Path-Analytic Study of Class, Gender, Qualification, Subject Taught, Teacher-Student Relationship and Teacher Job Confidence

Joshua O. Adeleke[a],*; Charles O. Onocha[b]

[a]Senior Research Fellow, Institute of Education, University of Ibadan, Ibadan, Oyo, Nigeria.
[b]Professor, Institute of Education, University of Ibadan, Ibadan, Oyo, Nigeria.
*Corresponding author.

Abstract

Teacher is a central factor in any educational system and the job confidence of any teacher goes a long way to boost educational benefits obtained by learners. Investigating into variables that are related to job-confidence to provide empirical information for better educational planning will be worthy effort. Hence the study investigated "Path-Analytic Study of Class, Gender, Qualification, Subject taught, Teacher-Student relationship and Teacher Job Confidence" The study adopted a Descriptive survey research method using path-analytic approach. The population for the study comprises of all the teachers in public secondary schools in the five Local Government Areas (LGAs) in Ibadan metropolis in Oyo state, Nigeria. Stratified random sampling was used to select one hundred and fifty (150) teachers from each LGA making a total of seven hundred and fifty (750) teachers, teaching in all the six levels (JS1 to SS3) in secondary schools. The selection cut across various subjects being taught in the schools. Two validated instruments were used to gather information for this study. These are: Teacher – Student Relationship Inventory and Teacher Job Confidence Scale with estimated Cronbach reliability coefficients(rs) of 0.80 and 0.95 respectively. Twenty five research assistants were engaged to collect the data (5 per LGA). Data collection lasted one week. The data collected were analyzed by adopting Path analysis, using AMOS 18 software. Class taught and teacher-student relationship were found to be meaningful causal of teacher Job Confidence with beta weights (βs) 0.079 and 0.077 respectively. Effort should be directed to train teachers on the expected relationship in the classroom. Experienced teachers also should be deployed to lower classes too.

INTRODUCTION

Teaching-learning process majorly involves what to teach, who to teach and who is to be taught. Therefore, teacher plays a direct and crucial role in molding a student towards educational goal. Teacher's behaviour, especially confidence in the job, becomes important in the field of education. Teacher Job confidence could be said to mean a trust in oneself, a knowledge of one's limitation and strengths and a trust in one's ability to be able to handle any situation as it comes. Confidence in teaching comes from having job-related knowledge, being well prepared and taking action as necessary to manage the classroom and students and to resolve problems. Teaching Job Confidence is a self-reliance trait that could be enhanced through good mastery of the subject and personal experiences acquired over a period of time. As one embarks on a teaching career, it is possible to experience nervousness and uncertainty, but as one puts in skills and knowledge to work, and experiences success, one's confidence tends to grow.

According to Bandura (1997), confidence to teach the subject matter is central in teaching engagements. This implies that Teachers' confidence can be viewed as the product of overall effectiveness. A teacher can only

be effective when he believes in his ability as a teacher. Teachers need to be able to survive the demands, threats and challenges within the diverse circumstances of teaching. Teacher will be able to exhibit all these only when he has self- confidence. On a broader note, teacher job confidence can be anchored on teacher's mastery of the subject and experience acquired, but specifically there is need to establish the kind of correlation that exists between teacher job confidence and some variables such as gender, teacher-student relationship and teacher academic qualification.

Gender of teachers is of great concern to stakeholders in education. This is because they are crucial in performance indices of school. Gender is in fact considered by employers as a precursor of production in all human ventures and industrial undertakings. Thomas (2010) in his study found that learning from a teacher of opposite gender had a detrimental effect on student academic progress and their engagement in schools. Sparks (2013) in a study found that female elementary school mathematics teachers gave boost to female pupils. However male pupil's performance was not affected by mathematics teacher gender. The difference in performance of students therefore is children's gender biases. In this respect Antecol (2012), in a study titled "Elementary school teachers have an impact on girls mathematics learning," found that children express the stereotype that mathematics is for boys not for girls as early as second grade and added that according to a study by University of Washington researchers it was found that children applied the stereotype to themselves, boys identified themselves with mathematics whereas girls did not. The common expression was "mathematics is for boys." This explains why so few women pursue science, mathematics and engineering careers. Hence, disposition of teachers that teach subjects related to these courses may not be free from gender bias. Thomas (2010) , in his study on teachers and gender gaps in students' achievement found out that switching up teachers actually could narrow achievement gaps between boys and girls but one gender would lose at the expense of the other. Umeasiegbu (1991) argued that "the level of performance in any school is intimately related to some other factors aside gender among which teacher –student relationship is likely to be prominent.

The ultimate process of education could be simplified as a meaningful interaction between the teacher and the student. Teacher-student relationship can be said to be the academic relationship that exist between teacher and student. It forms the basis of the social context in which learning takes place (Hughes & Chen 2011). Teacher-student relationship is one of the major factors affecting students' development, school engagement and academic motivation. Supportive and positive relationships between teachers and students ultimately promote a sense of school belonging and encourages students to participate cooperatively in classroom activities (Ibid.). A positive relationship between teachers and students is the fundamental aspect of quality teaching and student learning. Positive teacher-student relationships serve as a resource for students at risk of school failure, whereas conflict or disconnection between students and adults may compound that risk (Ladd & Burgess, 2001). Teacher-student relationships however, in this century are expected to be different from traditional experience when teachers possessed unilateral power and authority to cause anything to happen even when it was outside students' interest. Such experience could hinder cognitive and behavioural development of the learners. Teacher-students relationship ought to foster interactions that enhance all round development of the learners since they are the essence for the presence of the teachers in schools

Teacher-student relationship should not be limited to classroom alone, teacher can go the extra mile by using a wide variety of strategies to interact with students outside the class. Eisner (2002) suggests that teaching is a caring exercise which takes an important role in effective learning process. Teacher is expected to show care to students not only on academic but also about their particular lives and/or personal problems. According to Stronge, Tucker, and Hindman (2004), the social interactions between the teacher and students, encourages students' learning and achievement. Beside, this gives the introvert or low self-esteem learners the boldness to be better integrated in the group, as mutual relationship between teacher and student creates a friendly classroom environment conducive to learning. A good and supportive relationship is needed to create safe environments and give students confidence to work without pressure and become motivated to learn. Students feel motivated and stimulated to learn and actively collaborate with the teachers when the classroom is running in a safe and supportive environment. Now the question is what is the relationship between this type of environment or otherwise and teacher job confidence? Does a friendly and contusive environment as described support teacher job confidence? All these questions call for empirical investigation.

"No Education system can rise above the quality of teachers in the system" as stated by The National Policy on Education (FGN, 2004). One cannot give what he doesn't have. This shows how important teacher's academic qualification is while considering the quality of education. In Nigeria, the minimum qualification for teaching is the Nigeria Certificate in Education as stipulated by Federal Government of Nigeria (Ibid.). Teachers all over the world are recognized as critical factors in the delivery of quality education at whatever level (Ike & Iheberenu, 2008). Having acknowledged this, some previously studied such as Fakeye 2012 have recommended constant upgrade of teachers' knowledge so as to equip them with the necessary pedagogical skills

and knowledge that can foster effective delivery of their subject.

Nigeria Educational Policy stipulates that minimum teaching qualification should be Nigeria Certificate in Education. It is not a surprise that, there are a good number of teachers teaching in secondary schools, who have exceeded the minimum qualification but now holding master and Ph.D. certificates. Academic qualification has been identified in the past as one of the predictors of teacher ability to understand and teach a subject effectively. Qualification may however need co-exist and interact with other factors to explain the variation in teacher job confidence. It is therefore difficult to conclude without investigation that, all teachers who are academically qualified must be confident about their job. This reveals the significant of this study, which attempted to establish empirical finding about the path linkages that exist among teacher academic qualification, class of assignment; subject taught by the teacher, gender, teacher-student ratio and teacher job confidence.

1. RESEARCH QUESTION

a) What is the strength and direction of relationship Class, Gender, Qualification, Subject taught, Teacher-Student relationship and Teacher Job Confidence?

b) What are the meaningful paths that can explain the teachers' confidence?

c) What is the proportion of direct and indirect relationship among the variables that can provide meaningful explanation of teachers' confidence?

d) How fit is the Casual model that can provide meaningful explanation about teacher confidence?

2. METHODOLOGY

The study adopted a Descriptive research method using path-analytic approach. The population for the study comprises of all the teachers in public secondary schools in the five Local Government Areas (LGAs) in Ibadan metropolis in Oyo state, Nigeria. Stratified random sampling was used to select one hundred and fifty (150) teachers from each LGA making a total of seven hundred and fifty (750) teachers, teaching in all the six levels (JS1 to SS3) in secondary schools. The selection cut across various subjects being taught in the schools. Two validated instruments were used to gather information for this study. These are: Teacher-Student Relationship Inventory and Teacher Job Confidence Scale with estimated Cronbach reliability coefficients(rs) of 0.80 and 0.95 respectively. Twenty five research assistants were engaged to collect the data (5 per LGA). Data collection lasted one week. The data collected were analyzed by adopting Path analysis, using AMOS 18 software.

3. DISTRIBUTION OF SAMPLED TEACHERS BY SCHOOLS

(a) Research Question 1

What is the strength and direction of relationship class, gender, qualification, subject taught, teacher-student relationship and teacher job confidence?

Table 1
Intercorrelations Among Variables: Class, Gender, Qualification, Subject Taught, Teacher-Student Relationship and Teacher Job Confidence

12	X1	X2	X3	X4	X5	X6
X1	1					
X2	-.142**	1				
X3	.170**	-.028	1			
X4	-.141**	.019	-.063	1		
X5	-.021	.013	.308**	-.034	1	
X6	.077*	.024	.018	-.075*	.075*	1

X1=Class, X2=Gender, X3=Qualification, X4=Subject taught, X5=Teacher-student relationship and X6= Teacher job confidence

Considering zero order correlations as shown in Table 1, Class of engagement, Subject taught and teacher-student relationship has significant relationships with teacher job confidence. Among the three identified variables, Only class taught and the teacher-student relationship has a positive relationship with teacher job confidence. This reveals that teachers that teach higher classes and likewise those that have a better relationship with their students are more confident about the job.

(b) Research Question 2

What are the meaningful paths that can explain the teachers' confidence?

Table 2
Identification of Meaningful Path Using Firs Order Correlation and Regression Weight

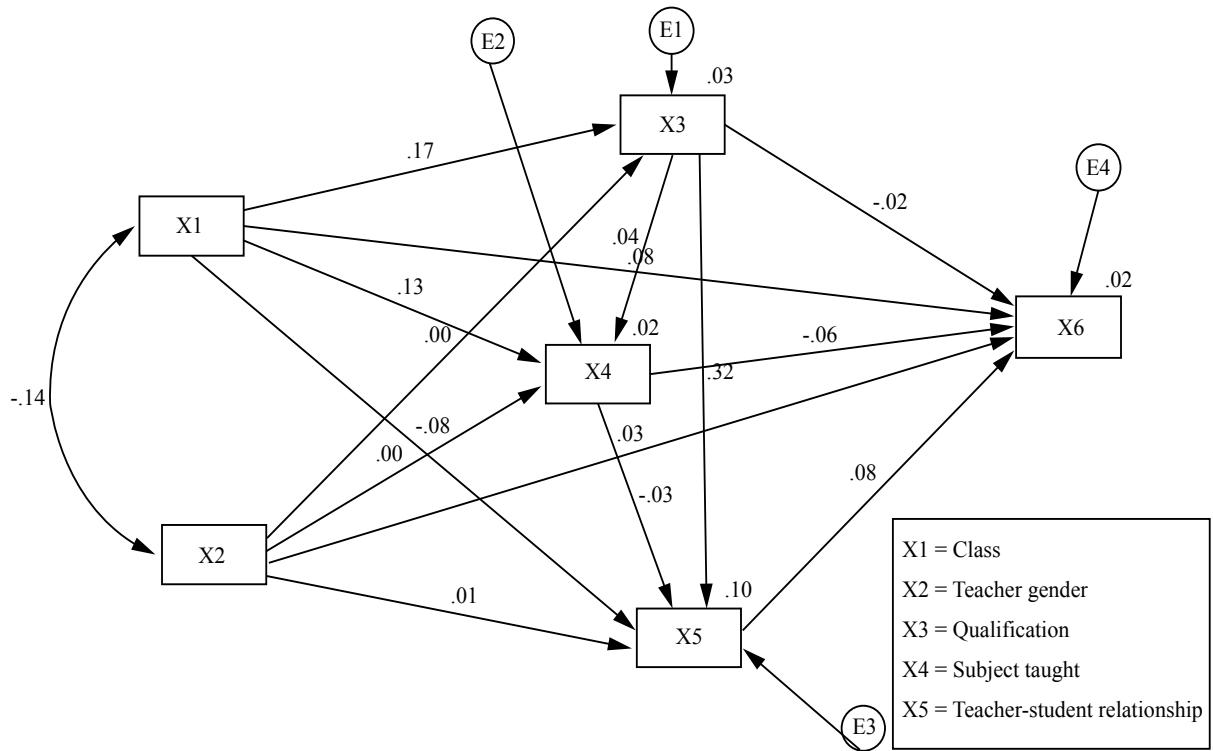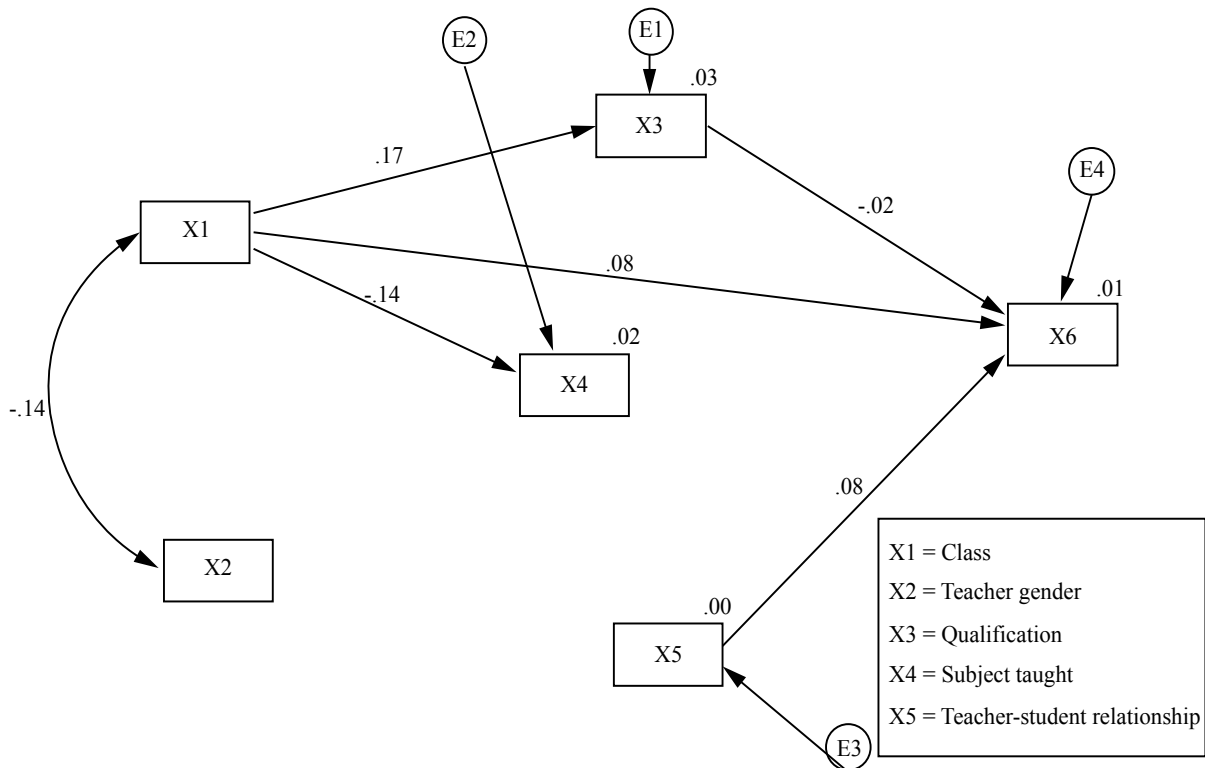| Path	First order correlation	Regression weight	Significant
P_{31}	.170**	0.170*	S
P_{32}	-.028	-0.04	NS
P_{41}	-.141**	-0.141*	S
P_{42}	.019	-0.001	NS
P_{43}	-.063	-0.041	NS
P_{51}	-.021	-0.76*	NS
P_{52}	.013	0.321*	NS
P_{53}	.308**	0.022	NS
P_{54}	-.034	-0.025	NS
P_{61}	.077*	0.079*	S
P_{62}	.024	0.036	NS
P_{63}	.018	0.005	NS
P_{64}	-.075*	-0.065	NS
P_{65}	.075*	0.077*	S

Figure 1
Hypothesise Paths

Figure 2
Trimmed Paths

This study used two types of criteria to determine whether a path is significant or not. Usually three types of criteria may be used in path of trimming that is statistical significance, or meaningfulness or both. In this study, for meaningfulness, the absolute value of a path coefficient was taken to be at least 0.05 as recommended by Land (1969) cited by Utoh (2006) and Adeleke (2007). For the significance criterion, the choice of the investigator is at 0.05. These two criteria were applied to avoid the uncomfortable situation where some minute path coefficients were found to be significant because the analysis was based on fairly large samples (Kerlinger & Pedhazur, 1973) cited in (Utoh 2006 & Adeleke, 2007).Based on the two criteria selected, for this study, the term "Significance" therefore connotes Statistical Significance as well as meaningfulness. The paths found not to be significant or meaningful were dropped. The results are consistent, only class and teacher-student relationship are found to have direct effects on job confidence of the teachers.

(c) Research Question 3

What is the proportion of direct and indirect relationship among the variables that can provide meaningful explanation of teachers' confidence?

Table 3
Direct and Indirect Estimates of Effects

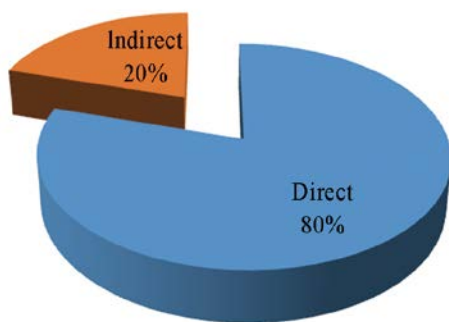| Path	Total effect	Direct	Indirect
P_{31}	0.170	0.170	0.00
P_{32}	-0.004	-0.004	0.00
P_{41}	-0.142	-0.135	-0.007
P_{42}	-0.001	-0.002	0.001
P_{43}	-0.040	-0.040	0.00
P_{51}	-0.020	-0.078	0.058
P_{52}	0.010	0.011	-0.001
P_{53}	0.321	0.320	0.001
P_{54}	-0.025	-0.025	0.00
P_{61}	0.082	0.79	0.003
P_{62}	0.036	0.35	0.001
P_{63}	0.005	-0.023	0.029
P_{64}	-0.065	-0.063	-0.002
P_{65}	0.081	0.081	0.00
Total	0.408	0.325	0.083
Percentage	100	79.65	20.34

Figure 3
Proportion of Direct and Indirect Relationship

Table 3 and Figure 3 show the heavy influence of class of assignment and teacher-student relationship in estimating direct effect (80%) on teacher job confidence. None of the indirect effects of the exogenous and endogenous is found to be significant; hence they are all excluded from the final trimmed model which is consistent with the existing data.

(d) Research Question 4

How fit is the Casual model that can provide meaningful explanation about teacher confidence?

Table 4
Fitness Estimates of Casual Model to Provide Meaningful Explanation

Fit index	Meaning	Value
Chi	Chi square	3.48, *df*=2, *p*=0.00
GFI	Goodness of fit index	0.9001
NFI	Norm fit index	0.87
CFI	Comparative fit index	0.92
RMSEA	Root mean square error approximation	0.056

For the perfectly fit model, the fit indices should have the value of 1, usually a value of at least 0.90 is required to accept a model while a value of at least 0.95 is required and to judge the model fit as "good", the chi square value should be close to zero which is an indication of insignificant difference between the hypothetical model and reality. RMSEA means Root Mean Square Error Approximation was also presented in the table. If the approximation is good the RMSEA should be small. Ordinarily, a RMSEA of less than 0.05 is required. The result presented above shows both the chi square and other fit indices, the table revealed that the value of Chi square is significant. Meaning that the model is not properly fitted, but this might probably due to effect of sample size on the chi square value since other fit indices except NFI revealed that the model is fit hence the model could be described as being fit.

DISCUSSION

The findings reveal that class and teacher-student relationship have direct causal effects on teacher job confidence. Common practice in secondary schools is to assign competent and high educationally qualified teachers to senior levels while others are deployed to Junior levels. This practice negates the voice of those that cry for solid foundation in educational system of a country. Experience really counts in establishing result-oriented teacher student relationship which was another strong significant causal of teacher job-confidence. Relationship can build confidence even in a learning environment. A classroom where teacher-student relationship is hampered, job confidence of the teacher can never be guaranteed. The finding corroborates the position of Hughes and Chen (2011) that teacher-student

relationship forms the basis of the social context in which learning takes place. They equally stressed the fact that teacher-student relationship is one of the major factors affecting students' development, school engagement and academic motivation. In their views also, supportive and positive relationships between teachers and students ultimately promote a sense of school belonging and encourages students to participate cooperatively in classroom activities. Job confidence of a teacher in a positive relationship classroom will appear higher because interaction is fundamental aspect of quality teaching and student learning. The signal the finding is sending is, teacher-students relationship will continue to foster interactions that enhance all round development of the learners since they are the essence for the presence of the teachers in schools.

Teacher gender, academic qualification and subject taught were found not to have significant direct effect on job confidence. The finding is revealing a new direction in educational research. When effort is concentrated on ensuring positive relationship between teacher and learners, the job confidence of the teacher ceases to be determined by any of the gender, qualification and subject taught. The finding supports the position of Ike and Iheberenu (2008) that teachers all over the world are recognized as critical factors in the delivery of quality education at whatever level. It is however necessary to emphasise that not all the variables that surround the teacher will contribute immensely to his job confidence. The emphasis of Fakeye 2012 on the need for constant upgrade of teachers' knowledge so as to equip them with the necessary pedagogical skills and knowledge that can foster effective delivery of their subject is commendable. The finding however reveals specific area for attention, teacher student relationship remains central to maximum classroom achievement.

CONCLUSION

The challenges teaching in this 21st century poses has made it mandatory for the teachers to be confident on their job. The era when teachers impose self-ideas on learners is over. The cry for soft skills that can enhance the achievement of education institutional goals is loud now at all levels. Teacher confidence on the job is prominent because if a person is defeated within, then poor performance on the job becomes unavoidable. This study reveals major propellers of such confidence as, class of assignment and teacher-student relationship. Since the class of assignment may not be unconnected with the highest qualification a teacher holds, employers that see academic advancement of teachers as means of leaving their jobs seems wrong. They are rather inhibiting the confidence of the teachers under their control. The identified propellers if boosted can change the orientation

of teaching in secondary schools for better and by extension other educational levels.

RECOMMENDATIONS AND EDUCATIONAL IMPLICATIONS

Based on the findings of the study, these recommendations are made to give directions to stakeholders in the educational industry:

(a) The traditional approaches to teacher development should be replaced with the 21st century innovative training that gives learners priority in school engagements.

(b) Quality of Educational qualification a teacher is coming to the job with must meet the minimum standard set for level of education the teacher is to serve.

(c) Authoritarianism that characterised teachers' relationship with their students in the time past should change to create conducive learning atmosphere for the holistic development of learners. Achievement of this can consequently lead to job confidence of a progressive teacher.

(d) The school management should also consider the qualifications of teachers before assigning them to classes. Teachers with higher academic qualifications should be assigned to higher classes to boost their job confidence.

(e) School owners should also put a strategy in place not only to monitor learners' academic achievement, but also to observe the relationship that exists between a teacher and the students.

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