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TEACHER TRAINERS' DEMOGRAPHIC FACTORS AS DETERMINANTS OF INSTRUCTIONAL QUALITY IN PUBLIC COLLEGES OF EDUCATION IN SOUTHWEST, NIGERIA

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Abstract

Purpose: The issue of low instructional quality could be responsible for the incompetence of graduates from public colleges of education in Nigeria. This study investigated teacher trainers' demographic factors as determinants of instructional quality in public colleges of education in the Southwest region of Nigeria.

Methodology: The population of the study consisted of 3402 teacher trainers in the eleven public colleges of education in Southwest Nigeria. A multi-stage sampling procedure was used to select 1358 respondents for the study. Two research questions were raised to guide the study. The instruments titled "teacher trainers' demographic variables questionnaire (TTDVQ) and instructional quality questionnaire (IQQ)" were used to gather relevant data for the study.

Findings: The findings revealed that there was a significant contribution of teacher trainers' variables (teachers' experience, gender, and academic qualification) to the instructional quality in colleges of education ($F(3,1354) = 270064.277, p < 0.05$). It also revealed that females ($\beta = 0.326; t = 5.456, p < 0.05$) contributed the most to instructional quality in colleges of education.

Unique contribution to theory, practice and policy: teacher trainers should endeavour and be encouraged to advance their academic qualifications and put in their best to gather the requisite experience on the job for the improvement of instructional quality. There should be a policy from the regulatory agency (National Commission for Colleges of Education) instructing the management of teacher training institutions to take cognizance of teachers' experience and academic qualifications when assigning responsibilities as regards courses to be taught. This study was premised on the systems theory and it establishes that the interrelationship between teachers' experience, their gender, and academic qualification results in the requisite instructional quality in public colleges of education. This implies that the systems theory could be applied to similar studies in the future.

Keywords: *Teacher trainers, Teacher trainers' demographic factors, Instructional quality*

INTRODUCTION

Globally, researchers and stakeholders have long known that the quality of teachers' instruction is a key determinant of student learning outcomes (Nilsen and Gustafson, 2016; Klieme et al. 2009; Seidel and Shavelson, 2007). This challenge transcends the school system in developed countries to the developing ones, which Nigeria is not an exception of.

The Nigerian school system is being increasingly challenged by a myriad of problems. One of them is the instructional quality at all levels of education. Typically, discussions about instructional quality focus on the disparities that exist between the prescribed and achieved goals and objectives of the school's teaching and learning process. The process of instruction must be given adequate consideration, if the desired quality is to be met. Studies such as Iyamu and Ede (2005) and Izuagba and Afurobi (2009) are of the view that Nigeria still needs to do more to improve the instructional quality because the quality of the country's education is largely dependent on the quality of input and the process.

Instruction is the method of providing support to the process of learning. It is also a goal directed teaching process. It has to do with how best certain pieces of knowledge should be presented and in what sequence to the learners in a school system. Thus, for teacher education to be able to satisfy the current human and social needs, the input-process and output dimensions must be of high quality. However, it has been observed in recent times that there is a general decline in the instructional quality in Nigeria's higher education (Olaewe, 2005; Arongi & Ogbadu, 2010).

A lot of derogatory comments have been made about the Nigeria Certificate in Education (NCE) graduates. Many reports have shown reasons for the incompetency of NCE products and ways to circumvent them. Agada (2011) remarks that for NCE graduates to be effective in their capacity as middle level manpower, there is a need to review the modes of instruction in colleges of education (COE). Gbagi (2011) states that the quality of teachers produced by the COE are too poor. Jekayinfa (2007) indicates that the provision of primary school teachers is inadequate in terms of quantity and quality. Some people blame the government, the parents, the students, and the teachers, yet the challenges at this level of education still continue in the country.

Teacher trainers, as tools used to facilitate the teaching process and produce NCE graduates, are graciously hampered by a number of factors, and each attempt to address the problem(s) often leads to another problem. Teacher trainers, as instructors, are not only an indispensable component of the teacher education system but are also an unavoidable factor in the process of instruction at any level of education. The quality of education is firmly founded on the quality of the teacher's education. Therefore, teacher's education must be given adequate and continual attention if the products of our educational system are to be of the desired quality. This is in line with the submission of Obadara (2008) that teachers are highly essential for the successful operation of the educational system and an important tool for educational development. The National Policy on Education FRN (2013) states that no education system can rise above the quality of its teachers. Also, the National Commission for Colleges of Education (NCCE) (FRN, 2013) states that a teacher is the king-pin of quality education.

Obong (2006) opines that in order to face the challenges of our educational system, the pivotal role and responsibilities of formulation, interpretation, and implementation of educational aims

and objectives trusted to the teacher must be accepted and recognized. One of these pivotal roles and responsibilities is effective and quality instructional delivery. Adenaike and Olaniyi (2010) and Arongi and Ogbadu (2010) also believe that teachers are those who are professionally trained and equipped to guide, maintain, and see to the attainment of acts of instruction for a quality education system. The teacher is the agent that makes things happen and processes the input to produce appreciated products. Otu (2006), in considering the importance of teachers, stated that the teacher is the prime mover in the development of optimum conditions for learning. Teachers need to see themselves more as facilitators of learning, organisers and advisers to the learners (Kolawole, 2002).

Several factors have been identified as having determining power on instructional quality. For instance, Onasanya (2004), Jaiyeoba (2006), Otu (2006), and Sodipo (2007) submitted that the quality of teaching is a product of many factors, such as: teachers' academic qualification, teachers' experience, teachers' professional qualification, teachers' gender, teachers' attitude, class-size, instructional materials, library, school location, teaching method, teachers' motivation, job satisfaction, leadership, age, and marital status. In this study, teacher trainers' demographic variables (teacher's experience, teacher's gender, and academic qualification) serve as independent variables.

Teaching at any level, as a specialized job, requires certain qualities from a person to be addressed as a teacher. Before an individual can be regarded as a competent teacher, he/she must possess some qualities such as good academic qualifications, reasonable years of teaching experience, and professional qualification. However, a competent teacher without adequate consideration of some factors may not achieve the goals and objectives for which the instruction is meant. This is the main reason why the NCCE prescribes a minimum standard for the operation of colleges of education in Nigeria.

The importance of teaching experience on instructional quality has been highlighted by many researchers. Ijaiya (2000) stressed that experience increases teaching skills, and it is evident that pupils learn better at the hands of teachers who have taught them continuously over a period of years. Also, Tahir (2003) reported that the poor teaching process demonstrated by inexperienced teachers as among the many problems of educational development in Nigeria. Adeyemi (2008) found out that teachers' teaching experience was significantly associated with students learning outcomes is measured by their performance in the SSC examinations.

Considering the sensitivity of the gender issue in the process of instruction, researchers like Akinsola and Okpala (2001) and Olabisi (2002) observe that male teacher trainees exhibit shorter threshold times than their female counterparts, and this may eventually exert a positive effect on the instructional quality. Abdullahi (2010) states that much specific attention and interest should be given to the issue of gender sensitivity in the classroom when teaching and learning.

Professional qualification in relation to teaching requires a teacher to possess the basic skills and abilities of the teaching learning process. It is also the preparation of a teacher for a life long journey into the teaching profession. It is one thing to have the subject matter in the area of specialization as required in terms of quality and quantity as a teacher. Another important thing is to have the means of passing this subject matter onto the students. The instrument used to impact the subject matter on the learners is what is referred to as a professional qualification.

Teaching does not take place when students do not learn anything from the teacher (Ogunsanya, 2002).

Previous research has looked at the relationship between school and teacher demographic factors. It is quite interesting that a substantial part of these studies have not used colleges of education as a sample or population. It is against this background that this study investigated teacher trainers' demographic factors and instructional quality in public colleges of education in Southwest, Nigeria.

Statement of the Problem

Recently, education stakeholders have shown concern about the quality of graduates being produced at colleges of education in Nigeria. Many of these graduates are unable to perform the expected functions effectively and efficiently in all fields of work. In view of the fact that instructional quality is a potent catalyst to the quality of graduates produced, there are factors that could be found to be the determining factors of instructional quality at the colleges of education. These include school demographic variables (school location, class-size, library, and instructional materials) and teachers' demographic variables (teachers' experience, gender, and academic qualification). Therefore, the determining ability of teacher trainers' demographic variables on the instructional quality will subsequently reflect on the quality of the graduates. Apparently, previous research in this area was carried out outside the colleges of education in Nigeria. In light of the above, this study examined teacher trainers' demographic factors and instructional quality in public colleges of education in Southwest Nigeria.

Research Gap

In related literature, other studies have been conducted, showing the interrelationship between teachers' qualifications, teachers' experience, and teachers' qualifications, and instructional quality in Nigeria (Awolola, 2017; Fakeye, 2012; Labo-Popoola, 2002). There appears to be dearth of literature on teachers' gender in relation to instructional quality. Also, most of the related studies in the literature were carried out on primary and secondary schools, but not on teacher training institutions. These situations created a gap for this study, to see the composite contribution of teachers' qualifications, teachers' experience, and teachers' gender to instructional quality in colleges of education in Southwest Nigeria.

The Objectives of the Study

The major objective of the research is to investigate teacher trainers' demographic factors as determinants of instructional quality in public colleges of education in Southwest Nigeria. Specifically, the objectives of the study are to:

1. To examine the composite contributions of teacher trainers' demographic factors (teachers' experience, gender, and academic qualification) to instructional quality in colleges of education in the Southwest Nigeria.
2. To investigate the relative contributions of gender (male and female) to instructional quality in colleges of education in the Southwest Nigeria.

Research Questions

This study was designed to answer these research questions:

- (1) What is the composite contribution of teacher trainers' demographic variables (teachers' experience, gender and academic qualification) to instructional quality in colleges of education in the Southwest, Nigeria?
- (2) What is the relative contribution of gender (male and female) to instructional quality in colleges of education in the Southwest, Nigeria?

LITERATURE REVIEW

Perspectives on teacher quality and instructional quality

Stakeholders and researchers alike have the knowledge of the relationship between the quality of teachers and the instructional quality in schools as a determinant of students' learning attainments (Nilsen and Gustafsson, 2016; Klieme et al. 2009). Globally, there has been a series of research showing the challenges in measuring teacher and instructional quality (Nilsen and Gustafsson, 2016; Kunter et al. 2013). Various variables are involved when measuring teacher quality in relation to student learning outcomes, and this has been presented in a framework presented by Goe (2007). In the framework, teacher characteristics and qualifications are both inputs that in the process phase, influence teachers' instruction, leading to achievement as a students' outcome.

In a multi country study conducted by Nilsen & Gustafsson (2016), teacher qualifications were depicted as education level, professional development level and job experience. Teacher quality was found to be of importance for student achievement in a number of within-country studies (Baumert et al., 2010; Blömeke and Delaney, 2014). All of these studies were conducted at the secondary school level. A research gap exists with respect to tertiary institutions, especially teacher training institutions that are saddled with the responsibility of training teachers.

In Nigeria, a series of related studies have been conducted on how to improve instructional quality and in relation to teacher factors. These studies established that there is a significant relationship between the years of teaching experience of teachers, the educational qualification of the teachers, and instructional quality (Awolola, 2017; Fakeye, 2012; Adeyemi, 2009; Harris and Sass, 2008; Labo-Popoola, 2002). These studies were conducted at the secondary school levels, creating a research gap with respect to teacher training institutions that are saddled with the responsibility of training teachers. Also, these studies did not factor in gender as a teacher factor, and as such, this study considered the composite contribution of teacher characteristics (teacher experience, academic qualification and gender) in relation to instructional quality in colleges of education in Southwest Nigeria.

Theoretical Framework

This research is based on systems theory. The systems theory was originally advanced by Von Bertalanffy in the 1930s (Bertalanffy 1972; Adams et al. 2013). Systems theory is a conceptual framework based on the principle that the component parts of a system can best be understood in the context of their relationships with each other and with other systems rather than in isolation. The systems theory is an interdisciplinary theory that is concerned with every system, whether natural or social, and provides a holistic approach to the investigation of phenomena (Mele et al. 2010).

Education is concerned with the production of human resources, as an outcome of a relationship between the amount of input and intervening factors for production with consideration to its quality (John, 2010). The application of the systems theory in this study implies that the extent of the instructional quality in the colleges of education will be determined by the interaction of the demographic variables (teachers' experience, gender, and academic qualification) of teacher trainers.

METHODOLOGY

The research design used for this study was a descriptive survey. The population of the study consists of 3402 teacher trainers in all the eleven public colleges of education in Southwest Nigeria (colleges of education official websites, 2016). One thousand three hundred and fifty-eight (1358) teacher trainers represented the sample for the study, and this was drawn using a multi-stage sampling procedure. Two research instruments (Teacher Trainers' Demographic Variables Questionnaire, TTDVQ, and Instructional Quality Questionnaire, IQQ) were used to collect relevant data for the study. To ensure that the instrument for this study properly captures the expected inputs, the instruments were given to experts in measurement and evaluation at the Institute of Education, University of Ibadan, to assess their face and content validity. The reliability tests of the instruments were established through the test-retest method at an interval of two weeks while Cronbach's Alpha method was used to confirm the internal reliability coefficient, which yielded 0.86 and 0.84 respectively. The researchers, along with six trained research assistants, administered the research instruments. The two research questions raised to guide the study were answered using Multiple Regression analysis.

RESULTS

Research Question 1: What is the composite contribution of teacher trainers' demographic variables (teachers' experience, gender, and academic qualification) to instructional quality in colleges of education in the Southwest Nigeria?

Table 1: Composite contribution of Teacher Trainers' demographic variables (Teaching Experience, Gender, and Academic Qualification) to Instructional Quality

Multiple R=0.999

R Square= 0.998

Adjusted R Square=0.998

Standard Error= 0.12941

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	13569.296	3	4523.099	270064.277	.000
Residual	22.677	1354	0.017		
Total	13591.973	1357			

Table 1 shows the regression model summary for the joint contribution of teacher trainers' variables (teachers' experience, gender, and academic qualification) to instructional quality in colleges of education in the Southwest Nigeria. The result indicated that there is a significant contribution of teacher trainers' variables (teachers' experience, gender, and academic qualification) to instructional quality in colleges of education in the Southwest Nigeria ($F_{(3,1354)} = 270064.277$, $p < 0.05$). It also shows a coefficient of multiple correlation ($R = 0.999$) and an adjusted R^2 of 0.998.

This means that 99% of the variance in the dependent measure (Instructional Quality) was accounted for by the teacher trainers' variables (teachers' experience, gender, and academic qualification) when taken together. The remaining 1% could be due to errors and other variables.

Research Question 2: What is the relative contribution of gender (male and female) to instructional quality in colleges of education in the Southwest Nigeria?

Table 2: Beta Coefficient and t ratio for Relative contribution of Gender (male and female) to Instructional Quality

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	71.542	2.378		30.091	.000	66.872	76.212
	Males	-.202	.082	-.147	-2.464	.014	-.362	-.041
	Females	.516	.095	.326	5.456	.000	.330	.702

$p < 0.05$

Table 2 shows the relative contribution of gender (male and female) to instructional quality in colleges of education in the Southwest, Nigeria. The beta weights show that females ($\beta = 0.326$; $t = 5.456$, $p < 0.05$) contributed the most to instructional quality in colleges of education in the Southwest, Nigeria, while males had ($\beta = -0.147$; $t = -2.464$, $p < 0.05$). This means that there was a relative contribution of gender (male and female) to instructional quality in colleges of education in the Southwest, Nigeria.

DISCUSSION

Research question one examined the composite contribution of teacher trainers' demographic variables (teachers' experience, gender, and academic qualification) to instructional quality in colleges of education in the Southwest, Nigeria. The result showed that there is a significant contribution of teacher trainers' variables (teachers' experience, gender, and academic qualification) to instructional quality in colleges of education in the Southwest, Nigeria. The finding is in line with Obadara (2008), who found out that teachers are highly essential for the successful operation of the educational system and an important tool for educational development.

Research question two investigated the relative contribution of gender (male and female) to instructional quality in colleges of education in the Southwest, Nigeria. Females ($\beta = 0.326$; $t = 5.456$, $p < 0.05$) made the greatest contribution to instructional quality in colleges of education in

Southwest, Nigeria. The findings are consistent with those of Abdullahi (2010), who believes that gender sensitivity in the classroom on teaching and learning should be given special attention and interest.

Conclusion

On the basis of the available literature, it is concluded that teacher trainers' demographic variables play a great role in achieving instructional quality. Based on the findings, it is noteworthy that there is a significant contribution of teacher trainers' variables (teachers' experience, gender, and academic qualification) to instructional quality in colleges of education. It was concluded that gender (male and female) contributed to instructional quality in colleges of education. Strategies to improve the instructional quality in colleges of education should be given utmost priority, and this can be achieved by taking cognizance of teacher trainers' variables.

Recommendations

On the basis of the findings of this study, it was recommended that:

1. For the improvement of instructional quality, teacher trainers should endeavour and be encouraged to advance their academic qualifications and put in their best to gather the requisite experience on the job.
2. There should be a policy from the regulatory agency instructing the management of teacher training institutions to take cognizance of teachers' experience and academic qualifications when assigning responsibilities as regards courses to be taught.
3. This study was premised on the systems theory, which established the interrelationship between teachers' experience, gender, and academic qualifications for higher instructional quality in public colleges of education. This implies that the systems theory could be applied to similar studies in the future.

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