Post-Graduate Studies Completion Time in Vocational and Technical Education Programmes in South-South Nigerian Universities: Students' Related Determinants

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Abstract: The need for post-graduate students to complete their programmes within the stipulated time necessitated this study. Thus, the study examined students' related determinants of post-graduate studies completion time in vocational and technical education programmes in South-South Nigerian Universities. A research question guided the study and two null hypotheses were tested at 0.05 level of significance. Descriptive survey research design was employed for the study. The population consisted of 204 post graduates of vocational and technical education programmes in South-South Nigerian Universities. The population constituted the sample size since it was not too large. The instrument for data collection was a structured questionnaire titled *Determinants of Post-Graduate Studies Completion Time Questionnaire (DPGSCTQ)*. The instrument was validated by three experts. To determine the reliability of the instrument, Cronbach Alphawas used to check the internal consistency and thus, the reliability coefficient of 0.78 was obtained. The data collected for the study were analyzed using descriptive statistics of mean and standard deviation to answer the research questions. The t-test and ANOVA were used to test the null hypotheses. Findings of the study revealed that students' related factors such as demography, research orientation, study habit, among others, contribute to a great extent to the completion time of the students in the post-graduate programmes. It was recommended among others that post-graduate students should show commitment in their studies; avoid procrastination and poor study habits in order to make their time count in the programmes.

Keywords: Post-graduate Programmes, Vocational Education, Determinants, Students' Related Factors

1. Introduction

Higher education is the cornerstone of national development both in developed and developing nations of the world. It is the key to the realization of individual and societal aspirations. It not only equips people with knowledge, skills, attitudes and values, but also provides competencies necessary for the performance of social and economic roles. It confers on the recipient boundless opportunities and expands life options. In view of the above, the goals of tertiary education according to Federal Republic of Nigeria [1] shall be to:

1) contribute to national development through high level relevant manpower training;

2) develop and inculcate proper values for the survival of the individual and society;

3) develop the intellectual capability of individuals to understand and appreciate their local and external environment;

4) inculcate intellectual and physical skills which will enable individuals tobe self-reliant and useful members of the society;

5) promote and encourage scholarshipand community service;

6) forge and cement national unity and promote national and international understanding and interaction…(p: 28).

Spurred by the roles which higher education is currently playing in national development and survival, the government has placed high premium on the development of universities in

Nigeria for the production of high level manpower in critical areas of need in the economy. While undergraduate programmes have some role to play in this regard, post-graduate progammes have comparatively more significant roles to play.

Post-graduate education, also referred to as graduate education in some countries, involves learning and studying for degrees, professional or academic certificate or other forms of qualification that require a first or bachelor's degree for entry [2]. According to Okala [3] post-graduate programmers provide a pathway for human capital development in all discipline of learning and sectors of the economy. Expansion in the programmes has become a desideratum because the recipients are perceived to constitute intellectual think-tanks of the nation. Soyode [4] stated that recipients of post graduate training are regarded as the initiators or anchors of policies and efficient managers of the economy; owning to the fact that the programme is carefully structured and efficiently organized.

The organization of post graduate education differs across countries. The Nigerian system broadly divides the programme into two; the masters and doctoral degree with post-graduate diploma and master of philosophy (MPhil) also available. The duration of the programmes varies depending on each the nation's post graduate programme regulations. Olorunisola [5] captured the duration of some Post-graduate programmes in Nigerian universities with three semesters minimum and five semesters maximum for academic degree ofmasters for full time students and minimum of five semesters and maximum of six semesters for part time students. The author further stated that the Doctor of philosophy programme takes a minimum of six and maximum eight semesters for full time students and minimum of eight and maximum of twelve semesters for part time students.

While there is an increasing rate of enrollment and admission into post-graduate studies in universities across the country, the National Universities Commission [6] observed that most students in the programme do not complete their studies within the stipulated time for graduation. The commission revealed that in 2010/2011 academic session, 12,962 were admitted into masters' programmesin selected Nigerian universities, but 7,867 students (52%) completed their studies within the stipulated time [6]. The report also shows that it takes longer time for students to complete their post-graduate studies within the stipulated time in the faculty of education to which Vocational and Technical Education belongs.

Vocational and Technical Education is an essential education programme, which is intended to provide skilled manpower for industries and institutions [7]. It is a type of education that prepares manpower for sustainable national development. Smith [8] defined vocational and technical education as the training that enables one to succeed in a socially useful occupation. Obidile and Uzoekwe [9] defined technical vocational education as the education which equips the recipient with the competencies needed to start a life of work. According to Ekpenyong [10], a number of occupational areas are usually classified under vocational and technical education in higher education. These include agricultural education,

industrial/technical education, business education home economics education and health occupation education.

A handful of universities in Nigeria offer vocational and technical education programmes for both undergraduate and post-graduate levels and some of these are located in the South-South region. From available research records, according to Okala [11], a total of 287 students were admitted into vocational and technical educationpost-graduate programmes in South-South Nigerian universities in 2008/2009 session; 273 in 2009/2010; 242 in 2010/2011; 225 in 2011/2012 sessions. For these years, only 53 (18%), 45 (16%), 39 (16%) and 32 (14%) respectively graduated within the stipulated time. This clearly shows a decline in enrollment and graduation of post-graduate students in vocational and technical education programmes. This is a clear signal that the prolonged completion time of post-graduate studies in the area is already dampening the interest and enthusiasm of prospective students. Hence, there is the need to examine the determinants of post-graduate studies completion time in vocational and technical education programmes in the South-South region of Nigeria.

Determinant is seen as anything that determines certain situations and status [12]. Badmus and Omoifo, [13] defined determinants as the conditions that predict a certain outcome while Numnally [14] posited that it could be seen as factors that make certain conditions possible or impossible. Olorunisola [15] highlighted possible determinants of completion time of post graduates programmes in Canadian educational programmesto include programme policy, teaching/supervision factors environmental factors, field of study, mode of study andstudent related factors.

Zhao, studying this phenomena in Australia, revealed that students' demographic variables such as gender, age, background, language and ethnicity were significant students' related factors that could determine completion time of post-graduate programmes [16]. Roche and Strongner [17] stated that students' age could predict programme completion time. They observed that older students complete their studies earlier because they do not procrastinate due to the intrinsic reasons they have for attending universities. David [18] also agreed that students' age, gender and cultural background could contribute significantly to completion time of programmes.

In the same vein Martin [19] in a study of universities in Chicago stated that male students usually complete their programmes earlier than their female counterparts owing to the peculiar nature of female students. According to the author, the motherly responsibilities of some female students such as, pregnancy, child-birth, child-care and home management usually interfere with their programmes. Furthermore, Nduka [20] in Nigeria observed that, only female students that are single or have passed child-bearing age usually show more commitment to their studies.

Also, studying this phenomenon in Swedish universities, Singh [21] observed that students from previously disadvantaged backgrounds may have further distinctive needs, in order to cope with the pressures of a

technologically advanced environment and a system that demands independent research. In Texas, USA, Walker [22] was of the view that students previous academic experiences, knowledge of data related processes, understanding of project writing processes, making project writing a priority and finding a topic of interest determinedthe completion time of post-graduate programmes. The author further stated that the inability of students to understand project writing processes is one of the major issues that lead to non-completion of studies within the stipulated time. In order for individuals to scale through project writing, Frank [23] in South Africa suggested that, individuals must choose researchable topics, read very wide and possess good statistical knowledge. It is mainly those that understand the research mode of their field that are likely to complete their programmes within the stipulated time as observed by James [24] in another South African studies.

Furthermore, in Philippines, Dyner [25] identified motivation, psychological status of students and students' personality as students' related determinants of completion time for post-graduate programmes. Psychological factors such as self-sabotaging behaviour due to over-commitment, procrastination and perfectionism were listed as determinants that can hinder completion time of studies. Motivation on the other hand can provide the enthusiasm, optimism and dedication to complete post-graduate programmes within the stipulated time [26, 27]. Most students start their course of studies being highly motivated, but often find it challenging to be motivatedthroughout the duration of their studies. Motivation helps individuals to remain both proactive and focused posture in accomplishing a given task. Abiodum [28] observed that, it is the lack of motivation among post-graduate students occasioned by problems such as poor health, financial difficulties, criticism, family issues and face-off with supervisors that could discourage some to complete their programmeswithin the required time.

Considering that post-graduate studies completion time in vocational and technical education programmes in South-SouthNigerianuniversitiesis dependent on various factors, it is essential to examinestudents' related determinantsthat could hinder timelycompletionof studies.

1.1. Statement of the Problem

The major challenge to the certification of students of post-graduate programmes has been the issue of timely completion of their studies Onuegbu [29]. Timely completion of post graduate programme is an important outcome for the students, the host university, the employers and the economy. However, non-completion of the programme within the stipulated time results in additional costs to the students in terms of fees, opportunity, emotion and attrition. To the university, it results in loss of fees, recruitment cost, tuition costs, low students enrollment and output as well as lack of required manpower in education.

In as much as completing of post graduate programme in the required time frame is dependent on many variables as seen from various parts of the world, there is growing evidence that students' related factors are negatively affecting completion time of post graduate programme in some Nigerian universities [30]. Hence it is imperative to examine the extent to which the student-related factors determine the post-graduate completion time in vocational and technical education programmes in South-South Nigerian Universities.

1.2. Purpose of the Study

The main purpose of the study is to examine the extent to which students' related factors influence completion time of post-graduate studies in vocational and technical education programmes in South-South Nigerian universities.

1.3. Research Question

The following research question guided the study:

To what extent do student related factors determine post-graduate studies completion time in Vocational and Technical Education in South-South Nigerian universities?

1.4. Null Hypotheses

The following null-hypotheses were tested at 0.05 level of significance.

1. Full time and part time graduates of post-graduate studies do not differ significantly in their mean ratings on the extent to which students' related factors determine post-graduate studies completion time.

2. Graduates of post-graduate studies do not significantly differ in their mean rating on the extent to which students' related factors determine post-graduate studies completion time based on discipline (Technical Education, Business Education, Agricultural Education and Home Economics Education).

2. Method

This study adopted a descriptive survey research design. The population for this study consisted of 204 graduates of post-graduate studies of the four common programmes in Vocational and Technical Education in six public universities namely, one each from Deltaand Akwa-Ibom States, as well as two each from Edo and Rivers States who completed their studies in the 2017/2018 academic session, as shown below;

Table 1. Population Distribution of Vocational Technical Education Post-Graduates by Universities and Programmes (2017/2018).

| University | Mode of Study | | | | | | | | |
| | Part-time | | | | Full-time | | | | |
	Agric.	Tech.	Business	Homec.	Agric.	Tech.	Business	Homec.	Total
1. University of Benin, Benin (Edo State)	-	5	11	3	-	13	17	6	55
2. Ambrose Ali University, Ekpoma (Edo State)	2	1	3	2	5	6	4	3	26
3. Delta State University, Abraka Delta State	1	1	2	1	4	2	5	2	17
4. Rivers State University, PH Rivers State	4	2	8	2	7	9	11	6	49

University	Mode of Study								
	Part-time				Full-time				
	Agric.	Tech.	Business	Homec.	Agric.	Tech.	Business	Homec.	Total
5. Ignatius Ajuru University, PH Rivers State	3	3	5	1	4	6	8	3	33
6. University of Uyo, UyoAkwa-Ibom State	3	3	2	3	6	1	4	1	23
Sub Total	13	15	31	12	26	37	49	21	204
Total (Grand)			71				133		204

The entire population for this study consisting of 204 graduates of post-graduate studies in Vocational and Technical Education Programmes in South-South Nigerian universities was used. There was no sampling, since the population was not too large and was manageable. The instrument for data collection for this study was a structured questionnaire developed by the researchers titled *Determinants of Post-Graduate Studies Completion Time Questionnaire (DPGSCTQ)*. It contains 22 items and is structured on a five-point rating scale of Very Great Extent (VGE), Great Extent (GE), Moderate Extent (ME), Small Extent (SE) and Very Small Extent (VSE). The instrument was validated by three research experts, two from vocational and technical education in the Department of Technology and Vocational Education and one from Measurement and Evaluation Unit in the Department of Educational Foundations – all in Nnamdi Azikiwe University, Awka. The reliability of the instrument was established using a pilot test involving 20 graduates of post-graduate studies who have graduated from the Department of Vocational Teacher Education, University of Nigeria Nsuka, Enugu State; which is outside the study area. The area was chosen because it has similar features. Data collected for the pilot study were analyzed usingCronbach alpha. The reliability coefficient of the instrument was 0.78 which indicates a high reliability. The E-mail addresses of the respondents were collected through their registered universities. Copies of the questionnaire were sent to the respondentsusing the e-mail. Out of 204 copies of questionnaire sent, 197 copies of questionnaire representing 97 percent were returned and used for analysis. The data collected for the study were analyzed using the arithmetic mean and standard deviation to answer the research question and determine the closeness of the mean responses. The t-test and Analysis of Variance (ANOVA) statistical tools were used to test the null hypotheses at 0.05 level of significance. A null hypothesis was rejectedwhere the calculated p-value was less than the 0.05 level of significance, it meant that there was a significant difference. Conversely, where the calculated p-value was greater than or equal to the level of significance (0.05), it meant that there was no significant difference and the hypothesis was not rejected. However, where there was a disagreement among the three groups in the case of the null hypotheses tested with ANOVA, the Scheffe Post-hoc test was conducted to determine the group in which such disagreement relates.

3. Result

3.1. Research Question

To what extent do students' related factors determine post-graduate studies completion time in Vocational and Technical

Education in South-South Nigerian universities?

Data collected in respect of research question were analyzed and presented in Table 2.

Table 2. *Mean ratings of respondents onthe extent students' related factors determine post-graduate studies completion time in vocational and technical education.*

S/N	Aspects of students' related factors	Mean	SD	Decision	N=197
1)	Age	4.00	.45	Great Extent	
2)	Social status	4.30	.46	Great Extent	
3)	Cultural background	4.30	.78	Great Extent	
4)	Financial status	3.80	.40	Great Extent	
5)	Marital status	4.10	.54	Great Extent	
6)	Search for project topic of interest	4.20	.40	Great Extent	
7)	Knowledge of project writing	4.30	.64	Great Extent	
8)	Knowledge of data collection	4.20	.87	Great Extent	
9)	Knowledge of data analysis	3.80	.75	Great Extent	
10)	Procrastination	4.10	.54	Great Extent	
11)	Excess work-load	4.00	.45	Great Extent	
12)	Health status	4.00	.45	Great Extent	
13)	Quality of critiquing	4.30	.46	Great Extent	
14)	Motivation	4.30	.78	Great Extent	
15)	Mental status	3.80	.40	Great Extent	
16)	Discouragement	4.10	.54	Great Extent	
17)	Relationship with lecturers	4.20	.40	Great Extent	
18)	Family responsibilities	4.30	.64	Great Extent	
19)	Death of immediate member of the family	4.20	.87	Great Extent	
20)	Divorce/separation of spouse	3.80	.75	Great Extent	
21)	Loss of job	4.10	.54	Great Extent	
22)	Lack of reading culture	4.00	.45	Great Extent	
	Cluster Mean	4.10		Great Extent	

The data in Table 2 shows that all the items have mean ratings ranging from 3.80 to 4.30 meaning that all the items contribute to post-graduate studies completion time in vocational and technical education to a great extent. The cluster mean score of 4.10 indicates that, in the opinion of the respondents, students' related factors determine post-graduate studies completion time in vocational and technical education to a great extent. The standard deviations of 0.40 to 0.87 show that the respondents' ratings are closely related.

3.2. Null Hypothesis I

Full time and part time graduates of post-graduate studies do not differ significantly in their mean ratings on the extent to which students' related factors determine post-graduate studies completion time.

Data obtained in respect of null hypothesis 1 were analyzed and presented in Table 3.

Table 3. Summary of t-test comparison of the mean ratings of full time and part time respondents on the extent to which students' related factors determine post-graduate studies completion time.

								N=197
Mode of study	N	$\overline{X}$	SD	α	Df	t-cal	P-value	Decision
Full Time	127	4.12	.15	0.05	195	0.63	0.067	Not Significant
Part Time	70	4.10	.10					

Data in Table 3 show that full time and part time respondents do not differ significantly in their mean ratings on the extent to which students' related factors determine post-graduate studies completion time with mean scores of 4.12 and 4.10 while the corresponding standard deviation is .15 and .10. The Table indicated a t-value of 0.63, at degree of freedom of 195 and a p-value of .067. Testing at alpha level of 0.05, the p-value is not significant, since the p-value is greater than the alpha value (0.05). Therefore, the null hypothesis is not rejected; hence, the mean ratings of full time and part time respondents on the extent to which students' related factors determine post-graduate studies completion time in vocational and technical education programmes in south-south Nigerian universities do not differ significantly. Therefore, the hypothesis was not rejected.

3.3. Null Hypothesis II

Graduates of post-graduate students do not significantly differ in their mean ratings on the extent to which students' related factors determine post-graduate studies completion time based on discipline (Technical Education, Business Education, Agricultural Education and Home Economics Education).

Data obtained in respect of hypothesis 2 were analyzed and presented in Table 4.

Table 4. Summary of analysis of variance (ANOVA) on mean ratings of the respondents on the extent to which students' related factors determine post-graduate studies completion time.

	Sum of Squares	Df	Mean Square	F	P-value	Decision
Between Groups	9.529	3	38.264	9.334	.000	significant
Within Groups	294.958	193	3.799			
Total	374.487	196				

Results in Table 4 show that there was a significant difference among the four groups (Technical Education, Business Education, Agricultural Education and Home Economics Education) in terms of their mean ratings on the extent to which students' related factors determine post-graduate studies completion time in vocational and technical education programmes in south-south Nigerian universities based on discipline. It was observed that at 0.05 level of significance, 3 is numerator and 193 is denominator, the calculated F-ratio is 9.334 and *P-value* .000 which is less than the 0.05 level of significance. Therefore, the null hypothesis was rejected.

Table 5. Summary of Scheffe post hoc test on mean ratings of the respondents on the extent to which students' related factors determine post-graduate studies completion time.

(I) Discipline of Study	(J) Discipline of Study	Mean Difference (I-J)	P-value
	Buss. Edu.	2.41667*	.000
Tech. Edu	Agric. Edu.	1.54167*	.028
	Homec. Edu.	1.52637*	.024
	Tech. Edu	-2.41667*	.000
Buss. Edu.	Agric. Edu.	.87500	.267
	Homec. Edu.	1.54165*	.022.
	Tech. Edu	-1.54167*	.028
Agric. Edu.	Buss. Edu.	-.87500	.267
	Homec. Edu.	-1.53245*	.021
	Tech. Edu	-1.52637*	.024
Homec. Edu.	Buss. Edu.	1.54165*	.022.
	Agric. Edu.	1.53245*	.021

Significant.

The Scheffe test of multiple comparism on table 5 showed that the extent to which the student-related factor affect the programme completion time for the students varied across the students' programmes of study.

4. Discussion of Findings

The findings of the study revealed that students' related factors determines post-graduate studies completion time in vocational and technical education programmes in south-south Nigerian universities to a great extent. The results revealed that the respondents rated all the aspects of students'-related factors as determinants of post-graduate studies completion time in vocational and technical education programmes. These include students' age, social status, cultural background, marital status, knowledge of project

writing, knowledge of data collection and analysis, motivation, loss of job, relationship with lecturers, name all. This finding is in consonance with Zhao [16] who asserted that students' demographic variables such as gender, age, background, language and ethnicity were significant students' related factors that determine completion time of post-graduate programmes. The demography of students especially gender and age usually influence students' academic achievement. This is in agreement with Martin [19] who stated that male students usually complete their programmes earlier than their female counterparts owning to the peculiar nature of female students. The motherly responsibilities of some female students such as, pregnancy, child-birth, child-care and home management usually interfere with their programmes. Martin further revealed that only female students that are single or have passed child-bearing age show more commitment to their studies. In terms of age Martin noted that older students complete their studies earlier because they do not procrastinate due to the intrinsic reasons they have for attending universities. Zhao [16] observed that, students' related factors such as sex and age can positively or negatively affect programme completion time.

The findings also agreed with Walker [22] whose investigation of the influence of students' related factors on completion time of post-graduate programmes in Australia revealed that students' previous academic experiences, knowledge of data related processes, understanding of project writing processes, making project writing a priority and finding a topic of interest influenced completion time programme. According to the author, the inability of students to understand project writing process is one of the major issues that affect completion time of studies. In order to scale through project writing, individuals must choose researchable topics, read very wide and possess good statistical knowledge. It is those that understand the research mode of their field of study that are likely to complete their programmes.

This finding is also in agreement with Dyner [25] whose study in Philippines revealed that students' related factors such as motivationprovide the enthusiasm, optimism and dedication to complete post-graduate programmes within the stipulated time. Most students start their course of studies being highly motivated but often find it challenging to be motivated throughout the duration of their studies. Motivation helps individuals to maintain proactive posture and to remain focused in accomplishing a given task [28]. Lack of motivation among post-graduate students occasioned by problems such as poor health, financial difficulties, criticism, family issues and face-off with supervisors usually discourage some post-graduate students to complete their programmes. Obviously, students' related factors play major role in programme completion time. These factors, if properly managed will enables students complete their studies on time.

Findings from hypothesis one revealed that full time and part time respondents do not differ significantly in their mean ratings on the extent students' related factors determine post-graduate studies completion time in vocational and technical education programmes in south-south Nigerian universities. This means that the respondents irrespective of their mode of study are in agreement in their opinion as to the extent students' related factors determine post-graduate studies completion time in vocational and technical education programmes in south-south Nigerian universities. This finding supported that of Wong [31] who opined that students' related factors will continue to majorly determine post-graduate studies completion time whether full time or part time.

Findings from hypothesis two revealed that there was a significant difference in the mean ratings of the respondents on how students' related factors determine post-graduate studies completion time in vocational and technical education programmes in south-south Nigerian universities based on discipline (Technical Education, Business Education, Agricultural Education and Home Economics Education). This implies that field of study moderates students' related factors as a determinant of post-graduate studies completion time.

5. Conclusion

Based on the findings of this study, it was concluded that student-related factors determine post-graduate studies completion time. However, the field of studies even found to have moderated the extent the student-related factors determined the students completion time from the post-graduate studies.

6. Recommendation

Based on the findings of this study, the following recommendations are made:
1. Post-graduate students should demonstrate high level of academic excellence, motivation, commitment and emotional stability which is required in completing their studies on time.
2. Post-graduate students should show commitment in their studies, avoid procrastination and poor study habits in order to make their time count in the programmes.

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