

PATH ANALYTICAL STUDY OF THE INFLUENCE OF PARENTAL, TEACHER AND STUDENT FACTORS ON ACADEMIC ACHIEVEMENT OF SENIOR SECONDARY SCHOOL STUDENTS IN FINANCIAL ACCOUNTING

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Abstract

Evidence from the results released by public examination bodies in Nigeria annually clearly indicates persistent poor achievement by students in financial accounting. This study therefore sought to develop a causal model that can provide deeper insight into parent, teacher and student factors that could account for the academic achievement of students in financial accounting. A sample of 807 senior secondary two (SS2) financial accounting students and 56 financial accounting teachers were selected from 56 public secondary schools in Akwa Ibom State, Nigeria. Data were collected using Teachers' Job Satisfaction Questionnaire (TJSQ); Financial Accounting Teachers' Attitude to Teaching Scale (FATATS); Parental Involvement Questionnaire (PIQ); Financial Accounting Students Attitude Scale (FASAS) and Students Score Profoma (SSP). Both face and construct validity of the research instruments were carried out. TJSQ had a reliability coefficient of .94, PIQ had an overall reliability coefficient of .88, FATATS had a reliability coefficient of .75 and FASAS had a reliability coefficient of .73. The result of the study revealed a parsimonious path model that provides explanation of the achievement of students in financial accounting based on parental, teacher and student factors. The model fit-indices indicated a chi-square value of 2.1; a RMSEA value of .03; a NFI value of .92 and CFI values of .95. The model as a whole explained 8.2% of the total variance in students' achievement in financial accounting.

Keywords: Financial accounting achievement, job satisfaction, parental involvement, attitude, gender, socioeconomic status, educational qualification, path analysis.

Introduction

Over the years, the failure rate in financial accounting has been moving astronomically in public examinations in Nigeria. This is evident in results released by external examination bodies in Nigeria. Commenting on candidates' poor achievement, Oloidi (2003) lamented that poor

academic achievement of students in financial accounting may jeopardised the development of accounting profession in the country, this is due to the fact that students are not making much progress in the subject. Morakinyo cited in Adetayo (2010) described the train of educational failure as a serious setback and economic waste considering the dwindling resources of the Country. Consequently, the continuous deterioration of students' performances in senior school certificate examinations does not encourage and favour Nigeria's move towards becoming vocational, science and technology self-reliance. In an effort to establish the root cause or causes of poor students' performance in financial accounting, Bolarinwa (2013) examined the relationship that exists between teachers' characteristics (educational quality and years of experience) and students' academic performance in financial accounting in senior secondary schools in South-western Nigeria using Pearson Product Moment Correlation Statistical approach. The result revealed that a positive relationship exists between teachers' characteristics and the level of students' performance in financial accounting. Similarly, in South-South geopolitical zone of Nigeria, Agharuwhe (2014) studied the influence of teachers' career satisfaction on student academic performance in public secondary schools using t-test, correlation and single –factor analysis of variance. The analysis revealed that satisfied teachers had higher job performance rating thereby producing better achieving students. Furthermore, recently Osagie and Akinlosotu (2017) examined a causal relationship between teachers' job performance and students' academic achievement using the step-wise multiple regression analysis in analysing relevant data, the findings of their investigation indicated that there is a bi-causal relationship between the variables in the study, and they went further to advice teachers to take their instructional duties and delivery processes serious because of the effect it has on the academic achievement of students. From the foregoing, literature showed that most researchers in financial accounting in a bid to proffer solution to this reoccurring problem had examined the effect of school factors, teacher factors, parental factors, student factors and teaching methods independently while some that examined the influence of these variables collectively had inconsistence results and a few that established the relationship among these variables failed to examine the strength of such relationship extensively (Omotayo, 2014; Adetayo, 2010; Ezeagba, 2014).

Further investigation revealed from literature that teacher factors may have significant influence on students learning outcome, considering the fact that teachers are the most indispensable element in the educational system. In the subject area of financial accounting, researchers have not extensively examined teacher factors collectively, they concentrated on single variable. Parental variables can have a greater influence on students' learning outcome considering the fact that parents are the first teacher and role model to their children, the home also serves as the first medium of socialization to the child. Parental variables have not been extensively examined in the field of financial accounting, few studies that examined the influence of parental factors in financial accounting has conflicting findings. Some researchers that were able to establish the relationship among some variables of parental factors, teacher factors, student factors and students' achievement in financial accounting did not reveal the magnitude and directional effects of such relationship extensively. This necessitated the researcher to further introduce path analysis into the present study, thereby building a hypothesized causal model that best fit the pattern of correlations found within the data set.

Structural Equation Modelling is a statistical approach to testing hypotheses about the relationships among observed and latent variables (Hoyle, 1995). According to Mac Callum and Austin (2000) Structural Equation Modelling tests hypothesised patterns of directional and non-directional relationships among a set of observed (measured) and unobserved (latent) variables. Observed variables, indicator variable or manifest variables can be describe in educational or behavioural research as any variable that can be used to infer or give definition to a latent variable, example is score from intelligence test. Intelligent is a latent variable because it cannot be measured directly but with the use of an observed instrument that will produce scores which can be used to infer the level of intelligence of a student. In literature, there are diverse types of structural equation models use in research. Raykov and Marcoulides (2006) enumerated four most commonly use, there are: (i). path analytic model (ii). Confirmatory factor analysis model (iii). Structural regression model (iv). Latent change model.

The focus of this study will be on path analytic model. Historically, path analysis was developed in the 1920s by Sewall Wright who was a geneticist, the essence of this development was to examine the effects of hypothesized models in phylogenetic studies. Years later, researchers adopted path analysis in various discipline including education. Path analysis according to Lleras (2005) is a statistical technique used primarily to examine the comparative strength of direct and indirect relationship among variables. Path analysis enables a researcher to systematically disentangle the various causal variables underlying a particular outcome using correctional data in series of parameter that are estimated by solving one or more structural equations in order to test the model fit of the correction matrix between two or more causal models, which are hypothesized by the researcher to fit the data set. Path analysis also enable researcher to examine the comparative strength of direct and indirect relationship among variables and identify the most significant pathways involved in predicting an outcome or academic achievement. The researchers shall among others use path analytic model to draw causal inferences from correlational data and as well causal inter relationship among a set of variables of teacher factors, student factor and parental factors. Parental factors to be examined in this study are; at-home and at-school level of parental involvement in their children educational activities and socioeconomic status using income, level of education and type of occupation as indicators. Socioeconomic status means the relative position a person occupies in the society with respect to the level of the person's social and economic class. Kraus and Keltner (2008) described socioeconomic status as an individual or family economic and social measures in relation to others in the society, these measures are based on parameters like level of income, education and occupation. While there is no uniform parameter for the measurement of socio economic status, Ovute (2009) stressed that variables that make up socioeconomic background are; family size, standard of house occupied or rented, type of occupation, family income and level of education. However, in the context of this research, socioeconomic status consists of parents' income, parents' occupation and parents' educational level. According to Grissmer (2003) parents' level of education is a strong factor affecting students' academic achievement. Musgrave (2000) was of the opinion that a child that has educated parents would strive to be like the parents or more than the parents.

The author further said that educated parents know the need to provide library materials like textbooks, newspapers and journals as this will assist the children in building their vocabulary. Mullis (2002) noted that educated parents can encourage their children to pursue advanced degrees and spend significant time on their homework. Karshen (2005) explains that in a

standardized test, students who have educated parents score higher than those who have uneducated parents. This may be attributed to the fact that educated parents can assess their children's books and communicate better regarding school activities. The educational level of parents may determine the type of occupation parents engage themselves. Parents in various occupations have unique styles of child rearing as well as different ways of disciplining their children. Parents' occupations may determine the level of encouragement and support parents render to their children. Kapinga (2014) revealed that parents from formal occupation stand a better chance of assisting their children at home than parents from informal occupation. The type of occupation determines an individual level of income. Income can be described as any form of earnings received; for example, salaries, wages, rents and profit from investment.

Parents make decision based on the available resources at their disposal and these decisions affect their children academic either negatively or positively. Krueger and Lindahl (2001) observed that the level of income influences children's academic achievement. Parents with better sources of income have the financial resources to really get involved in their children academic activities both at home and in the school. According to Epstein cited in Ibrahim and Jamil (2012) Parental involvement is a situation where families and communities create and play active roles in their children's educational activities. The author went further to assert that parents who play active role in the educational processes of their wards are those who volunteer their time in the school, help their children learn at home, take an active role in school-related decision making, demonstrate good parenting skills and regularly collaborate with the school community. Gonzalez-peinda, Nunez, Gonzalez-pumariiega, Alvarez, Rocés and Garcia (2002) were of the opinion that parental involvement affects students' academic achievement positively by boosting the academic self-concept of students, thereby giving the students greater confidence which is considerable important in academic progress and also sustain excellent in students' academic achievement.

Roces and Garcia (2002) were of the opinion that parental involvement affects students' academic achievement positively by boosting the academic self-concept of students, thereby giving the students greater confidence which is considerable important in academic progress and also sustain excellent in students' academic achievement. In Africa, Nyarko (2011) noted that Ghanaian parental involvement in their children's education is limited to home activities like ensuring completion of homework. This is not different from what is obtainable in Nigeria, as parents in Nigeria only get involved in their children's educational activities when a child goes to either the father or mother seeking assistance on how to solve homework. Available literature evidence indicates that students possess little behavioural problems and perform better academically when parents are highly involved in their school (Henderson & Mapp, 2002; & Jeynes, 2003).

Parent involvement in their children's education especially at- school may be influenced or hindered by the teachers' gender especially in some parts of Africa where mothers are not permitted to interact freely with their Children's male teachers and fathers are not allowed to communicate freely with their children's female teachers due to their religious or cultural inclination. Hansman, Tyson and Zahidi (2009) opined that countries all over the world are yet to achieve gender equality between women and men in various sectors including education. Nworgu (2005) observed that in our contemporary society, there is a prevalent gender imbalance

which has drifted into the school system. In the secondary school system, female teachers make up a greater percentage of the workforce and there may be differences between male and female teachers with respect to the behaviour they exhibit during instructional delivery.

Nworgu, Ugwuanyi and Nworgu (2013) revealed that there is a significant main effect due to gender on the students' academic achievement. The gender of a teacher (male or female) may influence the level of satisfaction a teacher derives from his or her job, considering the fact that men have more family responsibilities than women. Job satisfaction emanates from employee's perception of the degree to which the job enables him/her to achieve those things considered important to him/her and to the organisation. According to Weiss (2002), job satisfaction is a comfortable and pleasurable emotional feeling derived from the evaluation of an individual job. Nguni, Slegers and Denessen (2006) argued that satisfied teachers exhibit a lot of excitement, while putting in more effort and time with interest in helping students to actualize their academic goals and objectives. A satisfied teacher is likely to exhibit positive attitude towards teaching, attitude of an individual towards something involves the way and manner the person reacts, thinks and behaves. Ukpong (2000) sees attitude as an individual personal line of action expressed overtly based on actual choice which could be expressed positively or negatively. The author went further to explain that positive attitude is favourable mental disposition which is directed to a target stimulus while negative attitude is as a result of dislike and aversion for the stimulus, under consideration.

In a typical classroom setting, a teacher pilots the affairs of the teaching and learning processes, a teacher is seen by the learners as a role model. Furthermore, students' academic achievement is not solely the result of their endeavour, academic achievement is affected by so many factors, and one of them is the attitude of the teacher. Teachers with positive attitude tend to influence the students' positively, motivate as well as assist the students to also develop positive attitude towards school which in turn increases the degree of their commitment to academic work. (Ulug, Ozden&Eryilmaz, 2011).

Mubeen, Saeed and Arif (2013) were of the opinion that attitude could influence a learner's behaviour and reaction towards a subject, instructional materials as well as other students in the environment. This implies that, if a student is not favourably disposed to financial accounting, such student's attitude towards everything about the subject will be negative. Supporting this assertion, Ogunkola (2002) agreed that the attitude of a learner towards a subject would determine the degree of the learners' attractiveness or repulsiveness to that subject. Another variable of interest in this study is teachers' qualification. Teacher's qualification refers to the level of educational attainment an individual possess as a teacher. According to Owolabi and Adedayo (2012) teachers' educational background is the bane behind differences in instructional competences. Their assertion was based on their research findings which revealed that students taught by teachers with higher qualification performed better than those taught by teachers with lower qualification.

According to Martler & Vannatta (2005), the following steps are involve in executing path analysis; model specification: this involves the building of hypothesized model; model identification: this involves the use of correlational matrix to check the level of multi collinearity; model estimation: this involves the use of parameter estimates to determine the

magnitude and directional effects; model evaluation: this involves the determination of model fits; model modification: when the model does not fit the data set, there is need for modification.

Guidelines for Deletion of Paths in Hypothesized Causal Models.

Path trimming is usually done in path analysis to produce a more parsimonious causal model of the hypothesized causal, that is, a model with the most minimum reactive paths but would give the same effect as the hypothesize model. Heise (1969) describe deletion of paths as “theory trimming”. According to the author, there are two criteria for theory trimming namely: statistical significance and meaningfulness. In the use of significance criteria, the researcher only needs to delete paths whose beta β value (path coefficients) are not statistically significant at the prescribed level of significance usually $p < .05$. Kerlinger and Pedhazur (1973) and Land (1969) stressed that the criteria of statistical significance is prone to error due to the fact that if fairly large sample size is used in the analysis, even minute path coefficients may be found to be statistically significance.

As a remedy to this challenge, Land (1969) recommends the adoption of meaningfulness of the value of the path coefficients. The author implies that path coefficients with values less than .05 should be treated as not meaningful, only paths coefficient that is equal to or above ($p \geq .05$) should be treated as meaningful.

Unstandardized and Standardized Regression Coefficients

Unstandardized regression coefficient of say B_1 is obtained by holding other variables constant. The calculated valued of B_1 tells us how much of a change in Y can be expected for a given (unit) change in X_1 when the effects of X_2 are held constant. The standardized regression coefficient called beta weight β_1 are related to the unstandardized regression coefficient by $B_1 = \beta_1 \left(\frac{SD_y}{SD_{x1}} \right)$ where SD_y and SD_x are the standard deviations of variable Y and X_1 respectively. Beta (β) is a measure of how strongly each predictor variable influences the criterion variables, β is measured in units of standard deviation (Lleras, 2005).

Path model often report the standardized regression coefficients (beta) or estimated path coefficient that have been converted into standardized z-score, for each causal path depicted in the model. Standardized coefficients allow researchers to compare the relative magnitude of the effects of different explanatory variables in the path model by adjusting the standard deviations such that all the variables, despite different unit of measurement have equal standard deviations. These standardized path coefficients measure the relative strength and sign of the effect from a causal variable to an endogenous or outcome variable in the model. When more than one causal variable is present in the model, the standardized path coefficients represent partial regression coefficients that measure the effect of one variable on another while controlling for prior variables (Lleras, 2005).

Guidelines for Assessment and Determination of model fit

One of the most important steps in structural equation modelling is the assessment whether a specified model “fits” the data. There are various methods of determining model fits namely: absolute fit indices and incremental fit indices. Absolute fit indices determine how well a priori model fits the sample data (Mc Donald & Ho, 2002) and demonstrate which model has the most superior fit. These measures provide the most reliable indication of how well the proposed theory fits the data. This is different from incremental fit indices calculation which relies on comparison with a balance model. Absolute fit indices measure how well the model fits the data without reference to any other model, among others included in this category are the chi-square test and root mean square error approximation (Joreskog & Sorbom, 1993).

Chi-square(X^2)

Overtime, chi-square has been used in assessing the magnitude of discrepancy between the sample and fitted covariance matrixes (Hu & Bentler, 1992). It is however sensitive to sample size (Joreskog & Sorbom, 1993). Additionally, Garsson (2008) pointed out that the likelihood ratio of chi-square test cannot be relied upon alone, particularly in large samples because a finding of significance (rejecting the model) can occur even with very small differences of the model-implied and observed covariance matrices. The author added that AMOS labels the likelihood ratio chi-square as CMIN and advice the use of other goodness of fit measure in addition to chi-square. It is on this basis that the researchers used Root Mean Square Error Approximation (RMSEA) for further assessment and determination of model fit.

Root Mean Square Error Approximation (RMSEA)

Root mean square error approximation for a long time now, has been regarded as one of the most informative fit indices (Diamantopoulous and Siguaw, 2000). RMSEA reports how well the model is with unknown but optimally chosen parameter estimates would fit the population covariance matrix (Byrne, 1998). According to Hooper, Coughlan and Mullen (2008) RMSEA favours parsimony in that it will choose the model with the lesser number of parameters and it also has a known distribution. The author recommended a benchmark of values less than 0.03 to represent excellent fit. Additionally, Garson (2008) recommended pclose value of RMSEA should be less than 0.05 for a good model.

Root Mean Square Error Approximation (RMSEA) estimates lack of fit compared to the saturated model. RMSEA of .05 or less indicates good fit and .08 or less adequate fit. LO90 and HI90 are the lower and upper ends of a 90% confidence interval on this estimate. Pclose is the pvalue testing the null that RMSEA is no greater than .05 (Ingram, Cope, Harju & Wuensch, 2000).

Research Questions

The following research questions guided the study:

1. What is the most meaningful casual model for providing explanation of the achievement of students in financial accounting based on teachers' gender, teachers' qualification, teachers' job satisfaction, teachers' attitude towards teaching, at- school parental

involvement, at- home parental involvement, parent income, parent education, parent occupation and students' attitude towards financial accounting?

2. How fit is the casual model that can provide meaningful explanation about students' achievement in financial accounting?
3. What are the estimated direct, indirect and total influences of teacher, Parental and student factors on the students' achievement in financial accounting?
4. What is the proportion of variation in financial accounting students' academic achievement (criterion variable) that is attributed to teachers' gender, teachers' qualification, teachers' job satisfaction, teachers' attitude towards teaching, at- school parental involvement, at- home parental involvement, parent income, parent education, parent occupation, and students' attitude towards financial accounting?

Methodology

Design

This study adopted a correlation survey research design and the study was carried out in Uyo Senatorial District of Akwalbom State. The accessible population of the study is one thousand five hundred and eighteen (1,518) senior secondary school two (SS2) students offering financial accounting, and one hundred and nine (109) financial accounting teachers in all the eighty-six (86) public secondary schools in the nine (9) local government areas that makes up Uyo Senatorial District of Akwalbom State. Eight hundred and seven (807) senior secondary school two (SS2) financial accounting students and fifty-six (56) financial accounting teachers were selected from 56 public secondary schools in Uyo Senatorial District to constitute the sample size for the study through the use of multi-stage sampling procedure.

Instruments for Data Collection

The following research instruments were developed, validated and used for data collection for the study: Financial Accounting Teachers' Attitude to Teaching Scale (FATATS); Financial Accounting Students Attitude Scale (FASAS) Parental Involvement Questionnaire (PIQ); Teacher's Job Satisfaction Questionnaire (TJSQ); and Students Score Profoma (SSP).

FATATS was used to measure the attitude of financial accounting teachers towards teaching on a 4-point (Likert type) scale ranging from Strongly Agree (SA) to Strongly Disagree (SD), the construct validity of FATATS was ensured through factor analysis and FATATS had a reliability coefficient of .75 for the internal consistency of the items in the instrument.

FASAS was used by the researchers to elicit information from the students on their attitude towards financial accounting on a structured four-point (Likert type) scale with response options ranging from Strongly Agree (SA) to Strongly Disagree (SD) the construct validity of FASAS

was ensured through factor analysis and FASAS had a reliability coefficient of .74 for the internal consistency of the items in the instrument.

TJSQ was used to measure the level of financial accounting teachers' job satisfaction. It is made up of seven (7) clusters of different facets of job satisfaction such as growth and advancement, recognition, work itself, institution policy and administration, interpersonal relation, remuneration and working condition. Each cluster has five items with four-point response option of Very Dissatisfied (VD) to Very Satisfied (VS). After the face validity of the instrument was carried out by an expert, TJSQ reliability coefficient of .94 was obtained for the internal consistency of the items in the instrument.

PIQ was used to measure the level of parents' involvement in their children educational activities at home and at school on a 4-point response option ranging from Never (N) to Very Often (VO). After the face validity of the instrument was carried out by an expert, PIQ had a reliability coefficient of .88 measuring internal consistency of all the items in the instrument.

SSP was used for data collection on students' achievement in financial accounting, it contains names of sampled schools, class and local government areas which the schools are located with columns for serial numbers, students' identification number and scores of the students in financial accounting.

Data Analysis

Data were analysed using two multivariate analytical techniques namely: multiple regression and path analysis with the aid of Statistical Package for Social Science SPSS (version 23) and Analysis of Moment of Structure (AMOS version 23).

RESULTS

Test of assumption of multi collinearity

Assessment of multicollinearity among the variables in the model.

Pearson product moment correlation coefficient among the eleven variables in the causal model (teachers' gender, teachers' qualification, teachers' job satisfaction, teachers' attitude towards teaching, at- school parental involvement, at- home parental involvement, parents' income, parents' education, parents' occupation, students' attitude towards financial accounting and academic achievement of students in financial accounting) was computed to avoid duplication of ability measures and provides the basis for the determination of the predictive ability of each of the predictor variable in the causal model through the assessment of multicollinearity (bivariate correlation should not be more than 0.85) (Bart & Earnest, 1999; Pallant, 2010).

Table 1: Zero Order Correlational Matrix

	X1	X2	X3	X4	X5	X6	X7	X8	X9	XaXb
X1	1									
X2	-.108	1								
X3	.011	-.012	1							
X4	-.114	.030	-.020	1						
X5	-.015	.047	.175	-.009	1					
X6	.004	-.055	.564	.048	.126	1				
X7	.007	.102	-.060	.517	.004	.061	1			
X8	-.017	.024	.099	.017	.497	.125	-.027	1		
X9	-.051	-.008	.515	-.005	.163	.481	-.037	.036	1	
Xa	-.027	-.054	-.065	.064	-.137	-.016	-.006	.031	-.025	1
Xb-.052	-.223	-.065	.045	.035	.020	.082	-.023	-.024	-.059	1

X1=Teachers' Gender, X2=Teachers' Qualification, X3=Parents' Educational level, X4=Teachers' Job Satisfaction, X5=At- Home Parental Involvement, X6=Parents' Occupation, X7= Teachers' Attitude towards Teaching, X8---At- School Parental Involvement, X9=Parents' Income, Xa=Students' Attitude towards Fin. Acc.,

Xb=Students Achievement in Financial Accounting.

The zero-order correlational matrix in Table 1 indicates the suitability of all the predictor variables in predicting students' achievement in financial accounting since no bivariate correlation coefficient was more than .8 which is the benchmark for the assessment of multi collinearity (Field, 2005). To this end, all the predictor variables were retained and were used in building the causal model.

Research Question One

What is the most meaningful casual model for providing explanation of the achievement of students in financial accounting based on teachers' gender, teachers' qualification, teachers' job satisfaction, teachers' attitude towards teaching, at- school parental involvement, at- home parental involvement, parent income, parent education, parent occupation and students' attitude towards financial accounting?

Hypothesized recursive causal model of parent factors, teacher factors and students' factor on students' academic achievement in financial accounting.

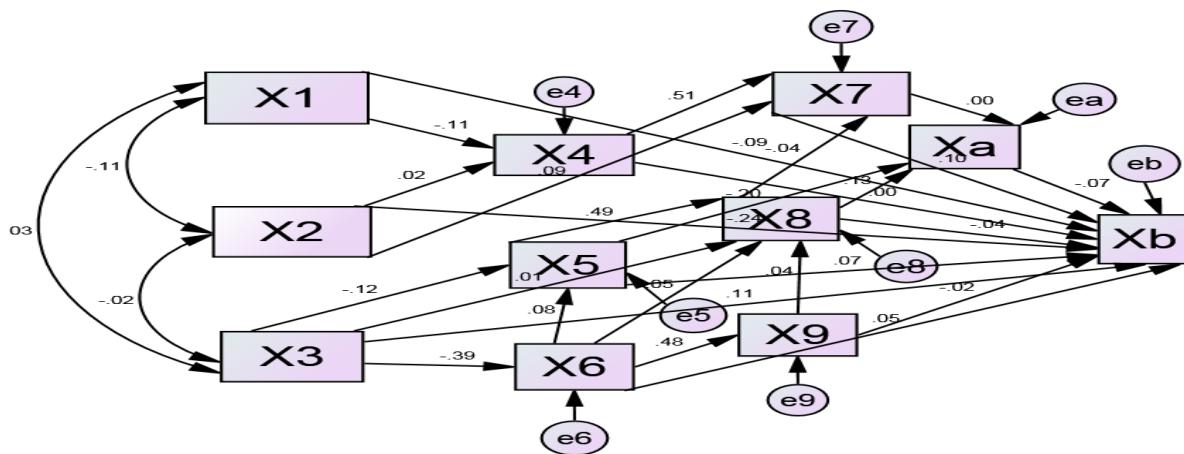


Figure 1: Hypothesized Causal Model

Variables in the model

Exogenous Variables:

X1-----Teachers' Gender; X2-----Teachers' Qualification; X3-----Parents' Educational level

Endogenous Variables:

X4---Teachers' Job Satisfaction X5---At- Home Parental Involvement; X6---Parents' Occupation

X7---Teachers' Attitude towards Teaching; X8---At- School Parental Involvement

X9---Parents' Income; Xa---Students' Attitude towards Fin. Acc.

Criterion Variable: Students Achievement in Financial Accounting

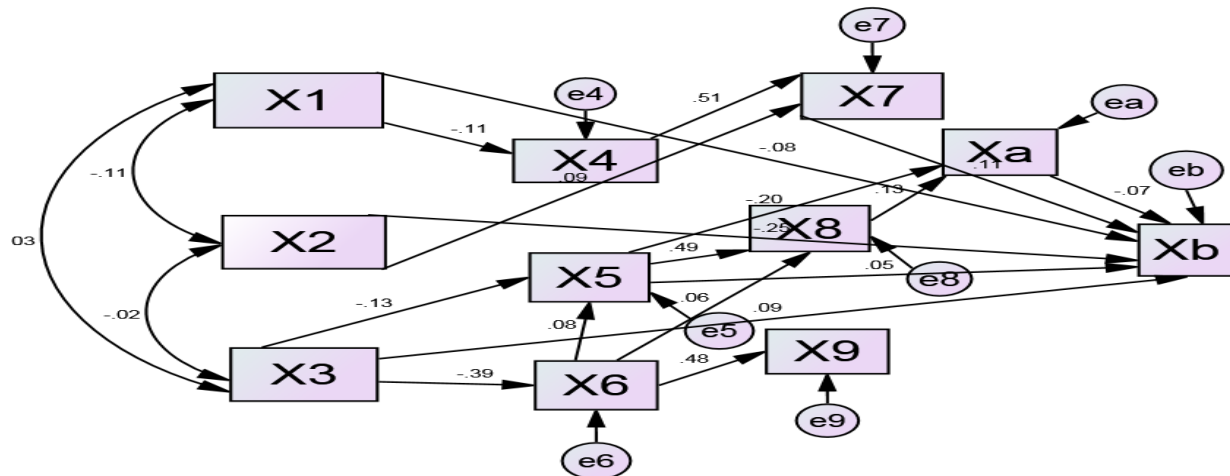


Figure 2 Presents a Parsimonious Path Model to provide explanation for the achievement of students in financial accounting based on parental factors, teacher factors and students' factor. Out of the 26 paths in the hypothesized model, 17 paths were meaningful while 9 paths were not meaningful using path coefficient with standardized beta weight equal or greater than 0.05 ($\beta \geq 0.05$) (Land, 1969) for the trimming exercise. The Parsimonious Model is a recursive model in which the direction of the causal flow is unidirectional. That is, it flows in one way. The model as indicated by the directions of the arrows shows that the three exogenous variables (teachers' gender, teaching qualification and parents' education) had a direct effect on the criterion variable (academic achievement in financial accounting). Furthermore, indirect effect of teachers' gender on students' academic achievement in financial accounting is observed through teachers' job satisfaction and teachers' attitude towards teaching. Indirect effect of teachers' educational qualification on students' academic achievement in financial accounting is observed through teachers' attitude towards teaching financial accounting. Indirect effect of parents' level of education on students' academic achievement in financial accounting is observed through parents' occupation, at-school parental involvement and students' attitude towards financial accounting.

Research Question Two: How fit is the Casual model that can provide meaningful explanation about students' achievement in financial accounting?

The model fit for the recursive model developed by the researchers was tested using

Chi-square goodness of fit test, Root Means Square Error Approximation (RMSEA) and Comparative Fit Index (CFI).

Table 2: Chi-square goodness of fit indices

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	42	76.477	35	.000	2.185
Saturated model	77	.000	0		
Independence model	11	1002.447	66	.000	15.189

Table 3: Root Mean Square Error Approximation indices

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.038	.027	.050	.949
Independence model	.133	.125	.140	.000

Table 4: Comparative Fit Index

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.924	.856	.957	.916	.956
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

Table 2 shows that the developed model has a Chi-square value of 76.47 with a probability value of 0.00. These fit indices indicate that the pattern of correlation in the observed data set are not consistent with the parsimonious model. Which means that the model does not fit the data set. That is, it is not significant may be as a result of the large sample size (N = 807) used (Kline, 2005). However, another fit indices RMSEA was introduced to further test the model fit, table 3 shows that the developed model has a RMSEA value of .03, (this value indicates a good fit) which is less than 0.07 acceptable threshold level as recommended by Steiger (2007). This fit index indicates that the pattern of correlation in the observed data set is consistent with the parsimonious model. Which means that there is a significant fit between the data set and the model. Table 4 also shows that the developed model has a CFI values of 0.95, (this value

indicates a good fit) values ≥ 0.95 is presently recognised as a good fit according to Hu and Bentler (1999). This fit index further indicates that there is a significant model fit between the empirically observed data set and theoretical model proposed by the researcher in the study.

Research Question Three: What are the estimated direct, indirect and total effects of teacher, parental and student factors on the students' achievement in financial accounting?

Table 5: Shows direct, indirect and total estimates of effects

Path	Direct Effects	Indirect Effects	Total Effects
P _{b2}	-.246	.009	- .237
P _{b1}	-.083	-.006	-.090
P _{b3}	.093	-.009	.084
P _{b8}	0.00	-.009	-.009
P _{b5}	.049	.010	.059
P _{b6}	0.00	.004	.004
P _{ba}	-.071	0.00	-.071
P _{b7}	.108	0.00	.108
P _{b9}	0.00	0.00	0.00
P _{b4}	0.00	.056	.056

Table 5 shows that teachers' level of educational qualification, teachers gender, parents' level of education, parental involvement at-home, students' attitude towards financial accounting, teachers' attitude towards teaching has direct effects on students' achievement in financial accounting with path coefficients of-.246, -.083, .093, .049, -.071, .108 respectively, but parental involvement at-school, parents' occupation, parents' level of income and teachers' job satisfaction has no direct effect on the academic achievement of students in financial accounting. Furthermore, teachers' level of educational qualification, teachers' gender, parents' level of education, parental involvement at-school, parental involvement at-home, parents' occupation, and teacher job satisfaction has indirect effects on students' academic achievement in financial accounting with path coefficient of .009, -.006, -.009, -.009, .010, .004, .056 respectively, students' attitude towards financial accounting, teachers' attitude towards teaching and parents' income has no indirect effect on students' achievement in financial accounting. The level of Parents income had neither direct nor indirect effect on the criterion variable.

Research Question Four: What is the proportion of variation in financial accounting students' academic achievement (criterion variable) that is attributed to teachers' gender, teachers'

qualification, teachers' job satisfaction, teachers' attitude towards teaching, at- school parental involvement, at- home parental involvement, parent income, parent education, parent occupation, and students' attitude towards financial accounting.

Table 6: The Total Contribution of the Ten Predictor variables in the Prediction of Students' Academic Achievement in Financial Accounting is as Shown Below.

Model	R	R Square	Adjusted R Square	Std Error of the Estimate
1	.286	.082	.070	19.675

a. Predictors: (Constant), StudentAttitude, TeacherAttitude, gender, ParentInvolAtSch, ParentEdu, qualification, ParentIncome, ParentInvolAtHome, TeacherJobSatis, ParentOccup

b. Criterion Variable: ACHIEVEMENT

Table 6 shows the regression analysis of the combined influence of the predictor variables (teachers' gender, teachers' qualification, teachers' job satisfaction, teachers' attitude towards teaching, parents' education, Parent income, parents' occupation, parental involvement at-home, parental involvement at-school and students' attitude towards financial accounting) on students' academic achievement in financial accounting. The analysis shows that the relationship between the ten (10) predictor variables and the criterion variable is .286 with a coefficient of determination of (R Square) of .082. This implies that the model explained 8.2% of the total variance in students' achievement meaning that 8.2% of students' academic achievement is accounted for by the predictor variables. This is an indication that 91.8% of the variation in financial accounting students' achievement is attributed to other factors outside the model.

Discussion

The most meaningful causal model for providing explanation of the achievement of students in financial accounting is a recursive model involving teachers' gender, teachers' qualification, teachers' job satisfaction, teachers' attitude towards teaching, at – school parental involvement, at- home parental involvement, parents' income, parents' educational level, parents' occupation and students' attitude towards financial accounting. The empirical data set used for the study fits the model as indicated by the model fit indices, thereby revealing that there is no significant difference between the empirically observed data and theoretical model proposed for the research. Furthermore, out of the 26 paths in the hypothesized model, 17 paths were meaningful while 9 paths were not meaningful. After the trimming exercise to obtain a parsimonious model. The parsimonious model was tenable and meaningful for the prediction of students' academic achievement in financial accounting considering the model fit indices. This result is in congruent

with the findings of Ugwuanyi (2016) who developed a causal model to provide explanation of the achievement of students in physics based on eight selected teacher and student variables and also Igbacha (2013) who developed a five- variable causal model to predict future achievement of candidates in vocational education in Nigerian technical colleges.

However, the model further indicates that using achievement of students in financial accounting as the criterion variable, Teachers' attitude towards teaching financial accounting has a direct causal effects with a path coefficient of 0.108 on students' achievement in financial accounting, this means that when teachers' attitude towards teaching goes up by 1 standard deviation, students' achievement in financial accounting goes up by 0.108 standard deviation. This implies that as teacher exhibits good attitude towards teaching, there is a corresponding improvement in the academic achievement of students in financial accounting. This finding corroborates the result of Ogunwuyi (2000) who found significant causal relationship between teachers' attitude and students' achievement in integrated science and Daso (2013) who examined the relationship between teacher variables using teachers' attitude as one of the indicator variables and students' academic achievement in mathematics.

Parental involvement at-home has a direct causal effects with a path coefficient of .049, this means that when the level of parental involvement at-home goes up by 1 standard deviation, students' achievement in financial accounting goes up by 0.049 standard deviation. This implies that as parents gets seriously involves in their children educational activities at home, there is a corresponding improvement in their children's academic achievement in financial accounting. This finding supports the result of Fan and Chen (2001) who in their various studies found a positive effects of parental involvement on academic performance of students.

Parents' level of education has a direct causal effects with a path coefficient of .093, this means that when parents' educational level goes up by 1 standard deviation, students' achievement in financial accounting goes up by 0.093 standard deviation. This implies that as parents level of education increases, there is also a corresponding increase in the academic achievement of their children in financial accounting, may be due to the fact that parents have acquired more knowledge that enables them to assist their children in their educational activities. This result is in support of European Union Monitoring Report (2013) which revealed that students whose parents are highly educated perform significantly better in mathematics which is the basis of financial accounting, reading and sciences than those whose parents have only basic schooling. Educated parents assist and encourage their children, provide relevant educational materials, get involved in the school management processes and create atmosphere that will facilitate learning at home. Collaborating this findings, Muruwei's (2011) research indicated that educational level of parents has a significant influence on students' academic achievement and concluded that the higher the educational level of parents, to an extent, the higher the probability that the offspring will achieve more academically.

Considering the model as a whole, it explains 8.2% of the total variance in students' academic achievement in financial accounting. This means that the ten predictor variables jointly account for 8.2% variance in students' achievement, the remaining 91.8% of the variation in students' achievement in financial accounting accounted for by other sources of variance outside the model.

Conclusion

A meaningful causal model for providing explanation of the achievement of students in financial accounting based on parental factor, teachers' factors and students' factor is tenable based on the fact that there is a significant model fit between the empirically observed data and theoretical model proposed for the study as indicated by the model fit indices. Thus, meaning that the data set used for the study fits the model. Among the ten predictor variables, parents' level of education, teachers' attitude toward teaching and at-home parental involvement has positive direct effects on the criterion variable. Furthermore, the ten predictor variables jointly account for 8.2% variance in students' achievement, the remaining 91.8% of the variation in students' achievement in financial accounting is accounted for by other variables that was not included in the model.

Recommendation

In line with the results of this study, the following recommendations were made:

1. The fit indices of the causal model revealed that the model is meaningful in predicting students' academic achievement in financial accounting, policy makers and various stakeholders in the educational sector should use the model as basis for policies formulation.
2. Teachers attitude towards teaching financial accounting was found in the model to have a significant positive direct effect on the academic achievement of students in financial accounting, school counsellors should be directed and encourage to organise frequent personal discussion with teachers to sensitize them about the importance of developing good positive attitude towards teaching, since the attitude of teachers influence the degree of attractiveness or repulsiveness of students towards financial accounting.
3. Educated parents should be actively involved in the formulation of schools' policies, regulation and planning, they should also play the role of second teachers at home to complement teachers' efforts in the school.

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