

Technical Vocational Education and Training (TVET) Teacher Quality and Self-Efficacy of TVET Students (A case study College of Education, South-South- Nigeria)

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Abstract

This work determined the influence of Technical Vocational Education and Training (TVET) teacher quality and self-efficacy of Technical Vocational Education and Training (TVET) students at College of Education, Afaha Nsit, Nsit Ibom, South-South, Nigeria. Three research questions guided the study and the three hypotheses were tested at 0.05 level of significance. The study employed ex-post facto research design. The population of this study comprised 580 subjects. This included 40 lecturers and 540 students in the school of vocational and technical education at College of Education, Afaha Nsit. A stratified random sampling technique was used to choose 12 lecturers from 16 in the department of business education; 10 lecturers from 14 in the department of agricultural education; and 8 lecturers from 10 in the department of technical education respectively. 216 students were equally proportionately selected from the three departments for the study. Data were collected using questionnaires and tested using simple arithmetic means to answer research questions and regression analysis to test the hypothesis. The result of the analyses showed that there was a significant influence of lecturers' attitude towards classroom practices, lecturers' knowledge of the subject matter and lecturers' workshop management skills on self-efficacy of vocational education students. Based on the findings of the study it was concluded that teacher quality remains a crucial factor in the self-efficacy of vocational education students. It was therefore recommended among other things that lecturers should be sufficiently trained and re-trained on educational resources, and on their attitudes toward those resources so as to enable TVET lecturers improve upon self-efficacy beliefs of the TVET students.

Key Word: *Teacher Quality, Self Efficacy, Technical Vocational Education and Training (TVET)*

Introduction

Teacher quality and students' self-efficacy are two psychological concepts which researchers have established to be crucial in educational system. Teacher quality is synonymous to teacher's status, standard, and excellence, academic attainment,

teaching skills, competencies, experience, and other academic qualities. The outputs of the teachers are measured in terms of the reciprocal self-efficacy and performance of the students. Student's performance could be predicted by students' self-efficacy which is one's belief in one's ability to perform a task successfully. Accordingly, Usoro and Usoro (2010) asserted that the source of the student ability is the teacher. The corollary of this claim seem to be fact that high quality standard of a Technical Vocational Education and Training (TVET) teacher could have a positive impact on the self-efficacy beliefs of Technical Vocational Education and Training (TVET) students.

Self-efficacy has been defined by Bandura (1994) as the belief in one's capabilities to achieve a goal. It is a component of self-concept which is motivational in nature. The researchers noted that students with high assurance in their capabilities approach difficult tasks as challenges to be mastered rather than as threats to be avoided. Such an efficacious outlook fosters intrinsic interest and deep engrossment in activities. Kirk, (2005) corroborated that students with strong sense of efficacy are more likely to put forth a high degree of effort in order to meet commitments, and attribute failure to things which are in their control rather than blaming external factors. Hence, students with strong self-efficacy approach threatening situations with assurance that they can exercise control over them. In contrast, students who doubt their capabilities shy away from difficult tasks and consider challenging tasks as personal threats that should be avoided. Such students have low aspirations and weak commitment to the goals they choose to pursue. They slacken their efforts and give up quickly in the face of difficulties. (Etuk, 2008)

The Federal Government of Nigeria (FGN, 2013), in the National Policy on Education admitted that, since no education system can rise above the quality of its teachers, teacher education shall continue to be given major emphasis in all educational planning and development among other things to:-

- Produce high motivated conscientious and efficient classroom teachers for all levels of an educational system; and
- Provide teachers with the intellectual and professional background adequate for their assignment and make them adaptable to changing situations.

The implication of the above quality requirements is that, if a TVET teacher is sufficiently trained to attain high quality standard in terms of attitudes toward classroom practices, knowledge of the subject matter, workshop management skills, among others, he should be a role model that impacts positively on the efficacious beliefs of students about their own abilities, capabilities, skills and competencies in the bid to attain better academic achievement.

In Colleges of Education, Joshua (2009) noted that the teacher-trainees have poor and negative attitudes toward teaching profession, especially if their parents had been in it. In the Departments of Technical Vocational Education and Training, the authors observed that some TVET students exhibit negative attitudes toward the profession because of the technical skills as well as lecturers' unfair attitudes toward the skills and learner themselves. The lecturers also blamed poor students' attitudes toward Technical Vocational and Education and Training programmes on poor training environment which encompasses poor infrastructures, poor Information and Communication Technology (ICT), poor tools and equipment, dysfunctional machines, lack of some specimens, and other educational resources. The effects of these on self-efficacy of students are better imagined.

Joshua (2009) decried the ill-equipped workshops, laboratories, studios, libraries, and low-carrying capacities in the departments of vocational and technical education at Colleges of Education, Polytechnics and Universities in Nigeria. This has been among the sources of non-motivation and negative self-efficacy beliefs of the students about their manipulative skills and workshops competencies. The researchers noted a general low students' self-efficacy towards the learning and acquisition of those skills in schools and colleges in Akwa Ibom State, Nigeria. While some students are not eager to learn the skills and willing to tackle new challenges, others seem uninterested and unmotivated. A greater number of TVET students demonstrate low levels of confidence in their abilities to grasp the skills and sometimes shy away from going to the workshops and laboratories where the working tools, equipment and machines are installed. Such low efficacious outlook does not produce personal accomplishment and self actualization in TVET.

It may not be out of place to observe a general unmotivated behaviours and poor attitudes of both the teachers and students toward Technical Vocational Education and Training at Colleges of Education in Nigeria. The researchers noted that there is a complete absence of some training facilities, and inadequate supply of the facilities in the workshops, laboratories, studios, libraries and offices. From the afore-mentioning background, this work therefore attempted to determine whether TVET students' self-efficacy could be traced to TVET teacher quality status at College of Education, Afaha Nsit.

Purpose of the Study: This study determined the influence of Technical Vocational Education and Training teacher quality on self-efficacy of Vocational Education and Training students at College of Education, Afaha Nsit. Specifically, the study sought to answer the following **Research Questions:**

1. What is the influence of Technical Vocational Education and Training (TVET) lecturers' attitude towards classroom practices on self-efficacy of Technical Vocational Education and Training (TVET) students at College of Education, Afaha Nsit.
2. What is the influence of Technical Vocational Education and Training (TVET) lecturers' knowledge of the subject matter on self-efficacy of Technical Vocational Education and Training (TVET) students at College of Education, Afaha Nsit.
3. What is the influence of Technical Vocational Education and Training (TVET) lecturers' workshop management skills on self-efficacy of Technical Vocational Education and Training (TVET) students at College of Education, Afaha Nsit.

Null Hypotheses

The following hypotheses were formulated and tested at 0.05 level of significance:-

- H₀₁. Technical Vocational Education and Training (TVET) lecturers' attitude towards classroom practices has no significant influence on self-efficacy of Technical Vocational Education and Training (TVET) students at College of Education, Afaha Nsit.
- H₀₂. Technical Vocational Education and Training (TVET) lecturers' knowledge of the subject matter has no significant influence on self-efficacy of Technical

- Vocational Education and Training (TVET) students at College of Education, Afaha Nsit.
- H₀₃. Technical Vocational Education and Training (TVET) lecturers' workshop management skills have no significant influence on self-efficacy of Technical Vocational Education and Training (TVET) students at College of Education, Afaha Nsit.

Methodology

This study used ex-post facto design. Ndiyo (2010) asserted that the researcher could only investigate the relationship between the dependent and independent variables by probing the minds of the subjects under examination. This design was therefore deemed most appropriate because the independent variable of the study could not be manipulated by the researcher. The population of this study was 580 subjects comprising 40 lecturers and 540 year two to four students in the school of Technical Vocational Education and Training (TVET), College of Education, Afaha Nsit. The researchers decided to study 75% of the lecturers amounting to 30 lecturers and 40% of the students which amounted to 216 students. Hence, the total sample size was 246 subjects which is 42.4% of the total population. The method of proportionately stratified random sampling was used to choose 30 from 40 lecturers and 216 from 540 students in the three departments in the school of Vocational and Technical Education. The researchers developed two instruments used for data collection. The first (i.e. lecturers') instrument was the 30-item TVET Lecturers' Quality Status Questionnaire styled VELQSQ. The second (i.e. Students') instrument was another 30-item Self-Efficacy of TVET Students toward Lecturers' Quality Status Questionnaire referred to as SEVESLQSQ. The first 30-item VELQSQ was divided into sections A and B. Section A inquired for bio-data of the lecturers while Section B was categorized into sub-sections I, II, and III. Each item in Section B of the VELQSQ has 5 levels of response options of Very High (VH, 5 points), High (H, 4 points), Moderate (M, 3 points), Low (L, 2 points) and Very Low (VL, 1 point) respectively. Similarly, the second instrument, SEVESLQSQ, has sections A and B. Section A, inquired for the personal data of the students while Section B was categorized into sub-sections I, II, and III. Each item in Section B of the SEVESLQSQ has 5 levels of Likert scale continuum of Strongly Agreed (SA, 5 points), Agreed (A, 4 points), Undecided (U, 3 points), Disagreed (D, 2 points) and Strongly Disagreed (SD 1 point) respectively. A respondent was requested to tick () one option that suits his or her sincere opinion. Face validation of the instruments was obtained through the judgment of three specialists drawn from the Department of Vocational Education, University of Uyo, Uyo. The specialists made necessary modifications, suggestions for improvement and corrections of the instruments before the final copies were produced and used for the study. The reliability of each instrument was determined using a different population. Each instrument was tested for reliability using the split-half measurement technique. The internal consistency of the two-halves was determined using Pearson's Product Moment Correlation coefficient (r) and a reliability coefficient (R) was computed using Spearman-Brown prophesy formula: The lecturers' instrument (VELQSQ) has the Pearson's correlation coefficient (r) of the two halves to be 0.82 while the reliability coefficient (R) of the whole test was computed to be 0.90. The students' instrument (SEVESLQSQ) has the Pearson's correlation coefficient (r) of the two halves to be 0.76 while the reliability coefficient (R) of the whole test was 0.86. As each of the reliability

coefficients was closer to 1, it is evident that the instruments were reliable to measure what they were measuring. The questionnaires were distributed personally to the respondents under the assistance of unit heads. The total number of questionnaires distributed were completed and returned successfully by the respondents. No questionnaire was voided. Hence a hundred percent (100%) response rate was attained.

Data collected were analyzed using simple arithmetic means and standard deviation for research questions and regression analysis for hypotheses.

Research Question 1 What is the influence of TVET lecturers' attitude towards classroom practices on self-efficacy of TVET students at College of Education, Afaha Nsit?

Table 1: Mean Rating and Standard Deviation of TVET Students' Responses on the Influence of TVET Lecturers' Attitude towards Classroom Practices on Self-efficacy of TVET Students at College of Education, Afaha Nsit

S/N	Items on influence of lecturers' attitude towards classroom practices on students' belief system	Mean	Std. Dev.	Remark
1.	Lecturers' attitude towards classroom teaching gives me confidence in what I learn.	3.43	1.10	Positive Influence
2.	Lecturers' attitudes toward me in the classroom motivate me into effective learning.	3.23	1.33	Positive Influence
3.	Lecturers' attitudes toward class punctuality stimulate my mind to effective learning.	3.30	1.09	Positive Influence
4.	Lecturers' attitudes toward the use of instructional facilities increase my dexterity in the use of the facilities.	3.27	1.36	Positive Influence
5.	Lectures' attitudes toward classroom management motivate me into positive learning habits.	3.50	1.58	Positive Influence
6.	Lecturers' attitudes toward classroom discipline stimulate my emotions to conform to desired.	3.17	1.23	Positive Influence
7.	Lecturers' attitudes toward improvisation of teaching resources increase my interest in learning.	3.67	1.21	Positive Influence
8.	Lecturers' attitudes toward his methods of teaching increase my confidence in learning.	3.90	0.92	Positive Influence
9.	Lecturers' attitudes toward continuous assessment encourage me to learn.	4.33	0.71	Positive Influence
10.	Lecturers' attitudes toward examination give me self trust in my academic performance	3.43	0.86	Positive Influence
.	TOTAL	3.52	1.14	Positive Influence

Table 1 shows that each of the means to items 1-10 was above the cut-off point of 3.00. This reflects a high positive influence of TVET lecturers' attitude towards classroom practices on self-efficacy of TVET students at College of Education, Afaha Nsit.

Research Question 2

What is the influence of (TVET) lecturers' knowledge of the subject matter on self-efficacy of TVET students at College of Education, Afaha Nsit?

Table 2: Mean Rating and Standard Deviation of TVET Students' Responses on the Influence of TVET Lecturers' Knowledge of the Subject Matter on Students' Belief System.

S/N	Items on influence of lecturers' knowledge of the subject matter on students' belief system.	Mean	SD	Rmk
1.	Lecturers' mastery of the course content increases myself confidence in learning.	3.27	1.11	Positive Influence
2.	Lecturers' mastery of the unit plan increases my interest in learning.	3.60	1.47	Positive Influence
3.	Lecturers' mastery of requisite skills increases my self-beliefs about the skills learnt.	4.17	.65	Positive Influence
4.	Lecturers' knowledge of my entry behaviour gives me encouragement to have a good start with him.	3.70	1.03	Positive Influence
5.	Lecturers' mastery of instructional facilities increases my belief in my learning abilities.	3.80	0.96	Positive Influence
6.	Lecturers' mastery of teaching strategies promotes my confidence in my learning abilities.	3.37	1.46	Positive Influence
7.	Lecturers' mastery in theoretical concepts gives me assurance in my learning experience.	3.43	0.89	Positive Influence
8.	Lecturers' mastery in practical exercises builds up my confidence in skills learnt.	4.33	0.72	Positive Influence
9.	Lecturers' mastery of students' characteristics increases my confidence to learn.	3.67	1.03	Positive Influence
10.	Lecturers' mastery in class evaluation increases my belief about my performance.	3.80	0.85	Positive Influence
Total		3.71	1.02	Positive influence

Table 2 indicates that each of the means to the next ten items was above the cut-off point of 3.00. This means that there was a high positive influence of TVET lecturers' knowledge of the subject matter on self-efficacy of TVET students at College of Education, Afaha Nsit.

Research Question 3 What is the influence of (TVET) lecturers' workshop management skills on self-efficacy of TVET students at College of Education, Afaha Nsit?

Table 3: Mean Rating and Standard Deviation of TVET Students' Responses on the Influence of TVET Lecturers' Workshop Management Skills on Self-efficacy of TVET Students at College of Education, Afaha Nsit.

S/N	Items on influence of lecturers' workshop management skills level on students' belief system	Mean	Std. Dev.	Remark
1.	Lecturers' facility planning competencies strengthens my self-worth in practical exercises.	3.42	1.01	Positive Influence
2.	Lecturers' proficiency in selecting instructional facilities increases my confidence in using the facilities.	3.55	1.37	Positive Influence
3.	Lecturers' ability to administer first aid treatment reposes confidence in my learning abilities.	4.08	0.88	Positive Influence
4.	Lecturers' proficiency in controlling equipment strengthens my learning capabilities.	3.20	1.04	Positive Influence
5.	Lecturers' ability to control students' laboratory practices motivates me into effective learning.	3.80	0.96	Positive Influence
6.	Lecturers' proficiency in coordinating students' laboratory practices increases my self-motive to learn.	3.37	1.11	Positive Influence
7.	Lecturers' compliance with laboratory safety practices removes fear in using laboratory equipment.	3.43	0.89	Positive Influence
8.	Lecturers' proficiency in maintenance of equipment increases my equipment maintenance competencies.	3.13	0.82	Positive Influence
9.	Lecturers' workshop supervisory roles stimulate my mind-set on the use of tools.	3.27	1.05	Positive Influence
10.	Lecturers' commitment to proper storage of tools gives me confidence in my ability to retrieve the tools for use.	3.46	0.86	Positive Influence
Total		3.47	1.00	Positive Influence

Table 3 shows that each of the means to the ten items was above the cut-off point of 3.00. This reflects a high positive influence of TVET lecturers' workshop management skills on self-efficacy of TVET students at College of Education, Afaha Nsit.

Null Hypothesis 1

Vocational education lecturers' attitude towards classroom practices has no significant influence on self-efficacy of vocational education students at College of Education, Afaha Nsit.

Table 4: Regression Analysis of the Influence of TVET Lecturers' Attitude towards Classroom Practices on Self-efficacy of TVET Students at College of Education, Afaha Nsit.

Model	Sum of Squares	df	Mean Square	F	Sig.
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Regression	14.071	10	1.407		
Residual	25.796	19	1.358	1.036	.002
Total	39.86	29			

R = 0.744, R² = 0.554

Table 4 shows the regression analysis of the influence of lecturers' attitude towards classroom practices on self-efficacy of vocational education students. The result indicated that the F-ratio was 1.036 with a probability value (P) of .002 at .05 level of significance. Since the P-value of .002 was less than the significant level of .05, the null hypothesis was rejected. Thus, there was a significant influence of lecturers' attitude towards classroom practices on students' self-efficacy beliefs. The result also showed the coefficient of determination R² value of 0.554. This means that 55.4% variations in students' self-efficacy beliefs was as a result of teachers' attitude toward classroom practices.

Null Hypothesis 2

TVET lecturers' knowledge of the subject matter has no significant influence on self-efficacy of TVET students at College of Education, Afaha Nsit.

Table 5: Regression Analysis of the Influence of TVET Lecturers' Knowledge of the Subject Matter on Self-efficacy of TVET Students at College of Education, Afaha Nsit.

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	12.210	10	1.221		
Residual	27.657	19	1.456	.839	.005
Total	39.867	29			

R = 0.711, R² = 0.506

Table 5 shows that the F-ratio was .839 with the probability values (P) of .002 at the significant level of .05. Since the P-value of .005 was less than the significant level of .05, the null hypothesis was rejected. Thus, there was a significant influence of vocational education lecturers' knowledge of the subject matter on self-efficacy of vocational education students. The result of the test also indicated the coefficient of determination R² value of 0.506. This implies that 50.6% variation in students' self-efficacy was attributed to lecturers' knowledge of the subject matter.

Null Hypothesis 3

TVET lecturers' workshop management skills have no significant influence on self-efficacy of TVET students at College of Education, Afaha Nsit.

Table 6: Regression Analysis of the Influence of TVET Lecturers' Workshop Management Skills on Self-efficacy of TVET Students at College of Education, Afaha Nsit.

Model	Sum of Squares	df	Mean Square	F	Sig.
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Regression	29.702	10	2.970		
Residual	10.164	19	.535	.552	.009
Total	39.867	29			

$R = 0.863, R^2 = 0.745$

Table 6 revealed that the F-ratio was .552 with the probability value (P) of .009 at the significant level of .05. Since the P-value of .009 was less than the significant level of .05, the null hypothesis was rejected. Thus, there was a significant influence of vocational education lecturers' workshop management skills on self-efficacy of vocational education students. The result of the test also revealed the coefficient of determination R^2 value of 0.745, meaning that 74.5% variation in students' self-efficacy was due to the lecturers' workshop management skills.

Findings of the Study

The findings of this work were that:

- i. There was a high positive and statistical significant influence of vocational education lecturers' attitude towards classroom practices on self-efficacy of vocational education students at College of Education, Afaha Nsit.
- ii. There was a high positive and statistical significant influence of vocational education lecturers' knowledge of the subject matter on self-efficacy of vocational education students at College of Education, Afaha Nsit.
- iii. There was a high positive and statistical significant influence of vocational education lecturers' workshop management skills on self-efficacy of vocational education students at College of Education, Afaha Nsit.

Discussion of the findings

The first finding of this work was a high positive influence (Table 1) and statistical significant influence (Table 4) of vocational education lecturers' attitude towards classroom practices on self-efficacy of vocational education students at College of Education, Afaha Nsit. According to this study, the influence of lecturers' attitude was directed towards such classroom practices as teaching, class punctuality, the use and improvisation of instructional facilities, classroom management, classroom discipline, teaching methods, continuous assessment and examination conduct. We could therefore state without equivocation that the attitudes of vocational education lecturers toward those class activities determine students' self-efficacy beliefs in what they acquire from the lecturers in a classroom situation. This finding lends credence to Bob (2014) who found out that teacher's level of attitude towards himself, his lessons, his materials, his skills and competencies, and his learners would go a long way to build confidence in the learning experiences of the students.

Next finding of this study was a high positive influence (Table 2) and statistical significant influence (Table, 5) of vocational education lecturers' knowledge of the subject matter on self-efficacy of vocational education students at College of Education, Afaha Nsit. The subject matter knowledge of the lecturer which help to build up students' self-efficacy encompass the mastery of the course content, unit plan, requisite skills and competencies, knowledge of students' entry behaviour, instructional facilities, teaching strategies, theories, students' characteristics and class evaluation. This finding agrees with Shulman (1992) who found out that successful teaching

encompasses teachers mastery of the pedagogical content to be taught as well as the transformation of the content into forms that are pedagogically powerful and yet adaptive to the variety of students' abilities and background. Eddie (2003) added that a teacher who has a shallow knowledge of the subject matter, usually beats about the bush and ends up in students' low self-efficacy beliefs about their academic abilities, skills and competencies.

This study finally revealed a high positive influence (Table 3) and statistical significant influence (Table 6) of vocational education lecturers' workshop management skills on self-efficacy of vocational education students at College of Education, Afaha Nsit. The areas of the workshop management skills of the lecturers which influence positively, the self-efficacy of students included facility planning, selection of instructional facilities, first-aid treatment, control of equipment, control of students' laboratory practices, coordination of students' laboratory practices, compliance with laboratory safety practices, maintenance of equipment, workshop supervision and storage of tools. The finding was corroborated by Cohen and Soto (2007) whose study revealed that teachers' dexterity in the use, maintenance and storage of tools, equipment and machines, builds strong confidence in learners' acquisition of workshop and laboratory skills and practices.

Conclusion

Based on the findings of this work, it was concluded that teacher quality remains a crucial factor in students' self-efficacy beliefs about their competencies, abilities and self-worth respectively. It was also concluded that the more the quality of the teacher improves, the more the students have confidence in what they learn from the teacher. The teacher is therefore the custodial of the requisite skills and knowledge to be acquired by the learners.

Recommendations

Based on the findings and conclusions of this study, the following recommendations were made:-

1. Sufficient re-training and development should be given to the lecturers on the new and emerging TVET skills in order to raise their standard of performance and quality status in modern classroom setting.
2. TVET lecturers should be re-trained on personality development in order to make them a good and attractive model in the classroom.
3. TVET lecturers should be sufficiently exposed to the content of the lesson to enable them deliver such a lesson satisfactorily to the learners.
4. The State government should equip school workshops and laboratories with the required materials and resources in order to ease students' acquisition of skills and competencies.
5. TVET lecturers should be sufficiently trained on workshop and laboratory management competencies to enable them maintain healthy practices during training.

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