., Oluwasola, O. O., & Aina, O. S. (2020). An analysis of students' career choice, knowledge, and perception towards forestry education in Nigeria. International Journal of Forestry Research, 1-8.

Ajala, M. K. (2019). Influence of mentoring on academic performance and commitment towards career in selected agronomy and forestry universities in Southwest, Nigeria. Journal of Management, 6(4), 25-32.

Ali, S., Bakar, N. A., Yusop, Z., & Yu, L. (2017). Challenges faced by female forestry students:- perception of students and lecturers in Universiti Putra Malaysia. Asia-Pacific Journal of Information Technology and Multimedia, 6(1), 19-32.

Bawa, J. M. (2018). Role of career counseling for the growth and development of secondary schools in Nigeria. Journal of Education and Practice, 9(3), 10-14.

Ezeuduji, I. O., Solomon, B. C., Adekunle, A. A., & Okonkwo, I. S. (2013). Profitability and economic determinants of tree planting among small-scale farmers in Oji River Local Government Area, Enugu State, Nigeria. Journal of Agriculture and Rural Development in the Tropics and Subtropics, 114(2), 93-102.

Ferreira, V. T., Nogueira, R. J. N., Pontes, M., & Pitanga, K. S. (2016). Analysis of multiple intelligences and interest in learning based on forestry training. International Journal of Geography, Agriculture and Environmental Sciences, 3(2), 66-76.

Johnson, A., (2018). Examining sources of information, social networks, and choice in natural resources degree programs. Journal of Forestry, 116(5), 448-457.

Larson, B. C., Lippke, B., & Dobbin, M. (2001). College students' knowledge and perceptions of forests and forestry. Journal of Forestry, 99(3), 8-14.

Leavitt, P. R., Rossetto, O. C., Brunet, N. J., & Herrington, L. P. (2017). Factors influencing undergraduate students' decisions to enroll in natural resource programs. The Journal of Environmental Education, 48(1), 3-14.

Maina, J. M., & Oricha, K. M. (2016). Pre-enrolment constraints to college enrolment into B.Sc. Forestry program in Nairobi University College of Agriculture and Veterinary Sciences, Kenya. IOSR Journal of Agriculture and Veterinary Science, 9(1), 90-95.

Mamat, N. H., Abdul Rahim, N., & Elina, A. (2018). Factors influencing career choice among undergraduate students in Malaysia: A literature review. International Journal of Academic Research in Business and Social Sciences, 8(12), 2216-2226.

Mamman, A. B., Aliyu, A., Oladele, A. T., & Abdulrahman, S. (2019). Evaluation of the Nigerian tertiary institution forest resources management curricula. Journal of Tropical Forestry and Environment, 9(1), 1-6.

Musa, D. R. (2017). An Analysis of the Curriculum of Forestry Education in Nigerian Universities. A paper presented at the International Conference on Forestry Research and Capacity Development in Nigeria, Ibadan, Nigeria.

Nejang, B., Braimoh, A. K., & Gami, N. M. (2019). Women perceptions on their participation in forestry resources management in Bali and Donga Local Government Areas, Taraba State, Nigeria. International Journal of Innovative Education Research, 7(1), 9-18.

Ngwamah, R. O., & Embong, R. (2019). Role of forestry education and extension in sustainable forest management among smallholder farmers in Eastern Nigeria. International Forestry Review, 21(1), 68-83.

Obasoro, A. J. (2015). Effects of career counseling and vocational guidance on students' career development in Edo State, Nigeria. International Journal of Academic Research in Progressive Education and Development, 4(1), 82-94.

Oke, D. O., & Atowino, L. O. (2019). Rationale for incorporating climate change into forestry curriculum in Nigeria. In Climate Change Adaptation In Nigeria, Proceedings of National Conference on Climate Change Adaptation, Uyo, Nigeria.

Olajire, O. A., & Ochu, C. O. (2018). Interest in forestry studies among secondary school students in Oyo State, Nigeria. Journal of Forestry Research and Management, 15(2), 98-106.

Oluwalana, S. A. (2016). Collaboration with international organisations in forestry education in West Africa: Lessons learnt and the way forward. International Journal of Agriculture, Forestry and Fisheries, 4(2), 24-30.

Oyewole, M. B., Aba, D. O., & Adebayo, O. (2018). Analysis of the Forestry Education Curriculum in Tertiary Institutions in Nigeria. Journal of Agriculture and Environmental Sciences, 2(2), 273-282.

Stanbury, A. L., & Whitaker, K. (2015). Gender enrolment trends in Canadian undergraduate forestry programs. Canadian Journal of Forest Research, 45(3), 255-261.

Umar, M. A., Rufus Jr, S. A., Abdulrahman, A. O., & Jelili, O. D. (2018). Implications of forest policy and politics on forest resource utilization and management in Nigeria. Sustainability, 10(6), 1692-1702.