Cypriot Journal of Educational Sciences

Volume 10, Issue 3, (2015) 192-204

http://sproc.org/ojs/index.php/cjes/

Academic performance of Students during transition period before choice of disciplines in Nigeria Certificate in Education (Technical) programme

Japo Oweikeye Amasuomo*, Department of Vocational and Technology Education, Faculty of Education, Niger Delta University, Wilberforce Island, Bayelsa State, Nigeria.

Suggested Citation:

Amasuomo, J. O. (2015). Academic performance of Students during transition period before choice of disciplines in Nigeria Certificate in Education (Technical) programme. *Cypriot Journal of Educational Sciences*. *10*(3), 192-204. doi: http://dx.doi.org/10.18844/cjes.v1i1.65

Received July 08, 2015; revised August 20, 2015; accepted September 16, 2015.
Selection and peer review under responsibility of Prof Dr. Huseyin Uzunboylu & Assist. Prof. Dr. Cigdem Hursen, Near East University.

Abstract

The study examined the academic performance of students in the compulsory courses in technical education during the transition period of first and second years of three years Nigeria Certificate in Education (NCE) Technical programme before choosing their disciplines in the third year. The study comprised of 237 students that consisted of Automobile, 22; Building, 8; Electrical/Electronics, 21; Metalwork, 24; and Woodwork, 4 admitted into year one in 2002/2003, 2003/2004 and 2004/2005 academic sessions who transited to third year of the programme in 2004/2005, 2005/2006 and 2006/2007 academic sessions respectively. Data consisted of examination scores for 20 compulsory courses offered by the students and was analyzed with the arithmetic mean, one-way ANOVA and the Scheffe's test. The study established that, students in Electrical/Electronics discipline performed better than their counterparts who made Automobile, Building, Metalwork and Woodwork as their discipline, and the academic performance of the five groups of students differed significantly.

Keywords: academic, performance, transition, specialization.

*ADDRESS FOR CORRESPONDENCE: **Japo Oweikeye Amasuomo,** Department of Vocational and Technology Education, Faculty of Education, Niger Delta University, Wilberforce Island, Bayelsa State, Nigeria.
E-mail address: japoamasuomo@gmail.com / Tel: +2348033415457

1. Introduction

The Nigeria Certificate in Education (NCE) Technical Programme is a three-year post-secondary education aimed at providing technical teachers with the intellectual and professional background adequate for teaching technical subjects and make them adaptable to any changing situation in technological development (NCCE, 2008). There are basically five disciplines/departments namely Automobile, Building, Electrical/Electronics, Metalwork and Woodwork Technology (NCCE, 2008); and they are domiciled in the School Of Technical Education. The technical teachers produced from this programme are expected to offer all the courses listed in the first and second years of the programme from all the five disciplines in Technical Education. The purpose is to enable the students acquire a basic knowledge of all the courses in the various disciplines which they shall later teach in either the junior secondary school or junior technical colleges as basic technology. The junior secondary school or junior technical college is the first three years of a post-primary school programme of six years.

However, in the third year of the NCE Technical programme, the students shall specialize in the disciplines or occupational areas of their choice or transfer to any other discipline/department based on the performance of the students in the related courses leading to any of the disciplines to enable them fit into a profession in the industry. For the purpose of this study, the first two years of the three years NCE Technical programme where a student may decide to continue or retained in the disciplines he/she was initially admitted or advised to transfer to any other department based on academic performance is the transition period.

The students in the five different disciplines (Automobile, Building, Electrical/Electronics, Metalwork and Woodwork Technology) were taught all the listed compulsory courses during the first and second years of the NCE (Technical) programme even though they were initially admitted into the various disciplines of their choice. It is therefore assumed that, all the students had equal exposure to the listed courses and therefore, their performance in the related compulsory courses offered together in the transition period was not expected to differ significantly.

From the foregoing, the researcher became interested in finding out how these five groups of students (Automobile, Building, Electrical/Electronics, Metalwork and Woodwork Technology) would perform academically in the listed compulsory courses during the transition period of the first and second years since transfer to other disciplines depend on performance in the related courses.

1.1. Literature Review

In education, the term transition typically refers to the three major transitional points in the public education system when students move from elementary school to middle school, from middle school to high school, and from high school to college. However, students experience other transitions during their educational journey such as advancing from one grade level to the next (Great Schools Partnership, 2014). In this study, transition is considered as advancing from one grade level to the next level.

Further, academic performance according Wikipedea (2013) is the outcome of education; the extent to which a student, teacher or institution has achieved their educational goals. Thus performance is characterized by performance tests in coursework; and performance of students in examinations (Kyoshaba, 2007). In this vein, when people hear the term “academic performance” they often think of a person’s GPA. People often consider grades first when evaluating academic achievement. This includes schools, which rank students by their GPA, awarding special designations such as valedictorian and salutatorian for those who graduate first and second in their class. Scholarship organizations and universities also start by looking at grades, as do some employers, especially when hiring recent graduates (Williams, 2015).Therefore, students’ performance (academic achievement) plays an important role in producing the best quality graduates (Ali, Jusoff, Ali, Mokhtar & Salamat, 2009) and students’

academic performance measurement has also received considerable attention in various works (Mushtaq & Khan, 2012).

Various factors have been identified to have affected students' academic performance or achievement in schools, colleges and at the university level. Some of the factors identified are: students' efforts, previous or prior educational performance, self motivation, parents' social-economic status, students' age, daily study hours, admission points, entry qualifications, tuition trend as well as the students' area of residence (rural or urban) (Ali, Haider, Munir, Khan & Ahmed, 2013; Farooq, Chaudry, Shafiq & Berhanu, 2011), academic background of the students admitted into a programme of study (Geiser & Stantellices, 2007; Dalziel & Peat, 1996; Ihiegbulem, 1992); the type of school a child attended prior to admission into a programme (Considine & Zappala, 2002; Kyoshaba, 2007); and the several entry qualifications obtained by the students for admission into a higher academic programme (Mlambo, 2011; Ibe-bassey, 1988). However, the above factors which influence academic performance are not related to performance during transition periods.

In this study, admission points or entry qualifications and grade point average (GPA) which are results of prior or previous academic performance; and interest, self-efficacy and commitment which are likely to affect students academic performance in future educational experiences are considered for this study since the research is about academic performance of students during transition period within a tertiary institution and not from a secondary to tertiary institutions.

Tertiary institutions all over the world including Nigeria use prior academic performance in terms of admission points or different entry qualifications/certificates as a basis for selecting students for admission into the first year of tertiary education programmes. These admission points or entry certificates are always of equivalent rating or value though may be awarded by different examination bodies. Thus Bratti and Staffolani, 2006 observed that measurement of students' prior educational outcomes or performance is the most important indicators or determinants of students' future academic performance. In this regard, Dalziel and Peat (1996), in a study on academic performance during student transition to university studies also submitted that performance at school is a relatively good predictor of performance at university. In a related study on admission characteristics and academic performance of podiatric and osteopathic medical students at Des Moines University, Yoho, Vardaxis and Comstock (2010), used Podiatric and Osteopathic medical students who took medical biochemistry in the first year and medical pharmacology in the second-year as final common course. The osteopathic students showed significantly better performance than the podiatric medical students in matriculating overall and science grade point averages, total Medical College Admissions Test scores and the medical biochemistry course. There was no difference in the performance of the student groups in the medical pharmacology course. They concluded that the academic performance of osteopathic students were higher than those of podiatric medical students because they also performed better in matriculating overall and science grade point averages and total Medical College Admissions Test scores.

From the foregoing, do other researchers agree totally that prior educational performance and admission point/entry qualification affect future academic performance? The answer is no. Huws, Reddy and Talcott (2006) in a study on relationship between previous academic performance and subsequent achievement at university level found that, students learning or studying at graduate level and the score secured did not predict any academic achievement at university. The academic Admission Council of Oregon state University, (2003) also disagreed with the view that academic performance is determined by prior academic performance. They held that, traditional measures of academic potentials such as grade point or A' Level grades did not predict academic performance at university. Mlambo (2011) also reported that, there was no significant difference in the academic performance between students due to differences in admission criteria employed though varied, are adequate assessment of the potentials of students to grapple with the demands of courses in agriculture. However, it is very important to note that even though these studies do not agree with former studies who explored that

previous studies achievement affect future performance confirmed that the admission scores are related to academic performance at university level but to a very minimal extent (Ali, Haider, Munir, Khan & Ahmed, 2013; Mlambo, 2011; Kyoshaba, 2007).

A student's college grade point average (GPA) represents a key indicator of academic achievement, and GPAs are one of the only quantifiable, agreed-upon measures of academic success in college (Plant, Ericsson, Hill & Asberg, 2005; Becker, Greer & Hughes, 1968). Further, grades can mean different things in different contexts, depending on whether the grading system is competitive or not. In addition, grading on a curve can also affect how and how much students learn, as curved grading practices tend to beget a "survival of the fittest" mentality in which students compete with one another for test scores rather than collaborate to learn and internalize course content (Epstein, 2006). By contrast, students performed worse when they felt overwhelmed by the work, found the classes difficult, and felt tense about assignments (Beyer, 2008). Galiher (2006) and Darling (2005) also used GPA to measure student performance because the main focus was on the student performance for the particular semester. Some other researchers used test results or previous year result since they are studying performance for the specific subject or year (Hijazi & Naqvi, 2006; Hake, 1995). In addition, the Universities Admission Centre (2006) reported that, tertiary institutions in Austria have found that a selection rank based on a student's overall academic achievement is the best single predictor for tertiary success for most tertiary courses. Also, where choice of discipline after transition period is dependent on performance, GPA is the only measurement for testing performance. Thus, those students whose performance with GPA below cut-off point are transferred to other disciplines irrespective of the interest of the student in his/her initial choice because the student did not perform better in the area of interest. In cases like this, an occupational area or discipline may be imposed on the student. According to Gesinde (1986), these categories of students were forced by circumstances influenced by a powerful stimulus. In this regard a student grade point plays an important role.

Interest, self-efficacy and commitment of the student have also influenced academic performance of students. Various studies have indicated that students' academic achievement is affected not only by cognitive abilities or intelligence (Mayer, 1998; Mayer, 1992) but also by affective factors, such as motivation, interest and learning strategies (Marra, Rodgers, Shen & Bogue, 2012; Schunk & Zimmerman, 2009; Besterfield-Sacre, Atman & Shuman, 1997; Pintrich & De Groot, 1990). According to Fang (2014), if a student is deeply interested in a particular learning topic and is highly self-motivated, the student would be willing to spend a significant amount of time and effort in learning. Most probably, this student would learn more than other students who lack interest and motivation. In conclusion Fang (2014) while conducting a study on correlation between students' motivated strategies for learning and academic achievement in engineering dynamics course which is a core course that nearly all undergraduate students in mechanical, aerospace, civil, biological and biomedical engineering programmes are required to take, reported that students' self-efficacy for learning was very important for performance in engineering dynamics. In the same vein Lynch (2010) while carrying out a study on college physics course, found that students' semester grade was positively correlated with students' self-efficacy, motivation, and task value. In addition, the college performance literature on STEM students reveals that high academic achievers have more domain-specific knowledge, more adaptive motivational beliefs, and better self-regulation than their counterparts who earn lower grades (Vander Stoep, Pintrich & Fagerlin, 1996). High achievers also hold particular beliefs and attitudes toward their courses instructors and program (Sharkness, Eagan, Jr., Hurtado, Figueroa & Chang, 2011). In another study by Dadigamuwa and Senanayake, (2012) on motivating factors that affect enrolment and student performance in an open and distributed learning engineering program; they observed that the study programmes in distance learning need more student commitment, self-motivation and good time management. The absence of these will result in failure in courses.

From literature, it has been established that, prior academic performance in terms of admission points or entry qualifications/certificates; student's college grade point average (GPA); and interest, self-efficacy and commitment of the student were some of the indices for

students' academic performance. However, the problem of the study is that if students with the right motivation, self-efficacy, interest and commitment are not encouraged to transit to the disciplines they have comparative advantage with better performance; the needed adequate supply of qualitative technical teachers will not be achieved. Therefore, the transition period is a period for ascertaining the academic capacity of the students and their ability to progress through to the third year to graduate in their chosen area of discipline. This is because; the qualitative technical teachers are the pivot of any technical education. Thus, the level of academic performance of students going through the NCE (Technical) Programme is an index of the quality of technical teachers in the system (Ihiegbulem, 1992).

From the foregoing, it became pertinent to find out the academic performance of the students in related listed compulsory courses being offered by the students during the transition period which cuts across the five disciplines of Automobile, Building, Electrical/Electronics, Metalwork and Woodwork Technology. With this, only students who have the capacity for academic work, and has shown right motivation, self-efficacy, interest and commitment are retained in the disciplines of their initial choice while those who did not perform creditably well in the disciplines of their initial choice are transferred to any other discipline based on performance in the related courses during the transition period.

1.2. Purpose of the study

The purpose of the study is to find out:

1. the level of academic performance of the groups of students in five disciplines in the listed courses offered together in the first and second years, and are used for this study.
2. whether the academic performance of the five groups of students in the listed courses offered together in the first and second years shall differ significantly.

1.3. Research questions

The following research questions shall guide the study:

1. What are the levels of academic performance of the five groups of students in the listed compulsory courses offered together in the first and second years?
2. Will the level of academic performance of the five groups of students in the listed compulsory courses offered together in the first and second years differ?

Based on the above research questions, a null hypothesis was postulated thus: there is no statistically significant difference in the level of academic performance of students in Automobile, Building, Electrical/Electronics, Metalwork and Woodwork Technology in the listed compulsory courses offered together in the first and second years of the NCE Technical programme.

2. Methodology

The research was a descriptive survey, and was conducted in School of Technical Education, Federal College of Education (Technical), Omoku, Rivers State, Nigeria. The School of Technical education has five disciplines namely: Automobile, Building, Electrical/Electronics, Metalwork and Woodwork Technology.

2.1. List of courses used for the study

A total of twenty (20) courses which were taught in the transition period of year one and two in the NCE Technical programme were use for the study. The choice of the listed courses was made because they are the core technical and related courses offered by all the students in the five departments. Table 1, is the distribution of the courses according to semesters and year of study.

Table 1. Distribution of listed courses

Year one	Year two
First semester courses	First semester courses
TED 111- Introduction to metalwork	TED 211- Foundry and forging
TED 112-Introduction to woodwork	TED 212- Machine wood working I
TED 113-Introduction to electrical / electronics	TED213-Electrical circuits and electrical measuring instruments
TED 114-Introduction to building construction	TED 214- Construction methods I
TED 115-Introduction to automobile technology	TED215 -Auto-braking, suspension and electrical systems
Second semester	Second semester
TED 121-Sheet metalwork	TED 221-Machine shop practice I
TED 122-Woodwork technology construction	TED 222-Woodwork design, and finishing
TED 123-Magnetism and electro magnetism devices	TED 223 Electrical and electronic
TED 124-Building science/materials	TED 224-Special methods
TED 125-Auto mechanics I	TED 225-Automobile engines (Transmission systems)

Source: School of Technical Education, Federal College of Education (Technical), Omoku, Rivers State, Nigeria

2.3. Population and sample

The study population is comprises all the students admitted in the School of Technical Education in 2002/2003, 2003/2004 and 2004/2005 academic sessions who are expected to transit to third year in their disciplines of choice or transferred to other disciplines based on academic performance in 2004/2005, 2005/2006 and 2006/2007 academic sessions respectively. A total of two hundred and sixty-nine (269) students were admitted within this period as indicated in Table 2.

Table 2. Students' year of admission and expected year to transit to third year

Academic session	Automobile	Building	Electrical/ Electronics	Metalwork	Woodwork	Total
2002/2003	22	14	26	27	4	93
2003/2004	25	14	25	30	5	99
2004/2005	20	8	21	24	4	77
Total	67	36	72	81	13	269

Source: School of Technical Education, Federal College of Education (Technical), Omoku, Rivers State, Nigeria

The number of students who transited to year three to choose their areas of disciplines are shown in Table 3. A total of two hundred and thirty-seven (237) students who were in their third year of NCE (Technical) programme in 2004/2005, 2005/2006 and 2006/2007 academic sessions were selected for the study. The selection was done alphabetically for the five groups of students according to how the names appear in the mark and attendance register for

convenience. That is, Automobile, 22; Building, 8; Electrical/Electronics, 21; Metalwork, 24; and Woodwork, 4.

Table 3. Number of students who transited to their third year to specialize in a discipline

Academic session	Automobile	Building	Electrical/ Electronics	Metalwork	Woodwork	Total
2004/2005	22	8	21	24	4	73
2005/2006	22	8	21	24	4	73
2006/2007	22	8	21	24	4	73

Source: School of Technical Education, Federal College of Education (Technical), Omoku, Rivers State, Nigeria

2.4. Data collection

The data for the study was collected as follows:

1. All the students admitted in 2002/2003 academic session and are expected to be in third year in 2004/2005 session had their raw examination scores obtained for 2002/2003 (first year: first and second semesters), and 2003/2004 (second year: first and second semesters).
2. All the students admitted in 2003/2004 academic session and are expected to be in third year in 2005/2006 session had their raw examination scores obtained for 2003/2004 (first year: first and second semesters), and 2004/2005 (second year: first and second semesters).
3. All the students admitted in 2004/2005 academic session and are expected to be in third year in 2006/2007 session had their raw examination scores obtained for 2004/2005 (first year: first and second semester), and 2005/2006 (second year: first and second semesters).

2.5. Data analysis

Data were analyzed by calculating the mean scores of the students for the three consecutive years. The raw scores obtained for the 20 courses offered by each student in the five groups (Automobile, Building, Electrical/Electronics, Metalwork and Woodwork Technology) were summed up and divided by 20 to get the mean score for each student. The mean scores will be used to determine the level of academic performance of each of group of students in the first two years of the programme. A mean pass mark of 50% for each student for all the courses offered was used as bench mark. A mean pass mark of 50% and above indicates a good performance; and that below 50% is a poor performance.

Further, the F-test (one-way analysis of variance) was used to test for significant difference and the Scheffe's test to determine which of the groups brought about the significant difference in the level of academic performance if there was any.

3. Results

The results in Table 4 showed that, the average mean scores of the students in Automobile, (51.69); Building (52.38); Electrical/Electronics (56.76); Metalwork (52.95) indicated good performance while Woodwork (46.25) indicated poor performance. This result further revealed that, the Electrical/Electronic students performed better than their counterparts in who choose other disciplines followed by Metalwork, Building, Automobile and woodwork respectively. This

means that, students in Automobile, Building, Electrical/Electronics and Metalwork may wish to transfer to any disciplines of their choice because they have performed above average in all the courses related to the other disciplines. However, the woodwork group do not have the privilege of transferring to any other discipline because their performance was below average.

Table 4. Group mean scores for two academic sessions for students admitted in 1991/92, 1992/93 and 1993/94 academic sessions

Academic session	Automobile		Building		Electrical/ Electronics		Metalwork		Woodwork		Total	
	(X_1)	(X_1^2)	(X_2)	(X_2^2)	(X_3)	(X_3^2)	(X_4)	(X_4^2)			(X_5)	(X_5^2)
Total	827	42,787	419	21,975	1,192	67,771	1,271	67,457			185	8,571
No of. Students	16		8		21		24				4	
Mean score (X)	51.69		52.38		56.76		52.95				46.25	

In testing the hypothesis, the F-test (One-way ANOVA) was used to test whether there was any significant difference in the academic performance of the five groups of students. The test was conducted at 0.05 level of significance with 4 degree of freedom for numerator and 68 for the denominator respectively with an expected critical F-value of 2.53.

Table 5. Test of significance in group performance

Source	SS	df	MS	F-Cal.	Significance level	F-critical
Decision						
Between Groups	56.88	4	14.22	2.81	0.05	2.53
Groups	343.84	74	5.06			
Within Groups	400.72	78				
Total						

The results of the ANOVA test in Table 5 revealed that, the calculated F-value of 2.81 was more than the expected critical-value of 2.53. The result therefore indicated that, there was a statistically significant difference in the level of academic performance of the Automobile, Building, Electrical/Electronics, Metalwork and Woodwork Technology groups of students. Hence the hypothesis was rejected.

Further, Scheffe's test was used to determine which of the groups brought about the significant difference in the level of academic performance.

Table 6. Scheffe's test for direction of difference

Comparison of groups	MS_w	MS_b	F-Cal.	F-Critical	Decision
Automobile with Building		0.95	1.05	10.12	Not significant
Automobile with Elect/Elect		0.57	45.11		Significant
Automobile with Metalwork		0.53	3.00		Not significant
Automobile with Woodwork		1.58	18.73		Significant
Building with Elect/Elect	16.56	0.87	19.07		Significant
Building with Metalwork	0.07	0.84	0.08		Not significant
Building with Woodwork	41.47	1.90	21.83		Significant
Elect/Elect with Metalwork	14.52	0.45	32.27		Significant
Elect/Elect with Woodwork	110.46	1.51	73.15		Significant
Metalwork with Woodwork	44.89	1.48	30.00		Significant

From table 6, the results of the Scheffe's test indicated that there was significant difference in level of academic performance of Electrical/Electronic group of students over their counterparts in Automobile, Building, Metalwork and Woodwork Technology. There was also significant difference in the level of academic performance of Automobile, Building, and Metalwork over Woodwork Technology. However, there was no significant difference in the level of academic performance in Automobile, Building and Metalwork groups of students.

4. Discussion of Findings

The findings showed that, the Electrical/Electronics students performed better than their counterparts in the other disciplines. While Automobile, Building and Metalwork Technology students performed above average when the mean scores were considered, the woodwork technology students performed below average. There was also a significant difference in the level of academic performance of the groups. Further, the direction of difference showed that, the level of performance of the Electrical/Electronics students was significantly higher than the Automobile, Building, Metalwork and Woodwork Technology students. However, there was no significant difference in the performance of Automobile, Building and Metalwork Technology students. But, there was a significant difference in the performance of Automobile, Building and Metalwork Technology students over their Woodwork counterparts. While the other groups of students performed above average; it was the woodwork technology groups of students that performed below average. Thus, no student from the other departments will be made to transfer to woodwork technology after the transition period on account of low academic performance; and the woodwork students cannot transfer to any other department because of their below average academic performance.

From the findings, various factors may have contributed to the above average performance of the Automobile, Building, Electrical/Electronics and Metalwork Technology students. Their above average performance may have been due to high admission points or good entry qualification used in selecting students for admission may have influenced students' academic performance at the post-secondary schools. In this regard, Bratti and Staffolani (2006) observed that measurement of students' prior educational outcomes or performance is the most important indicators or determinants of students' future academic performance. Dalziel and Peat (1996), also submitted that performance at school is a relatively good predictor of performance at university. Thus admission point which is a reflection of previous performance may influence future academic performance (Ali, Haider, Munir, Khan & Ahmed, 2013; Geiser & Santelices, 2007). Further, the universities Admission Centre (2006) also reported that, tertiary institutions in Austria have found that a selection rank based on a student's overall academic achievement is the best single predictor for tertiary success for most tertiary courses. Kyoshaba, (2007) and Farooq, Chaudry, Shafiq and Berhanu (2011) further reported that measures of prior educational performance are the most important determinant of students' performance; and this implies that the higher the previous performance, the better the students will perform academically. In addition, there have been evidences which suggested that high school grades were without doubt the best predicators of academic performance (Geiser & Santelices, 2007). In agreement, Waller and Foy, (1987); Mohammad and Alhmeed, (1988) opined that secondary school scores proved to be instrumental in predicting university performance. In the same vein, Yoho, Vardaxis & Comstock (2010), in a study on admission characteristics and academic performance of podiatric and osteopathic medical students also opined that, the academic performance of osteopathic students were higher than those of podiatric medical students because they also performed better in matriculating overall and science grade point averages and total Medical College Admissions Test scores.

In addition, none of the Automobile, Building Electrical/Electronics and Metalwork Technology students were advised to transfer to other disciplines but retained their disciplines of initial choice because they performed creditably well when their various semester Grade Point Average (GPA) were considered. In this regard, a student's college grade point average (GPA) represents a key indicator of academic achievement, and GPAs are one of the only quantifiable, agreed-upon measures of academic success in college (Plant, Ericsson, Hill &

Asberg, 2005; Becker, Greer & Hughes, 1968). Further, grades can mean different things in different contexts, depending on whether the grading system is competitive or not. Thus, when grading is competitive, it can affect how and how much students learn, as competitive grading practices tend to beget a "survival of the fittest" mentality in which students compete with one another for test scores rather than collaborate to learn and internalize course content (Epstein, 2006). By contrast, students performed worse when they felt overwhelmed by the work, found the classes difficult, and felt tense about assignments (Beyer, 2008). Therefore, GPAs derived from test results or previous year results are used to measure student performance for a particular semester since they are studying performance for the specific subject or year (Galiher, 2006; Hijazi & Naqvi, 2006; Darling, 2005; Hake, 1995).

Interest in the discipline may have also influence the positive academic performance of Automobile, Building Electrical/Electronics, and Metalwork Technology students because what informed their initial choice of their respective disciplines were based on interest. Thus, interest, self-efficacy and commitment of the student were a major influence on academic performance. Therefore, students' academic achievement was influenced not only by cognitive abilities or intelligence (Mayer, 1992; Mayer, 1998) but also by affective factors, such as motivation, interest and learning strategies (Marra, Rodgers, Shen & Bogue, 2012; Schunk & Zimmerman, 2009; Besterfield-Sacre, Atman & Shuman, 1997; Pintrich & De Groot, 1990). According to Fang (2014), if a student is deeply interested in a particular learning topic and is highly self-motivated, the student would be willing to spend a significant amount of time and effort in learning. Most probably, this student would learn more than other students who lack interest and motivation. He further stated that, students' self-efficacy for learning was very important for academic performance. In the same vein Lynch (2010) also opined that, that students' semester grade was positively correlated with students' self-efficacy, motivation, and task value. In addition, the college performance literature on STEM students revealed that high academic achievers have more domain-specific knowledge, more adaptive motivational beliefs, and better self-regulation than their counterparts who earn lower grades (van der Stoep, Pintrich & Fagerlin, 1996). In addition, Dadigamuwa and Senanayake, (2012) observed that, students' academic performance required commitment, self-motivation and good time management and that the absence of these will result in failure in courses.

It was relatively difficult to adduce reasons for the below average performance of the woodwork students when compared to the above average performance of their counterparts because the study was not conducted to determine the likely reasons for above or below average performance of the different groups of students but was to determine the academic performance of the students in the different disciplines using their examination raw scores. However, studies have established various factors such as entry qualification/ admission points, prior school background, interest as well as students' effort as factors that may influence students' academic performance (Ali, Haider, Munir, Khan & Ahmed, 2013; Farooq, Chaudry, Shafiq & Berhanu, 2011; Dill, 2006; Considine & Zappala, 2002; Jeynes, 2002; Kwesiga, 2002; Graetz, 1995; Comb, 1985). However, the only viable assumption for the below average performance of woodwork technology students was because of their performance in the matriculation entry cut-off point as well as the lowered entry qualification for woodwork technology candidates seeking admission in the NCE (Technical) programme since very few candidates or no candidate at all in some academic sessions who would want to study woodwork technology as a discipline. Further, students applying for admission prefer other departments but only accepted woodwork technology as a last resort. Thus, they are likely to also perform below average during the transition period because of lack of interest in the discipline. In this regard; Fang, (2014), Dadigamuwa and Senanayake, (2012), Lynch, (2010), Van der Stoep, Pintrich and Fagerlin (1996) had variously reported that the absence of commitment and self-motivation will always result in low academic performance. In cases like this, a discipline may be imposed on the students irrespective of the interest in their initial choice of discipline. The finding was consistent with Gesinde (1986), who observed that, this category of students were likened to an individual who did not deliberately plan to enter into any particular job, rather circumstances forced it on the individual, and he only succumbed to the influence of

a powerful stimulus. The implication of this finding was that, the level of qualitative woodwork technical teachers supplied to the world of work will be suspected. In the same vein Banjo, (1974) opined that, the success or failure of any system of technical education is dependent on the quality of technical teacher. Ihiegbulem, (1992) further stated that, the level of academic performance of students going through the NCE (Technical) Programme is an index of the quality of technical teachers in the system.

5. Conclusion

The study established that, the Automobile, Building, Electrical/Electronics and Metalwork Technology students performed above average. Therefore, these groups of students had the capacity to pursue the NCE (Technical) programme in their chosen disciplines to become trained teachers of technical education. However, the Woodwork Technology students performed below average. The implication of the finding was that, the Woodwork Technology Department may not produce the required qualitative technical teachers to teach technical education.

In conclusion, it was pertinent for every student admitted into the NCE Technical programme to perform above average in the courses offered in the disciplines of their choice and the other compulsory courses offered from the various disciplines during the transition period. The reason is that, the graduates of the NCE(Technical) education apart from effectively teaching their areas of discipline, should also be able to teach Basic Technology at the junior secondary schools or junior technical colleges effectively since this was one of the major objectives of the NCE Technical programme (NCCE, 2008).

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