

Environmental factors as determinants of postgraduate studies completion time in vocational and technical education programmes in south-south Nigerian universities

Sunny Nwakanma^{1*}, Stanley Ikemefula Mbato²

¹Department of Technical Education, Ignatius Ajuru University of Education, Rivers State

²Department of Educational Foundations, University of Port Harcourt, Rivers State

ABSTRACT

This study on environmental factors as determinants of post-graduate studies completion time in vocational and technical education programmes in South-South Nigerian Universities was carried out because of the elongated completion time experienced by many students. One research question guided the study and two null hypotheses were tested. Descriptive survey research design was employed for the study. The population for this study consisted of 204 graduates of this programmes in public universities in South-South Nigeria who completed their studies in the 2017/2018 academic session. The entire population was studied without sampling since the size was not too large and was manageable. The instrument for data collection was a structured questionnaire titled 'Environmental Determinants of Post-Graduate Studies Completion Time Questionnaire'. The instrument was validated by three experts from the Departments of Technology and Vocational Education and Educational Foundations of Nnamdi Azikiwe University, Awka. Using the Cronbach alpha method to determine the reliability of the instrument, the reliability co-efficient of 0.83 was obtained. The data collected for the study were analyzed using mean and standard deviation to answer the research question and to determine the closeness of the respondents' mean ratings. The t-test and ANOVA were used to test the null hypotheses at 0.05 level of significance. The results of the study also revealed that environmental factors to a small extent determined post-graduate studies completion time.

The findings also showed that mode of study had no significant influence on how environmental factors determine post-graduate studies completion time in vocational and technical education programmes in the area. Based on the findings, it was recommended that heads of school of postgraduate programmes should ensure that adequate and conducive classrooms, well-equipped workshops, laboratories and libraries are adequately provided and maintained to enhance effective teaching, learning and research.

KEYWORDS

environmental factors; determinants; post-graduate studies; completion time; vocational; technical education programmes

CORRESPONDING AUTHOR*

Sunny Nwakanma

INTRODUCTION

Postgraduate education programmes involve learning and studying for academic or professional degrees, academic or professional certificates, academic or professional diplomas, or other qualifications for which a first or bachelor's degree is required for entry (Lovitts, 2016). Allexender (2015) defined it as any higher education undertaken after a bachelor's degree. It is a step higher from undergraduate studies.

According to Colebatch (2016), post-graduate studies refer to graduate education that is taken by graduate students at a graduate school. According to Humphery (2017), it is referred to as research oriented programme that require serious academics, working on their own original research. Seymour (2016) postulates that it is a programme that leads to the award of doctorate degree, master's degree, post-graduate diploma and certificate upon graduation. In the opinion of Lin (2015), it is an advanced learning process that required first degree as entry qualification. Postgraduate studies in the context of this study, is a programme that leads to the award of master's and doctoral degrees. In most universities presently, the hierarchy of postgraduate studies is that the master's follows the doctoral degree. Vocational and technical education is one the programmes that exist in some universities postgraduate studies.

According to the FRN (2014), Vocational and Technical education refers to those aspects of educational processes involving in addition to general education, the study of technologies and related science and acquisition of practical skills, attitudes, understanding and knowledge relating to occupation in various sectors of economic and social life. It provides skills and manpower for industry and other engineering services required by the society. Vocational and Technical Education provides the foundation for productive and satisfying career by offering the learner thorough and specialized preparation for paid or self-employment via its broad training programme (Okoye and Okwelle, 2014). One of the goals of Vocational and Technical Education is to give training and impart the necessary skills to individuals who shall be economically self-reliant.

Vocational and technical education a social process concerned primarily with people and their part in doing the work that society needs done. It is also concerned with preparing people for work and with improving the work potential of the labour force leading to economic independence, self-realization and dignity (Melvin, 2016). In the context of this study, vocational and technical education is a kind of training that aims at preparing the individual for a gainful job. This training is carried out not only in primary, secondary and undergraduate levels of education but also in postgraduate programmes. Completion of postgraduate programmes or training in vocational and technical education provides significant human capital development for national development.

The duration and completion time of the programmes varies depending on each nation's postgraduate programmes regulations. Completion time is a calculated amount of time required for any particular task to be completed (Nwagwu, 2016). It spans from conceptualization of a programme or project to realization. Haworth (2014) described it as estimated time to accomplish a task. It is usually expressed in seconds, minutes, hours, days, weeks, months, and years. According to Beowski (2016), completion time is the period in which a project is expected to be concluded. It is the actual duration on which a project is executed. Chong (2017) defined completion time as period of time in which something such as project will be finished. In the context of this study, completion time is a formally fixed period required to conclude a programme. This is period of time is usually organized in semesters. For instance, it takes a minimum of three semesters and a maximum five semesters for academic degree of masters for full time students and a minimum of five semesters and a maximum of six semesters for part time students. The doctor of philosophy programme takes a minimum of six and a maximum of eight semesters for full time students and a minimum of eight and a maximum of twelve semesters for part time students. The completion of the programmes within the stipulated time hinges on some determinants.

According to Mavodo and Twigg (2014) determinants are factors which decisively affect the outcome of something. They are things that make something to happen or cause certain situation to exist (John, 2015). Hence, determinants of postgraduate studies completion time are factors that directly influence the completion time of the studies. They are elements that control the completion time of the studies (Worlu, 2015). Jinarek (2011) highlighted possible determinants of completion time of postgraduates programmes to include programme policy, student related factors, teaching/supervision and environmental factors.

Many researchers have identified the environment as a determinant of completion time of postgraduate programmes (Oyaziwo, 2010; Lessing, 2013; Ngeno, 2014 and Ritter, 2015). Lessing (2013) grouped environmental determinants into two: inside-school and outside-school determinants. Inside-school determinants include infrastructures, teaching and learning materials and equipment, prevailing circumstances existing within the school environment. Outside-school determinants include job, family, fund, friends, pregnancy, child birth, life events, recreational activities, employment issues and finance. Lessing stated that students' unrest, staff industrial action, programmes support system, interaction within the departments and wider university community, logistical arrangement and school location are inside-school environmental determinants.

Eaton (2012) observed that frequent students unrest and strike by universities' staff are some extraneous factors that hindered most students from graduating on time. Stella (2016) stated that, it is not surprising that prolonged duration of programmes is the most frequently reported difficulty for postgraduate students in Nigerian universities. Stella noted that most universities find it difficult to adhere to advertised academic calendars because of unpredictable strike action by staff unions or violent students' demonstrations and protests; all of which result in frequent institutional closures.

Moreover, an integral support system of postgraduate programmes is the classroom. The classroom provides a platform for effective teaching and learning. Teachers as well as the students need conducive classroom for teaching and learning to take place effectively. Okwelle (2014) stated that the structure of classroom building should be taken into consideration when constructing the classroom. Bossing (2015) viewed the structure of the building as an important factor in the school environment. This could influence the health, happiness and comfort of teachers and students. The size of the classroom can affect the number of students it can accommodate. When the classroom is overcrowded with students, teaching and learning becomes ineffective as students and teachers experience discomfort. Overcrowded classroom inhibits effective classroom management (Nlemadim, 2014).

Conducive classrooms involve proper sitting arrangement, good ventilation; adequate illumination and neatness (Egbuonye 2015). Teaching and learning thrive when there is a good sitting arrangement, ventilation and illumination. Mackley (2014) in Goby (2016) noted that classroom building should be situated far away from sources of noise pollution such as busy roads, markets, churches, mosques, industries; as these creates distraction to both the teachers and students.

Consequently, classroom temperature should be maintained to a proper degree to promote teaching and learning. Kathryn (2014) observed that installation of electrical fans, air-conditioners and provision of windows helps in regulating classroom temperature. Planting of trees around the school compound provide shade from the heat of sun as it contributes in regulating both external and internal classroom temperature especially during the hot periods of the day (Nwachukwu, 2015). Effective teaching and learning process can be maintained in post-graduate programmes when classrooms are designed, constructed and structured with class size, sitting arrangement, ventilation, illumination, sources of noise and temperature in mind.

Library is another indispensable factor in school environments as it contributes to effective teaching and learning. The school library is a force and a source of excellence in education. For the purpose of this study, the library is therefore, defined as a room or building where books, pamphlets, magazine, newspapers, cassettes and videos are kept. To Chime (2016), those items are known as the library stocks; in the stock all kinds of information can be found. A library is also seen as a center of educational materials. The library comprises of the media, resources, information, instructional materials for education. Furthermore, institutions for the collection, preservation and transmission of human intellectual expression constitute the library (Nwezeh, 2016).

In the opinion of Gates (2015), library is a foyer of living ideas that permeates and animates all aspect of national life. Ikoku (2014) saw the library as a place where the dead may be said to be alive, that is where ideas, knowledge and experiences of great men and women were fully documented and preserved to continue to move the world, even though these people may be no more. According to Ikoku, Chief Obafemi Awolowo is dead but we can still reason with the counsel and ideas in books written by this patriot, so also the great Philosopher Plato who is dead but is still kept alive by the thoughts and ideas put down in books. Omehia noted that library is a collection of records of human culture in diverse formats and languages, preserved, organized and interpreted to meet broad and varying needs of individuals. This means that the library is one of the major academic resources for post-graduate students since learning at this stage is student-centered.

Library exposes post-graduate students to a wide range of teaching, learning, and research materials that will help them to develop the skills and habits of observing, listening, communicating ideas and thinking as they further their educational careers (Akinniyi, 2015). The library therefore, is supposed to help in the development of students' creative ability by exposing them to a wide range of instructional materials. This is one of the reasons the Federal Republic of Nigeria (FRN, 2014) reflected the role of library by stating that "it is one of the most important education services and that every State Ministry of Education need to provide fund for the establishment of libraries in all educational institutions and also to train librarians for services and in provision of books for the library".

Okedara (2015) agreed with the Federal Republic of Nigeria (2014) by stating that library tends to promote the education process of the society, accelerate the translation of knowledge in action which enables the students or individuals to obtain spiritual, inspirational and recreational activities, preserve the cultural heritage and affects the

transfer of knowledge from one generation to the next. In essence, libraries are repertoires of knowledge sourced by library users. Buttressing the importance of the school library in a school environment Omehia (2014) outlined its the functions to include:

- (a) It supports teaching and learning within the school system.
- (b) It enriches the school curriculum.
- (c) It promotes the development of reading skills by providing variety of learning materials.
- (d) It stimulates research and independent study.
- (e) It promotes opportunities for further reading and use of materials other than prescribed classroom textbooks.
- (f) It provides up-to-date information to keep teachers and students abreast of new development. Omehia added that if the school library can achieve these functions, it means that it has contributed to the intellectual development of the learner.

Furthermore, on the importance of school library Ozzigi (2016) averred, that it an essential part/department of the school environment which helps to promote growth of knowledge. According to Ozzigi, a well-equipped library is a storehouse of knowledge and a centre of learning activities, if properly organized and utilized. Gates (2015) noted that library molds the information gathering of a student's behavior for the future and it plays a crucial role in readying him for an adult role in the society.

Baird (2016) observed that the school library supports the students' studies. According to Baird, every library collection will have information that can improve students understanding of the subjects they learn at school, and increase their knowledge of the world. Baird went on to state that library provides access to information as well as allows students to develop skills of searching for information on their own; helps to develop a problem-solving and active approach to learning; encourages students' interest and pride in local areas by exposing them to books written by local authors. Baird finally noted that pupils who regularly look up information in books would improve both their reading skills and research works.

Also, Kinnel (2015) observed that an education for life would include exposure to as wide range of subjects and sources as might be found in a modern school library collection. According Baird (2016), the school library has stock which can give students knowledge both general and specific information from textbooks and also provide explanations about different aspect of knowledge and satisfy students' curiosity and interest in life. Baird observed that the school library is useful for all staff no matter their discipline and improves their form of teaching by using stock from the library. That is, the use of library stock will help teachers prepare their lesson better, it may also encourage teachers to give students project work that can make students go to the library and find out information for their form work which will encourage them to study, learn and achieve better results as well as give them the confidence to start looking for information on their own.

However, Obi (2016), affirmed that the number of books in the library would mean nothing if books are not used, out of date or irrelevant. Nwaodu (2014) in describing the factors that affect the use of library by students reported that library facilities such as building, book stock and finance for library development were inadequate in most schools. According to Nwaodu, the librarians also lack a satisfactory orientation on the use of the library. Nwaodu opined that a well-run library contributes to students' academic performance because it provides learning resources and shifts emphasis from the teacher. Nwaodu finally noted that library also provides opportunity for self-education especially for post-graduate students who desire to complete their studies on time. Clapp (2015) opined that school library aid postgraduate students in research and professional development.

Since modern trend in postgraduate education programmes encourages self-learning and discovery rather than teacher-centered learning, the library plays major role in that regard (Alokun, 2015). It is therefore a clear fact that library facilities are important factors to be credited in effective teaching and learning in order to achieve timely completion of postgraduate programmes.

Other environmental factors, according to Lessing (2013), include job, family, fund, friends, pregnancy, child birth, life events, recreational activities and location of school. Most post-graduate students deal with such challenges as family commitment, work commitment and finance, which may affect their achievement academically. Myers (2012) observed that most students are affected by family or other personal obligations like paid jobs or professional responsibilities which take time and money from them for their studies.

Geographical location of some universities also determines completion time of programmes. Some students have abandoned their studies due to difficulties they experience while transiting to and from the schools. To such students, the money and time lost in transportation have become unbearable (Slade, 2013).

The location of school environment also has a bearing on effective teaching and learning. Harnby (2015) defined location as a place where something happens or exists and school is a place where people go to learn a particular subject or skill. Thus, location of school has to do with the community either rural or urban where a particular institution is situated for the purpose of teaching and learning of a particular skill. Since the community where the school is located forms part of the school environment, this means that the community equally plays a major role in completion time of studies.

Manigbo (2015), explained that environment is that which surrounds an individual or community whether physically or culturally. Manigbo observed that environment is used to denote a certain set of circumstances surrounding a particular occurrence. Okwelle (2014) observed that, the community where the school is located is influential to teaching and learning process. Okwelle opined that the community can positively influence the objectives of the educational programmes by being supportive and friendly to the school environmental condition.

The influence of location of school as part of school environment on students' academic performance and timely completion of programmes could also be seen in intra-communal crises. Salako (2014), in his study, observed that in Nigeria of today, institutions of learning are rocked and plagued by crises caused by secret cults and intra-commercial crisis which normally arise as a result of urge for chieftaincy titles by some elites and chiefs and also leadership and power tussle by cultic youths. According to him this makes the community where the schools are located uncomfortable for the inhabitants and in turn influence students' academic performance and could determine completion time of programmes. Ezegebe (2015) opined that no institution could graduate students within the record time in the atmosphere of war, bicker and rancor among its citizens.

In corroboration of above, Mbia (2015) opined that for proper and meaningful teaching and learning to take place, some minimum comfort and safety is required in the communities hosting academic institutions. When the reverse is the case, it will automatically cause a set-back to the school system as syllabus are hardly covered or rushed to be covered, academic calendars are truncated and sometimes the whole academic season are cancelled and lost.

STATEMENT OF THE PROBLEM

Postgraduate programme is an academic process that calls for timely and appropriate support. While the universities are eager to graduate the students within the stipulated time, the students on the studies also seek to complete their studies within stipulated time frames. Undoubtedly, completion of postgraduate studies within the stipulated time in south-south Nigerian universities is a serious problem. This could be as a result of environmental factors. The situation could lead to low students' enrollment, attrition and shortage of manpower to initiate new academic programmes and to sustain the existing ones in these universities. The present researcher is worried by this ugly situation in relation to vocational and technical education programmes. To what extent does an environmental determinant affect postgraduate studies completion times in Vocational and Technical Education programmes in south-south Nigerian universities? This study seeks to find the answer.

PURPOSE OF THE STUDY

The main purpose of the study was to examine the extent at which environmental factors affect postgraduate studies completion time in vocational and technical education programmes in South-South Nigerian universities.

RESEARCH QUESTION

The following research question guided the study:

- (1) To what extent do environmental factors determine postgraduate studies completion time in Vocational and Technical Education programmes in South-South Nigerian universities?

HYPOTHESES

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

- (1) Full time and part time graduates of postgraduate studies do not differ significantly in their mean ratings on the extent to which environmental factors determine postgraduate studies completion time.
- (2) Graduates of postgraduate studies do not significantly differ in their mean ratings on the extent to which environmental factors determine postgraduate studies completion time based on discipline (Technical Education, Business Education, Agricultural Education and Home Economics Education).

METHOD

This study adopted a descriptive survey research design. The population for this study consisted of 204 students of postgraduate studies of the four common programmes in Vocational and Technical Education in public universities who had completed their studies in the 2017/2018 academic session. The entire population was used as a sample size since the population is not too large and is manageable. The instrument for data collection for this study was a structured questionnaire titled '**Environmental Determinants of Post-Graduate Studies Completion Time Questionnaire (EDPGSCTQ)**'. It has sections A and B. Section A contains two items on demographic data of respondents while Section B contains 13 items 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). Two experts in vocational and technical education from the Department of Technology and Vocational Education and one expert in measurement and evaluation from the Department of Educational Foundations, all from Faculty of Education, Nnamdi Azikiwe University, Awka, validated the instrument. The reliability of the instrument was established using a pilot test involving 20 graduates of postgraduate studies who have graduated in Department of Technology and Vocational Education, Nnamdi Azikiwe University, Awka. Data collected for the pilot study were analyzed with Cronbach alpha. The reliability coefficient value of 0.83 was obtained. While 204 Copies of the questionnaire were sent to the respondents' e-mail boxes, 197 copies of questionnaire representing 97 percent were returned and used for analysis. The research question was analyzed using the arithmetic mean and standard deviation. The t-test and Analysis of Variance (ANOVA) were used to test the null hypotheses at 0.05 level of significance. A null hypothesis was rejected where the calculated p-value was less than the 0.05 level of significance, it meant that there was a significant difference between mean scores. 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 accepted.

RESULTS

Research Question 1

To what extent do environmental factors determine postgraduate studies completion time in Vocational and Technical Education in South-South Nigerian universities?

Data collected in respect of research question 1 were analyzed and presented in Table 1.

TABLE 1: Mean Ratings and Standard Deviation on Environmental factors (N = 197)

S/N	Environmental and extraneous factors	Mean	SD	Decision
1.	Students' unrest	2.00	.44	Small Extent
2.	Staff industrial action	2.30	.45	Small Extent
3.	Availability of conducive classrooms	2.60	.58	Moderate Extent
4.	Availability of well-equipped library	2.80	.50	Moderate Extent
5.	Access to internet services and facilities	2.10	.48	Small Extent
6.	Distance of school from workplace	2.20	.46	Small Extent
7.	Prevailing circumstances in the school host community	2.30	.44	Small Extent
8.	High rate of unemployment	2.20	.47	Small Extent
9.	Delay in the payment of salaries by employers	2.80	.52	Moderate Extent
10.	High cost of living	3.10	.54	Moderate Extent
11.	Level of insecurity	2.00	.44	Small Extent
12.	Unsafe roads	2.30	.45	Small Extent
13.	Availability of hostel and accommodation	2.20	.47	Small Extent
Cluster Mean		2.38		Small Extent

The data in Table 1 shows that almost all the items were rated small extent except items number 56, 57, 63, and 64 which were rated moderate extent and have mean ratings ranging from 2.60 to 2.80 as regards the extent to which environmental and extraneous factors contribute to post-graduate studies completion time in vocational and technical education. The cluster mean of 2.38 indicate that, in the opinion of the respondents, environmental and extraneous factors determine postgraduate studies completion time in vocational and technical education to a small extent. The standard deviations of 0.44 to 0.54 show that the respondents are homogenous in their responses.

Hypothesis 1

Full time and part time graduates of postgraduate studies do not differ significantly in their mean rating on the extent to which environmental factors determine postgraduate studies completion time.

Data obtained in respect of hypothesis 7 were analyzed and presented in Table 2.

TABLE 2: Summary of t-test comparison of the mean ratings of full time and part time on environmental factors.

Mode of Study	N	\bar{X}	SD	α	df	t-cal	p-value	Decision
Full-time	127	2.27	.19	0.05	195	3.77	0.012	Significant
Part-time	70	2.17	.21					

Data in Table 2 show that full time and part time respondents differ significantly in their mean ratings on the extent to which environmental factors determine postgraduate studies completion time with mean scores of 2.27 and 2.17 while the corresponding standard deviation is .12 and .13. The Table indicated a t-value of 3.17, at degree of freedom of 195 and a p-value of .012. 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 rejected; hence, the mean ratings of full time and part time respondents on the extent to which environmental factors determine postgraduate studies completion time in vocational and technical education programmes in south-south Nigerian universities do not differ significantly. Therefore, the hypothesis was rejected.

Hypothesis 2

Graduates of postgraduate studies do not significantly differ in their mean ratings on the extent to which environmental factors determine postgraduate 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 3.

TABLE 3: Summary of analysis of variance on mean ratings on environmental factors

	Sum of Squares	df	Mean Square	f	p-value	Decision
Between Groups	.190	3	0.95	.027	.973	Not significant
Within Groups	273.258	193	2.510			
Total	273.449	196				

Results in Table 3 show that there was no significant difference among the three groups (Technical Education, Business Education, Agricultural Education and Home Economics Education) in terms of their mean ratings on the extent to which environmental factors determine postgraduate 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 of denominator, the calculated F-ratio is 0.27 and *P-value* .973 which is greater than the 0.05 level of significance. Therefore, the null hypothesis is not rejected.

FINDINGS

The findings of the study revealed that environmental factors determined postgraduate studies completion time in vocational and technical education programmes in south-south Nigerian universities to a small extent. Out of the 13 items on environment factors, the respondents indicated that only four determined post-graduate studies completion time to a moderate extent. These include availability of conducive classrooms, availability of well-equipped library, delay in payment of salaries by employers and high cost of living. The results also identified the major aspects of environmental and extraneous factors that determined post-graduate studies completion time in vocational and technical education programmes to a small extent. These include student's unrest, staff industrial action, access to internet services and facilities, high rate of unemployment, level of insecurity, unsafe roads, availability of hostel and accommodation and so on. This finding is in disagreement with Olubusoye and Olusoji (2014), whom their study revealed that environmental factors such as classrooms, laboratories, workshops, and libraries have much influence on completion time of the programmes. Based on this finding, Olubusoye and Olusoji thus asserted that adequate and conducive classrooms, well-equipped workshops, laboratories and libraries enhances effective teaching, learning, and research. This is also in agreement with Lessing (2013), who noted that students' unrest, staff industrial action, programmes support system, interaction within the departments and wider university community, logistical arrangement and school location have major influence on academic programme completion time.

The findings also revealed that full time and part time respondents differ significantly in their mean ratings on the extent environmental factors determined postgraduate studies completion time in vocational and technical education programmes in south-south Nigerian universities. This implies that the extent environmental factors determine postgraduate studies completion time in vocational and technical education programmes tends to depend on mode of study. This is supported by Eaton (2013) who opined that environmental factors such as availability and utilization of library facilities, workshops, and laboratories tend to favour full time students more than part time students. The findings of the study also revealed that there was no significant difference in the mean ratings of the respondents on the extent environmental factors determine postgraduate 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 means that discipline of study does not influence how environmental factors determine postgraduate studies completion time in vocational and technical education programmes in south-south Nigerian universities This finding is in agreement with Tuckman, Bac and Coyle (2014) who in their study of the median years to complete the doctorate programme, revealed that area or field of study has a bearing.

CONCLUSION

Based on the findings of this study, it was concluded environmental factors are not major determinants of postgraduate studies completion time in vocational and technical education programmes in south-south Nigerian Universities.

RECOMMENDATIONS

Based on the findings of this study, it was recommended that heads of school of postgraduate programmes should ensure that adequate and conducive classrooms, well-equipped workshops, laboratories and libraries are adequately provided and maintained to enhance effective teaching, learning and research.

REFERENCES

- [1] Akinniyi, P.J. (2015). Recognizing difference: providing for graduate students, *Studies in Higher Education*, 24(3), 371-386.
- [2] Alexander, A.C. (2015). The supervision of research for dissertations and theses. *Acta Commercil*, 4, 73-89.
- [3] Alokun, I.C. (2015). Being a good course-taker is not enough: A theoretical perspective on the transition to independent research. *Studies in Higher Education*, 30(2), 137-154.
- [4] Baird, E.C. (2016). The changing face of accountability. *The Journal of Higher Education*, 71(4), 411-432.
- [5] Beowski, G.L. (2016). *Effective Teaching in Higher Education*. London: Methuen.
- [6] Chime, O.N. (2016). *In pursuit of the Ph.D.* Princeton, NJ:Princeton University Press.
- [7] Chong, G.C. (2017). Recognising differences: Providing for graduate students. *Studies in Higher Education*, 24(3), 21-36.
- [8] Clapp, C.B. (2015). Factors determining success in a graduate business program. *College Student Journal*, 36(3), 471-484.
- [9] Colebatch, F.N. (2016). Student attrition at a new generation universities. *Journal of psychology*, 67(10), 677-688.
- [10] Eaton, D. (2012). Distance education is on your doorstep. *Trusteeship*, 7(1) 4-17.
- [11] Egbuonye, F.C. (2015). The supervision of research for dissertations and theses. *Acta Commercil*, 6(2), 73-89.
- [12] Ezegbe, R.S. (2015). Doctoral supervision, workplace research and changing pedagogic practices. *Higher Education Research and Development*, 24(2), 165-178.
- [13] Federal Republic of Nigeria (2014). National policy on education 6th edition; Lagos: NERDC Press.
- [14] Gates, N.P. (2015). Customer perceptions of service quality – a critique. *Total Quality Management*, 12, 111-124.
- [15] Goby, E.C. (2016). How to Get a Ph.D – A Handbook for Students and Their Supervisors; What the best college teacher do. Cambridge, MA: Harvard University Press.
- [16] Harnby, W.C. (2014). *In pursuit of the Ph.D.* Princeton, NJ:Princeton University Press.

- [17] Haworth, H.J. (2013). *Supervision: A Social Process*. New York: Appleton-Century-Crofts. Inc.
- [18] Humphrey, E.S. (2017). Departmental factors affecting time-to degree and completion rates of doctoral students at one land-grant research institution. *The Journal of Higher Education*, 72(3), 341-367.
- [19] Ikoku, G.E. (2014). Ph.D completion in canadian universities. Final report. Halifax, Nova Scotia: Graduate Students Association of Canada.
- [20] Jinarek, U. (2015). Graduate supervision and academic support: Students' perceptions. *South Africa Journal of Higher Education*, 16(2) 42-57.
- [21] Kathryn, P.E. (2014). The supervision of research for dissertations and theses. *ActaCommercil*, 4(2), 73-89.
- [22] Kinnel, T.N. (2015). Graduate supervision and academic support: Students' perceptions. *South African Journal of Higher Education*, 16(2), 139-149.
- [23] Lessing, H.C. (2013). The supervision of research for dissertations and theses. *ActaCommercil*, 4(1), 22-35.
- [24] Lin, G.P. (2015). *How to Get a Ph.D – A Handbook for Students and their Supervisors*. London: Mcwell press Ltd.
- [25] Lovitts, N.E. (2016). The changing face of accountability. *Journal of Higher Education*, 71(4), 411-432.
- [26] Malvin, T.R. (2016). Departmental factors affecting time-to degree and completion rates of doctoral students at one land-grant research institution. *Journal of Higher Education*, 72(3), 341-367.
- [27] Manigbo, C.N. (2015). Theory into practice: Applying lessons learned from retention studies to build a diverse graduate community. *Journal of Higher Education*, 77(2), 11-25.
- [28] Mavodo, M.C. & Twigg, C.F. (2014). Being a good course-taker is not enough: A theoretical perspective on the transition to independent research. *Studies in Higher Education*, 30(2), 137-154.
- [29] Mbia, D.E. (2015). *Teaching outside the box: How to grab your students' attention by their brains*. San Francisco: Jossey-Bass Ltd.
- [30] Myers, B.O. (2012). Applying goal orientation theory in an exploration of student motivations in the domain of educational leadership. *Educational Research Quarterly*, 31(1), 45-59.
- [31] Ngeno, K.E. (2014). Postgraduate students' supervision and training in Nigeria tertiary institutions: A comparative study. *Journal of African Higher Education*, 12(2), 17-34.
- [32] Nwachukwu, W.F. (2015). *Trends and challenges in in canadian graduate education*. Canada: University of Alberta, Press.
- [33] Nwagwu, A.F. (2016). Attrition and completion times of Ph.D. candidates. *International Journal of Doctoral Studies*, 7(2), 63-74.
- [34] Nwaodu, R.I. (2014). The part time doctoral student experience. *International Journal of Doctoral Studies*, 7(2), 112-127.
- [35] Nwezeh, N.C. (2016). Discipline and doctorates: The relationship between programmes characteristics and the duration of doctoral study. *Research in Higher Education*, 31(3), 369-385.
- [36] Nworgu, S.C. (2015). Understanding and acquisition of entrepreneurial skills: a pedagogical re-orientation for classroom teacher in science education. *Journal of Turkish Science Education*, 6(3), 56-64

- [37] Obi, T.A. (2016). An analysis of problems encountered by post-graduate students in Nigerian universities. *Journal of social science*, 22(2), 129-137.
- [38] Okedara, U.O. (2015). Doctoral supervision, workplace research and changing pedagogic practices. *Higher Education Research and Development*, 24(2), 165-178.
- [39] Okoye, K.R.E. & Okwelle, P.C. (2014). Technical vocational education and training (TVET) as intervention mechanism for global competitiveness: Perspectives from Nigeria. *Journal of Developing Country Studies*, 4(4), 85-91.
- [40] Okwelle, K.L. (2014). Determining the extent to which program structure features and integration mechanisms facilitate or impede doctoral student persistence in mathematics. *International Journal of doctoral studies*, 32(2), 145-157.
- [41] Olubusoyae, S.C. & Olusoji, E.F. (2014). Determining the extent to which program structure features and integration mechanisms facilitate or impede doctoral student persistence in mathematics. *International Journal of Doctoral Studies*, 12(2), 145-57.
- [42] Omehia, A.H. (2014). The changing face of accountability. *The Journal of Higher Education*, 71(4), 411-432.
- [43] Oyaziwo, E. (2010). *Personal narratives and processes of educational change*. New York : Routledge.
- [44] Ritter, T. E. (2015). Quality education and America's competitiveness. *Quarterly Progress*, 27(9), 12-24
- [45] Salako, N.S. (2014). *How to Get a Ph.D: A Handbook for Students and their Supervisors*. Buckingham: Open University Press.
- [46] Seymour, R. (2013). *On Q: Causing Quality in Higher Education*. New York: Macmillan.
- [47] Slade, A.H. (2013). Teaching and technology in higher education: Changes and challenges. *Journal in Higher Education*, 45(5), 25-38.
- [48] Stella, R.T. (2015). *Emblems of Quality in Higher Education: Developing and Sustaining High Quality Programs*. Boston: Allyn and Bacon.
- [49] Tuckman, S.K.; Bac, A. & Coyce, M. (2014). Information behaviour: An inter-disciplinary perspective, information processing and management. *Journal in Higher Education*, 46(2), 16-29.
- [50] Worlu, F. (2015). Approach to doctoral programs: An interactive framework for action and research. *Higher Education Research and Development*, 25(1), 21-32.