

Technical Education in Nigerian Universities: Do Students' Perception of the Programme Changes Over time?

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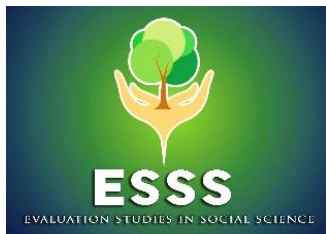
ABSTRACT

This study determined whether undergraduate technical education students' perception of the programme changes over time. Qualitative design approach was adopted. The population for this study was 174. However, due to the peculiar nature qualitative study, a total of 10 final year undergraduate technical education students drawn from the five Universities offering technical education programme participated in the study. Interview was used as instrument for data collection. Thematic analysis was used to analyze the data. Member checking was used to establish the validity and reliability of the result. Findings from the study indicated that students' perception of technical education in Nigeria universities relative to the knowledge of the programme prior to admission, the nexus between the programme and engineering/other related environmental courses and job prospect open to them after graduation changes as they advanced in the programme. It can therefore be concluded that vocational guidance and counselling services being rendered to secondary school leavers have not been effective and should be enhanced.

Keywords: *Technical Education, Students, Perception, Universities*

INTRODUCTION

The demand for a more competitive education has been on the increase in recent time (Triventi, 2013). This sharp increase can be attributed to many factors including the skills mismatch observed by employers among graduates relative to the needs of the industries (Auta & Onwusuru, 2022). In order to arrest the situation, many countries have been calling for the need to make the entire education system vocational in order to provide relevant and adequate education to the youths that will be responsive to the societal needs (Kareem, Maaji & Mohammed, 2016). Technical Education is one of the vocational studies that is geared towards achieving such lofty objectives. Technical education is referred to that aspect of educational process which involves in addition to general education, the study of related sciences and the acquisition of practical skills, attitude, understanding and knowledge relating to occupation in various sectors of economic and social life (Federal Republic of Nigeria, 2013). These



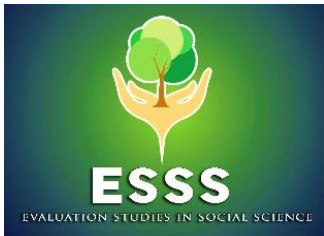
programmes are run in the colleges of education for the award of Nigeria Certificate in Education (Technical); in the polytechnics, leading to the award of National Diploma and Higher National Diploma and the Universities which is the focus of this study for the award of Bachelor degree.

Technical Education programme in Nigerian universities is geared towards equipping students with knowledge and skills needed to function as teachers and industry practitioners, this can be achieved through the instruments of either paid or self-employment (Auta, 2017). However in Nigeria, data obtained indicated that secondary school leavers who sat for the Unified Tertiary Institution Matriculation Examination (UTME) conducted by the Joint Admission and Matriculation Board (JAMB) hardly chose technical education as a proposed course of study in their respective universities of choice. For instance, in the 2021/2022 session, the researchers' personal observation and investigation indicated that no UTME applicant chose technical education programme in all the five universities offering the programme in south eastern Nigeria at the first round. The few that were unable to secure admissions into engineering were advised by the respective universities to consider a change of course in order to fill the unsubscribed programme. Consequently, a number of applicants accepted the offer, while others declined.

Though, this unpleasant experience can be attributed to many factors, the principal clog in the wheel is the long held belief that technical education is reserved for the less intelligent students (Leanne, Nola & Karen, 2008) who may not have the intellectual capacity to cope if admitted into other prestigious courses such as law, medicine, engineering among others. This is in addition to other extraneous factors such as its similarity with other engineering and environmental programmes and the near absence of vocational guidance and counseling services in our secondary schools. The question is: Does the perception technical education students' of the programme changes over time?

Several studies on this subject-related matter were carried out in the past. In a study conducted by James, Andrew and Wilson (2019) on the perceptions of secondary school students towards vocational education: A case study of Kampala District, the authors reported a negative students perception towards vocational education and attributed same to lack of adequate information and the inadequacy of the existing channels through which secondary schools transmit vocational education. Leanne, Nola, and Karen (2008) had earlier conducted a study on secondary school students' perceptions of, and the factors influencing their decision making in relation to, VET in schools. The study found that 81% of students participated in VET programmes largely because they associated VET with future job opportunities, 73.1% associated VET with a recognized qualification, while 62% perceived VET as good for students who are not suited for academic careers.

Additionally, St. Gean (2010) conducted a study on High school students' perception of career technical education and factors that influence enrolment in programs at a regional occupational centre. Findings from this study indicated that high school students who enrolled in CTE courses outside school have a career plan and understand the benefits of completing high school and pursuing additional education to achieve their career goals. The researchers also reported that the students who enrolled in CTE courses outside the school day are



influenced to enrol in CTE by friends, mothers, and female guardians. The study also found that CTE courses are for all students including those who struggle academically.

Based on the literatures reviewed in the preceding paragraphs, it can be seen that most of the studies focused on the perception of High School (Secondary School) technical and vocational education students outside the area of this study. Hence, to the best of the researchers' knowledge, there were no empirical evidences on whether students' perception of the technical education programmes obtained in the universities in Nigeria change overtime. That is the gap this study attempted to fill.

METHODOLOGY

Research Design

In this study, qualitative research design was adopted. Hammersley (2013) defined qualitative design as:

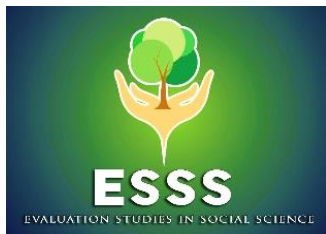
“a form of social inquiry that tends to adopt a flexible and data-driven research design, to use relatively unstructured data, to emphasize the essential role of subjectivity in the research process, to study a number of naturally occurring cases in detail, and to use verbal rather than statistical forms of approach” P.12

The choice of this research design was premised on the fact that, it provides an in-depth, elaborate and detailed understanding of meanings, actions, including both observable and non-observable phenomena, attitudes, intentions and behaviours through naturalistic enquiry (Gonzales, Brown & Slate, 2008). This research design therefore, afforded the researcher the opportunity to “dig deeper” in order to arrive at detailed understanding on whether undergraduate technical education students' perception of the programme changes over time.

Participants

A total of 174 participants spread across the five universities offering technical education programme in south eastern part of Nigeria constitute the population of this study. Purposive sampling was used to select 10 participants comprising two final year students from each of the five institutions. This is in line with Sandelowski (1995) who opined that in qualitative study, “the sample should not be too large that it is difficult to make deep, case-oriented analysis”. Thus, a sample size of 10 can be considered as adequate for this study.

The researcher leverage on the long established tradition of electing class representative (Class Rep.) at all levels in the university and adopted same as part of the criteria used for the selection of the participants. Therefore, a total of five class reps. drawn from the five respective



institutions were selected as participants. In order to ensure gender balance in the research outcomes, one female student (if any) whose matriculation/registration number appeared first in the official class list of each of the institutions covered by this study were selected as participants. Table 1 shows the demographic distribution of the participants.

Table 1

Demographic Distribution of the Participants

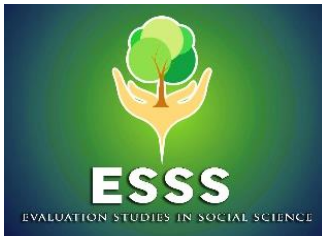
S/N	Institution	Male	Female	N
1	Enugu State University of Science and Technology	1	1	2
2	University of Nigeria Nsukka	2	0	2
3	Ebonyi State University Abakaliki	1	1	2
4	Michael Okpara University of Agriculture Umudike	1	1	2
5	Nnamdi Azikiwe University Awka	1	1	2
	Total	6	4	10

The data presented in Table 1 shows the demographic distribution of the participants. The data indicated that 10 purposively sampled undergraduate technical education students participated in the study. Out of the 10, six (60%) were male while four (40%) were female. The imbalance in the gender of the participants arose as a result of the fact that in one of the institutions, there was no female students in the final year class.

Data Collection Procedures

The data for this study was collected through Interviews. This is because interview is one of the most potent ways in which an interviewer can have the opportunity to ask follow-up questions based on the response received (Dawson, 2009). As suggested by Creswell (2013), an interview protocol which is “a form designed by the researcher that contains the instructions for the process of the interview, the questions to be asked, and space to take note of responses from the interviewee” was prepared so that the researcher can have a guide during the conduct of the study.

The two participants in the institution where the researcher was a faculty member were contacted face-to-face by the researcher; while the remaining eight were contacted through four research assistants. In the four institutions, the interviews were scheduled at the convenient time of the participants and were carried out through whatsapp calls. Each round of interview lasted between 15 to 22 minutes per participant and was recorded with the inbuilt recording feature of the smart phone used for the interview. Thematic analysis was used to analyze the data. The recorded interviews were transcribed and coded in line with the following guide given by Braun and Clarke (2006) for thematic analysis: (i) familiarization through writing notes on the text, using highlighters and coloured pens to indicate special patterns. (ii) sorting and classification of codes into themes (iii) collation of all the coded data extracts for alignment



with the appropriate theme. (iv) reviewing of the coded data extracts for each of the themes to ensure the validity of individual theme relative to the data set to form a coherent pattern. (v) naming of themes in line with the essence of what each theme is about. (vi) writing of the thematic analysis report.

Validity and Reliability

As customary with all studies, the validity and reliability of the findings must be subjected to confirmation. In this study, member checking was used to determine the validity of the findings. This is the process whereby the researcher sought for the opinion of one or more of the participants to evaluate the accuracy of the account as presented in the findings (Creswell, 2013). Consequently, three of the participants were asked to appraise the accuracy of the report through carefully perusal of the content and identify any thing they felt was not well or fairly interpreted. There was no objection thereby reaffirming the validity and reliability of the findings.

RESULTS AND DISCUSSION

Following the thematic analysis of the data obtained from the field, the findings on whether undergraduate technical education students' perception of the programmes changes over time are presented and discussed under the following themes: (i) Knowledge of the Programme Prior to Admission (ii) The Nexus between the Programme and other Engineering/Environmental related programmes (iii) Job Prospects for the graduates.

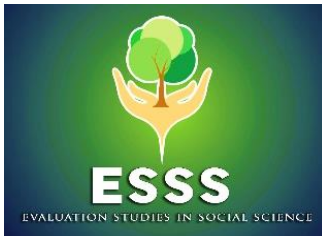
Knowledge of the Programme Prior to Admission

The participants confessed that they had no knowledge about technical education programme before they were admitted; but they are now better informed. According to them, they have no regret accepting the offer extended to them to study technical education programme in their respective institutions:

“I don't know anything about the course... but I am now conversant with what it's all about and I have no regret venturing into the programme”

“As against now, I had no idea of what the course is all about”

“Though I agreed out of desperation because I knew nothing about it, I am now pleased with it”



“I just wanted a degree that’s why I did that change of course to technical education after I failed to secure the one I wanted to study and when I looked back, it was a wise decision”

“My friend’s brother told me that the course is for dullards; but I now have a cause to disagree with him”

“I once followed my brother to the school and I saw a signpost of the department, but I don’t know what it’s all about; I now know better”

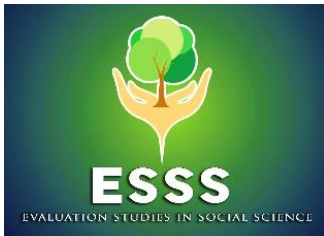
Based on this finding, it can be concluded that the perception of the knowledge of technical education by undergraduate technical education students changes over time. As they advanced in their academic pursuit, they begin to appreciate the vital roles technical education programme is meant to play in their collective wellbeing. In an earlier study conducted by Auta (2016), the author noted that, most of the students admitted into technical education programmes in Nigerian universities appears not to have idea of what the programme is all about.

The Nexus between the Programme and other Engineering/Environmental Related programmes

The participants acknowledged that, they have witnessed the existence of relationship between technical education programme and other engineering/environmental related courses. According to them, as they progress in their academic ladder, they began to observe the seeming similarities and the interconnections between technical education and other engineering and environmental related courses:

“To be frank with you, before I was admitted into technical education programme, I have never thought that the programme has anything in common with engineering. I applied to study mechanical engineering, but I was denied admission only to be asked to subscribe to technical education under supplementary admission. I was tired of staying at home, so, I had no option other than to accept. It was in my 200 and 300 levels that I noticed that we were offering some engineering courses together with those studying engineering. The irony is that, we perform better than them most of the time. I have no regret subscribing to technical education”

“This course is like engineering, in fact, we are better than them because we normally do both engineering and



education courses. So we are technologists and teachers at the same time. But they, they are only technologists. Though, before I reluctantly accepted the offer, I didn't know that technical education and engineering are almost the same. I have never heard of the course until when I was asked to choose it after failing to get admission into Architecture. ...I am enjoying the course”

“We actually offer some of our courses in environmental. Like me, I am a Building/Woodwork Technology major, so I take some of my courses in the department of building and Architecture”

“...at a point, I started asking myself why they wouldn't merge these departments? Because we do almost all the courses especially from year two with those guys studying electrical/electronic engineering”

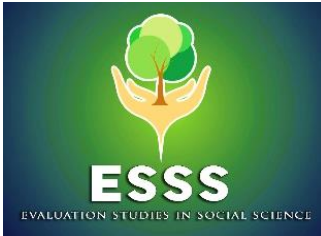
This finding provides a basis for the researcher to conclude that the respondents' perception of the relationship between technical education and other engineering/environmental relate courses changes as they move forward in their academic trajectory. This finding is in consistent with Kavin, Anbumani, Rameshkumar, and Syed Zabiyyullah (2014) who noted the existence of a strong bond between engineering and technical education. Relying on data obtained for India, the authors advocated for a greater synergy between technical education and engineering programmes as obtained in higher educational institutions in order to achieve their lofty goals.

Job Prospects for the graduates

The data analyzed show that, the respondents conceded to the fact that it was after some years of study they were able to appreciate the job prospects open to technical education graduates. They acknowledge that prior to their enrolment; they had no idea of the jobs that await them after graduation. They put it thus:

“I am happy that I am rounding off the programme and looking forward to working either in the industry or, in school especially technical school. But to be candidate, I had no idea of the job prospect of technical education student at the beginning of my journey in the university”

“I am going to the construction site straight after graduation. That's why I always thank my brother for advising me to accept the offer after I failed to get civil engineering”



“As a lady, I want to break the barrier that women can’t do “hard labour” jobs. Even during my IT, I refused to be intimidated by the guys in my team. I will go into private practice immediately I graduate from here. I have realized that the job prospect in technical education is even better than that of engineering that I intended to study- Engineers design, while we construct. I don’t know that before”

“The manager of workshop where I did my IT has assured me that once I am done with my programme, I should return to join them. And that is the way to go”

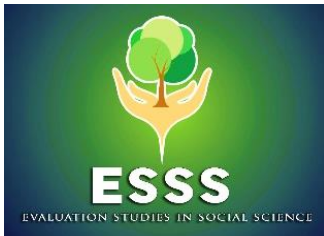
“I will go into teaching; I need to teach students so that they can have skills for self-reliance. I will also play a role of vocational counselor; I don’t want them to make an uniformed choice like us. Personally I was not comfortable with the course at the beginning, but immediately we went for IT, I fell in love with the course. I will also practice during my free time or may be weekends”

Based on this finding, it can be concluded that undergraduate technical education students’ perception of the jobs open to them prior to their enrolment into the programme changes as they progress in their academic pursuit. This finding was earlier echoed by Olajide (2015), in his study titled “repositioning technical and vocational education eradicating unemployment in Nigeria”. The author noted that, the main thrust of the programme had been distorted, hence he advocated for its proper repositioning to enable the prospective students identify the job opportunities available to them prior to their enrolment into the programme. As such may likely contribute to their academic progression during the course of the programme.

CONCLUSIONS AND IMPLICATIONS FOR FUTURE STUDIES

The focus of this study was to determine whether the perception of undergraduate technical education students of their programme changes over time. The reactions obtained from the participants suggest that their perception of the knowledge of the programme prior to admission, the nexus between the programme and other engineering/environmental related programmes, and the job Prospects for the graduates changes as they advanced in their academic pursuit in the university. Conclusively, the participants are of the view that their perception of technical education programme changes over time.

The implications of these findings for policy and practice is that, vocational guidance and counseling services in our secondary schools should be strengthen and fine-tuned in order

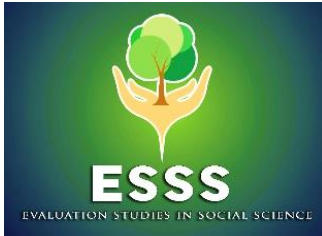


to deliver on its mandate. This is to ensure that secondary school leavers are kept abreast on what technical education is all about and what the programme is set to achieve. That knowledge may assist them to technical education from an informed angle in their applications for admission into the university through the UTME platform. It will further close the gap and change the narration on the stereotype being experienced by the programme.

One of the major strength of this study is that, qualitative design was adopted in the conduct of the study which afforded the researcher the opportunity to have collect data through the use of interview. That approach availed the researcher the opportunity to probe further based on the response received from the respondent being interviewed. However, there are inherent weaknesses such as the limitation of the areas covered and the sample size which may limit the generalization of the findings. Overall, the study has provided a spring board for further studies on whether the perception of undergraduate technical education students of the programme changes overtime in other jurisdictions.

REFERENCES

- Auta, M. A. (2016). Stakeholders' perception of adequacy of technology education programme in Nigerian universities for acquisition of requisite employable skills by students. *NAU Journal of Technology and Vocational Education* 1(1), 131-141.
- Auta, M. A. (2017). Adequacy of Technology Education programmes in Nigerian Universities in compliance with the benchmark for academic standards (BMAS). *Journal of Educational System* 1(1), 1-5.
- Auta, M. A. and Onwusuru, I. M. (2022). TVET graduates employability for construction industry: A mixed method study. *Online Journal of TVET Practitioners*, 7(1), 85-94.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77-101. doi: 10.1191/1478088706qp063oa
- Creswell, J. W. (2013). *Qualitative inquiry and research design: Choosing among five approaches*. SAGE.
- Dawson, C. (2009). *Introduction to research methods*. How to Books Ltd
- Federal Republic of Nigeria (2013). *National Policy on Education*, 6th edition. NERDC Press.
- Gonzales, L., Brown, M. S. and Slate, J. R. (2008). Teachers who left the teaching professions: a qualitative understanding. *The Qualitative Report*, 13(1), 1–11.
- Hammersley, M. (2013) *What Is Qualitative Research?* Bloomsbury Academic.
- James, K. Andrew, D., Wilson, K. (2019). The Perceptions of Secondary School Students towards Vocational Education: A Case Study of Kampala District. *International Journal of Research and Innovation in Social Science*, 3(6), 100-112.
- Kareem, W. B., Maaji, S. A. & Mohammed, B. M. (2016). Perception of Technical College Students on Woodwork Technology for Self-Empowerment in Niger State. Nigeria. *ATBU, Journal of Science, Technology & Education (JOSTE)*, 4(1), 40-49.



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- Kavin, R; Anbumani, S; Rameshkumar, R & Syed Zabiullah,G. (2014). The Development of Engineering and Technical Education in India. *International Journal of Advanced Technology in Engineering and Science*. 2(11), 151-155.
- Leanne, D. T., Nola, A. and Karen, W. (2008). Secondary school students' perceptions of, and the factors influencing their decision making in relation to, VET in schools. *The Australian Educational Researcher*, 35(2), 55-69.
- Olajide, S. E. (2015). Repositioning technical and vocational education eradicating unemployment in Nigeria. *International Journal of Vocational and Technical Education*, 7(6), 54-63.
- Sandelowski, M. (1995). Focus on quantitative methods: Sample sizes, in qualitative research. *Research in Nursing and Health*, 18, 179-183.
- St. Gean, L. M. (2010). High school students' perception of career technical education and factors that influence enrollment in programs at a regional occupational center. Unpublished D.Ed Dissertation Pepperdine University
- Triventi, M. (2013). The role of higher education stratification in the reproduction of social inequality in the labor market. *Research in Social Stratification and Mobility*, 32, 45-63.