STRATEGIES FOR STRENGTHENING STUDENTS' ENROLMENT IN WOODWORK TECHNOLOGY EDUCATION OF FEDERAL UNIVERSITY OF TECHNOLOGY, MINNA, NIGERIA

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Abstract
The study identified problems associated with low enrolment of students in Woodwork Technology Education programme and strategies for strengthening students' enrolment in the programme at Federal university of Technology, Minna, Nigeria. Two research questions and two hypotheses were formulated to guide the study. The population for the study constituted students and woodwork lecturers of Department of Industrial and Technology Education, Federal University of Technology, Minna, Nigeria. The total population used for the study was 206 respondents. Data obtained were analyzed using mean, standard deviation. The null hypotheses were tested using Z- test statistical tool at 0.05 level of significance. The finding of the study revealed that low enrolment of students in Woodwork Technology Education programme is attributed to Woodwork lecturers' behaviour, parents' attitude to Woodwork Technology and peer group influence. It is recommended that Guidance counselors should play their roles by guiding students when choosing career, modern facilities should be provided for teaching woodwork and Woodwork lecturers should exhibit good behaviour by attending to students problems and encouraging them to enrol in Woodwork Technology Education programme. This can be done by telling the students the benefits they will derive from the course after graduation.

Keywords: Enrolment, Federal University of Technology, Strategy, Strengthening, Woodwork technology

Introduction

Technology education is the type of education that is designed to prepare learners to teach technical courses, be self employed and/or be employer of labour. Bebbiafla (2003) stressed that technology education is meant for preparing individuals for employment in recognized occupation. Technology teachers teach students how to solve problems and evaluate the results in a systematic way that is essential in today's world of technology (Bjorkquist & Zuga, 2003).

Woodwork technology as a course is related to engineering and it deals with wood. It is one of the most important programmes in technology education and has contributed effectively to the development of many nations. Woodwork technology is concerned with the use of wood. Wood is used for construction work. It could be used for structural, furniture or road construction work. The responsibilities of woodwork technologists are varied but generally fall into the broad categories of production and maintenance of woodwork items. Woodwork technology has played a key role in the development of the environment and woodwork technologists have contributed effectively to the welfare and economic development of many nations. It is an acceptable fact that no society can develop or reach the highest level of economic or technological development without using skilled personnel such as woodwork technologists.

Woodwork Technology Education is an aspect of education that leads to acquisition of theoretical knowledge and practical skills relating to construction using woodworking machines and hand tools, and as well as maintenance of woodwork items. Woodwork Technology educators impart both theoretical knowledge and practical skills to learners so that they can be self employed after completing a particular module or course of study. The enrolment of students in Woodwork Technology Education programme at Federal University of Technology, Minna, Nigeria has not been encouraging. Few students enrolled in Woodwork Technology Education while many of them did not show interest in the course. The problem associated with the low enrolment of students in the programme has not been identified by the host Department or Institution. At present, enrolment in Woodwork Technology Education is still very low when compared to other programmes in the Department of Industrial and Technology Education (ITE) of the University. In 2008/2009 academic session, students' enrolment in different programmes in Industrial and Technology at Federal University of Technology, Minna, Nigeria were as follows: Automobile Technology Education 28, Building Technology Education 18, Electrical/Electronics Technology Education 28, Metalwork Technology Education 14 while Woodwork Technology Education 4 (FUT, Minna, ITE Dept, Examination Office, 2009) . In 2015/2016 academic session, Woodwork Technology Education students were only7 (FUT, Minna, ITE Dept, Examination Office, 2016). If this trend of enrolment is not checked, the possibility of having trained Woodwork technologists, Woodwork technology educators and Woodwork technicians and so on to meet the manpower needs for technological growth in Nigeria may be a problem in future. In addition, to get teachers of Woodwork to teach at post primary and secondary school level will be a problem.

Statement of the Problem

It is a fact that enrolment in Woodwork Technology Education in Federal University of Technology, Minna, Nigeria is not encouraging. In 2012/2013 academic session, students' enrolment into different programmes in Industrial and Technology Education at Federal University of Technology, Minna, Nigeria was as follows: Automobile Technology Education 20, Building Technology Education 20, Electrical/Electronic Technology Education 37, Metalwork Technology Education 21 and Woodwork Technology Education 4 (FUT, Minna, ITE Dept, Examination Office, 2013). In 2014/2015 academic session, Automobile Technology Education 20, Building Technology Education 29, Electrical/ Electronics Technology Education 35, Metalwork Technology Education 36 and Woodwork Technology Education 29 (FUT, Minna, ITE Dept, Examination Office, 2015). This low enrolment in Woodwork Technology Education has been a problem. The researcher wonders whether the low enrolment in Woodwork Technology Education could be attributed to the fact that it demands the use of energy and high level of co-ordination. Reasons for students' preference for other programmes such as Automobile Technology Education, Building Technology Education, Electrical/Electronic Technology Education and Metalwork Technology Education by students in the Department are not known. This poses a threat to Woodwork Technology Education which may result to shortage of workforce in future. It is on this basis that this research, strategies for strengthening enrolment of students in Woodwork Technology Education programme at Federal University of Technology, Minna, Nigeria was carried out.

Purpose of Study

The purpose of the study was to determine strategies for strengthening enrolment of students in Woodwork Technology Education at Federal University of Technology, Minna, Nigeria. Specifically, the study sought to:

(i) Identify problems responsible for low enrolment of students in Woodwork Technology Education at Federal University of Technology, Minna, Nigeria.

(ii) Find out strategies for strengthening students' enrolment in Woodwork Technology Education at Federal University of Technology, Minna, Nigeria.

Research Questions

In this study the following research questions were raised.

(i) What are the factors responsible for low students' enrolment in Woodwork Technology Education of Federal University of Technology, Minna, Nigeria?

(ii) What are the strategies to be adopted for strengthening students' enrolment in Woodwork Technology Education of Federal University of Technology, Minna, Nigeria?

Hypotheses

H_{O1}: There is no significant difference in the mean responses of students and woodwork lecturers on factors responsible for low students' enrolment in Woodwork Technology Education at Federal University of Technology, Minna, Nigeria.

H_{O2}: There is no significant difference in the mean responses of students and Woodwork lecturers on the strategies to be adopted for strengthening students' enrolment in Woodwork Technology Education at Federal University of Technology, Minna, Nigeria.

Methodology

Research Design

The research design adopted in this study was a case study design. A case study was adopted because the study involves only the Department of Industrial and Technology Education, Federal University of Technology, Minna, Nigeria.

Area of study

The study was carried out in the Department of Industrial and Technology Education of Federal University of Technology, Minna, Nigeria.

Population ans Sampling Technique

The total population for this study comprised of students and Woodwork lecturers in Industrial and Technology Education Department of Federal University of Technology, Minna, Nigeria. All 300 level, 500 level students and woodwork lecturers from Industrial and Technology Education Department of Federal University of Technology, Minna were used for the study. The respondents from 300 level were 86 and 500 level were 119 while woodwork lecturers were 5. The total population of the study was 210 and all was used for the study. Three hundred (300) and 500 level students were used for the study because students specialize or choose area of specialization in 300 level. Four hundred (400) level students were on teaching practice and industrial training so students in these levels were not in the campus. Therefore, they were not used for the study. There was no sampling since the population wasn't much.

Instrument for Data Collection

Questionnaire was used for data collection. Section 'A' sought for information from respondents on problems associated with low enrolment of students in woodwork technology while section 'B' sought for information from respondents on strategies for strengthening enrolment of students in woodwork technology.

Validation of the Instrument

The drafted copies of the questionnaire were given to three experts in the Department of Industrial and Technology Education, Federal University of Technology Education for face

and content validation. Final draft was produced after the validation of the instruments by experts.

Administration of the Instrument

The researchers administered the questionnaire personally and its collection was also done by the researchers. The questionnaire was given to 205 students and 202 questionnaire were returned while in the case of woodwork lecturers, 4 were returned out of 5. This means 206 questionnaire was received out of 210 making 98.10% return rate.

Method of Data Analysis

In analyzing the data collected, the researchers made use of mean, standard deviation and Z-test statistical tool. Four point rating scale of Strongly Agree (SA) 4 points, Agree (A) 3 points, Disagree (D) 2 points, Strongly Disagree (SD) 1 point was used.

To determine the acceptance level of the questionnaire items, a mean score of 2.50 was used as decision point between agree and disagree. In order words, any response or item with a mean score of 2.50 and above was considered accepted while items having mean score below 2.50 was considered rejected.

Hypotheses were tested using Z-test statistics at 0.05 level of significance. Any item having its value equal or below 1.96 was accepted while those above 1.96 was rejected.

Results

Research Question 1: What are the factors responsible for low students' enrolment in Woodwork Technology Education of Federal University of Technology, Minna, Nigeria?

Table 1: Mean responses of students and Woodwork lecturers on the factors responsible for low students' enrolment in Woodwork Technology Education

N_1=202, N_2=4

S/N	Items	$\bar{X}_1$	$\bar{X}_2$	$\bar{X}_t$	Remark
1	Students do not like handling and working with woodworking machine and tools.	3.14	3.36	3.25	Agree
2	Students always seek for help during woodwork practical period.	3.10	3.48	3.29	Agree
3	Students do not like woodwork technology education because of some lecturers' behaviour and attitude.	3.67	3.34	3.51	Agree
4	Students do not like woodwork technology education because their friends hate it.	3.21	3.38	3.30	Agree
5	Students do not like woodwork technology education because their parents do not like it.	3.69	3.25	3.47	Agree
6	Students do not like woodwork technology education because it has no bright future.	2.57	1.70	2.14	Disagree
7	Students do not like woodwork technology education because people call the experts carpenter.	3.64	3.60	3.62	Agree
8	Students do not like woodwork technology education because the workshop is not well-equipped.	2.07	2.25	2.16	Disagree
9	Students do not like woodwork technology education because their teachers lack practical skill.	2.0	1.88	1.96	Disagree
10	Students do not like woodwork technology education because people feel it is a course for student with low I.Q	3.57	3.63	3.60	Agree

Key: N_1 = Number of students
N_2 = Number of woodwork lecturers
$\overline{X}_t$ = Average mean of students and woodwork lecturers
$\overline{X}_1$ = Mean of students' responses
$\overline{X}_2$ = Woodwork lecturers' responses

Table 1 reveals that the respondents agreed with item 1, 2, 3, 4, 5, 7 and 10 with average mean score of 2.50 and above. While the respondents disagreed with item 6, 8 and 9 with average mean score below 2.50. This means respondents did not agree with these items as factors responsible for low students' enrolment in woodwork technology education.

Research Question 2: What are the strategies to be adopted for strengthening students' enrolment in Woodwork Technology Education of Federal University of Technology, Minna, Nigeria?

Table 2: Mean responses of students and Woodwork lecturers on the strategies for strengthening students' enrolment in Woodwork Technology Education

N_1=202, N_2=4

S/N	Items	$\overline{X}_1$	$\overline{X}_2$	$\overline{X}_t$	Remark
1	Students' interest should be considered in their choice of woodwork technology education.	3.60	3.59	3.60	Agree
2	Necessary facilities needed for woodwork technology education course should be provided.	3.52	3.46	3.49	Agree
3	Scholarship should be awarded to the best graduating student in woodwork technology education.	3.57	3.34	3.46	Agree
4	Guidance and counseling for career choice should be provided in Industrial and Technology Education Department	3.71	3.77	3.74	Agree
5	Public seminar and enlightenment programme should be organized by woodwork technology education experts on career opportunities for graduates of woodwork technology education.	3.50	3.48	3.49	Agree
6	Parents should be enlightened about woodwork technology programme.	3.76	3.05	3.46	Agree
7	Creation of job opportunities for woodwork technology education graduates.	3.69	3.68	3.69	Agree
8	Students should be properly guided in the choice of trade.	3.43	3.48	3.46	Agree
9	Provision of more role models will help to increase students' enrolment in woodwork technology education.	3.10	3.16	3.13	Agree
10	Field trips/ Excursion for beginning students to companies and industries should be organized to enhance students' interest in woodwork technology education.	3.67	3.38	3.53	Agree
11	There should be provision of well equipped library with woodwork textbooks for effective academic work.	3.64	3.60	3.62	agree
12	Educating other students about woodwork will improve students' interest in woodwork technology education.	3.14	3.34	3.24	Agree

Table 2 reveals that the respondents agreed with all the items. This shows that respondents agreed with these items as strategies to be adopted for enhancing students' enrolment in Woodwork Technology Education of Federal University of Technology, Minna, Nigeria.

Hypothesis Testing

Hypothesis 1: There is no significant difference in the mean responses of students and Woodwork lecturers on factors responsible for low students' enrolment in Woodwork Technology Education of Federal University of Technology, Minna.

Table 3: Z–test analysis of respondents regarding the factors responsible for low students' enrolment in Woodwork Technology Education, Federal University of Technology, Minna, Nigeria

S/N	RESPONDENTS	Number	$\bar{X}$	SD	df	z-cal	z-table
1	Students	202	3.14	1.03			
					204	-0.19	$\pm$1.96
2	Woodwork lecturers	4	3.18	1.00			

Key: Not significant = NS, df =204

The analysis in table 3 shows that the z-cal is -0.19 and the z-tab is $\pm$1.96. The z-cal is lower than the z-tab. Therefore, null hypothesis is accepted. This means that there is no significant difference in the mean responses of respondents on factors responsible for low enrolment of students in woodwork technology education of Federal University of Technology, Minna, Nigeria.

Hypothesis 2: There is no significant difference in the mean responses of students and woodwork lecturers on the strategies to be adopted for strengthening students' enrolment in Woodwork Technology Education of Federal University of Technology, Minna.

Table 4: Z–test analysis of respondents regarding the students on the strategies to be adopted for enhancing students' enrolment in Woodwork Technology Education, Federal University of Technology, Minna, Nigeria

S/N	Respondents	Number	$\bar{X}$	SD	df	z-cal	z-table
1	Students	202	3.22	1.03			
					204	-0.34	$\pm$1.96
2	Woodwork lecturers	4	3.29	0.92			

Key: Not significant =NS, df= 204

The analysis in Table 4 shows that the z-cal is - 0.34 while the z-tab is $\pm$ 1.96. The z-cal is lower than the z-tab. Therefore, null hypothesis is accepted. This shows that there is no significant difference in the mean responses of respondents on strategies for strengthening students' enrolment in Woodwork Technology Education of Federal University of Technology, Minna, Nigeria.

Discussion

It is clearly seen that students and Woodwork lecturers agreed that factors responsible for low enrolment of students in Woodwork Technology Education can be attributed to the fact that experts are called carpenters, and parents' attitudes towards Woodwork Technology Education. Inyiagu (2015) reported that students lack interest in technical college programme because their parents have negative attitude towards technical and vocational education.

The findings in Table 2 revealed strategies to be adopted for strengthening students' enrolment in Woodwork Technology Education to include: provision of modern facilities for teaching Woodwork Technology; parents should be enlightened about Woodwork Technology programme; students should be properly guided in the choice of career by

Guidance Counselor. Raji (2006) explained that absence of training material could discourage students from technical programmes.

Conclusion

Based on the findings of this study, attitudes of parents towards Woodwork Technology; peer group influence and calling experts carpenters affect students' enrolment into Woodwork Technology programme. Therefore, students should be enlightened during students' orientation at the beginning of every academic session about Woodwork Technology and they should be informed that experts in Woodwork Technology are not called Carpenter and the opportunities available to graduates of Woodwork Technology Education should be explained to them. Guidance counselors can play active role also by providing information on importance of Woodwork and job opportunities available for graduates of woodwork technology education. The above information can assist in strengthening students' enrolment in the course.

Recommendations

Based on the findings of the research, the following recommendations are:

(i) Guidance counselors should provide relevant information about Woodwork Technology Education and educate students about the benefits they will derive from the course after graduation.

(ii) Woodwork Technology workshop should be equipped with modern facilities. This can aid in improving students' enrolment in the course.

(iii) Woodwork Technology Education section should partner with industries, companies and ministries in order to strengthen the programme. This can be done through field trip and inviting resource persons to talk to students before choosing area of specialization. This can assist in improving students' enrolment in the course.

(iv) Woodwork lecturers should pay attention to students' problem when their assistance is sought especially with reference to the course. This can also enhance students' interest in the course leading to increase in enrolment in the programme.

(v) Lecturers in Woodwork Technology Education should encourage students to enrol in the course by using themselves as role models and also by telling the students the benefits of being Woodwork Technology experts.

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