

Teachers and Students Perception on Measurement Error in Economics Achievement in Senior Secondary Schools in Nasarawa State, Nigeria

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Abstract

The study assessed teachers and student's perceptions on measurement error in Economics achievement in senior secondary schools in Nasarawa State, Nigeria. Three research questions, three null hypotheses were formulated, and cross-sectional research design was adopted. The sample size of 350 respondents, 50 teachers and 300 students were selected through stratified random sampling techniques. Questionnaire for Teachers and Students Perception on Measurement Error in Economics Achievement was used for data collection (QTSPMEEA). The instrument "TSPMEEA" was validated by experts yielded 0.79, and Cronbach alpha was used to determine the reliability of the internal consistency of the instruments which gave 0.80. Data collected were coded and analyzed using descriptive statistics (mean and standard deviation) to answer research questions while Non-Parametric statistics (χ^2) was used to test the hypotheses at the 0.05 level of significance. The study revealed that there is a significant influence between the perception of teachers and students on the influence of Measurement error in Economics Achievement, there is no significant influence between the perception of male and female teachers on the influence of Measurement error in Economics Achievement and there is a significant influence between the perception of male and female students on the influence of Measurement error in Economics Achievement. The study recommended that teachers and students should be counseled toward reducing or minimizing errors in Economics achievement before and after exam. Emphasis should be placed on moral instructions and value re-orientation on male and female teachers to avoid awarding scores to students freely without them meriting it and educational stakeholders/parents should place value re-orientation on male and female students to avoid error and any form of exam misconduct.

Keywords: *Teachers, Students, Perception, Measurement Error, Economics Achievement*

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Background to the Study

Perception is the process of recognizing and interpreting sensory stimuli (information). Perception also includes how we respond to the information. We can think of perception as a process where we take in sensory information from our environment and use that information in order to interact with our environment. Therefore, the teachers and students' perception could influence their attitude towards learning of Economics or any other school subject. Students more often than not, judge their teachers in such areas as the teachers' knowledge of the subject matter, communication, ability and the choice of appropriate teaching method. A teacher who is rated high on these indices in the perception of the students is likely to enjoy the confidence, respect and admiration of his/her students and vice versa (Audu, 2015). The way students perceive a subject determines their success or failure in that subject. Some students perceive Mathematics as no go area because of the negative impression passed down to them by the past generation who had bad experience with unqualified Mathematics teachers; that Mathematics is the most difficult subject in the school, it is not meant for everybody, not everybody passes it, it is meant for those with special talent, some were born to do Economics while others were not (Audu, 2015).

According to Nelson and Quick (2012), perception is the process of interpreting information about another person. What this definition has clearly highlighted for your attention is that the opinions you form about another person depends on the amount of information available to you and the extent to which you are able to correctly interpret the information you have acquired. In other words, you may be in possession of the same set of information that other people have on a particular situation, person or group but still arrive at different conclusions due to individual differences in the capacity to interpret the information that you all have. Rao and Narayan (2011) obviously share the main characteristics of the above definition. However, they emphasize that perception ranks among the "important cognitive factors of human behavior" or psychological mechanism that enable people to understand their environment. They define perception as the process whereby people select, organize and interpret sensory stimulations into meaningful information about their work environment. They argue that perception is the single most important determinant of human behavior, stating further that "there can be no behavior without perception. Though focusing on managers in work settings, Rao and Narayan (2011) draw attention to the fact that since there are no specific strategies for understanding the perception of others, every one appears to be left with his own inventiveness, innovative ability, sensitiveness and introspective skills to deal with perception. Thus, perception refers to the process by which we form impressions of other people's traits and personalities. You may have noticed that by referring to "our senses" as the means of data collection, the authors may have placed too much emphasis on its perception component, which the first two definitions clearly avoided. In other to shed more light on this concept it is important to pay attention to the following elements of the above definitions of perception listed by Rao and Narayan (2011).

1. Our attention, feelings and the way we act are influenced by our environment.
2. Perception helps you to gather data from your surroundings process the data and make sense out of it.
3. In perception, it is sometimes difficult to separate the information from the action.

4. It is basically a process of gaining mental understanding, and
5. Perception guides the perceiver in harnessing, processing and channeling relevant information towards fulfilling the perceiver's requirements.

Deduced from above listed points, assessment of one kind must be subsumed and this possible way could lead to three errors: the first "errors inherent in the instrument, second the "errors in the use of the instrument and third the "errors emanating from responses of the test takers" (Anikweze, 2015).

According to William (2010), measurement error (also called observational error) is the difference between a measured quantity and its true value. It includes random error (naturally occurring errors that are to be expected with any experiment) and systematic error (caused by a mis-calibrated instrument that affects all measurements. For example, in measuring the weights of 100 marathon athletes, if the scale used is one pound off, this is a systematic error that will result in all athlete body weight calculations to be one pound off. On the other hand, if the scale is accurate, some athletes might be dehydrated than others. Some might have wetter (and therefore heavier) clothing or a 2 oz. candy bar in a pocket to affect the measurement. These are random errors and are expected. In fact, all collected samples will have random errors and they are, for the most part, unavoidable. Measurement error in every score is made up of two independent components: true scores and the random measurement error score. The true score theory is a good simple model for measurement, but it may not always be an accurate reflection of reality. In particular, it assumes that any observation is composed of the true value plus some random error value. But is that reasonable? What if all error is not random? Isn't it possible that some errors are systematic, that they hold across or all of the members of a group? One way to deal with this notion is to revise the simple true score model by dividing the error component into two subcomponents, *random error and systematic error*. The differences between these two types of errors and try to diagnose their effects on this research expressed as:

$$X = T \pm E \quad (X = T + E_r + E_s)$$

Random error (E_r) is caused by any factors that randomly affect measurement of the variable across the sample. For instance, each person's mood can inflate or deflate their performance on any occasion. In a particular testing, some children may be feeling in a good mood and others may be depressed. If mood affects their performance on the measure, it may artificially inflate the observed scores for some children and artificially deflate them for others. The important thing about random error is that it does not have any consistent effects across the entire sample. Instead, it pushes observed scores up or down randomly. This means that if we could see all of the random errors in a distribution they would have to sum to 0, there would be as many negative errors as positive ones. The important property of random error is that it adds variability to the data but does not affect average performance for the group. Because of this, random error is sometimes considered noise.

Systematic error (E_s) is caused by any factors that systematically affect measurement of the variable across the sample. For instance, if there is loud traffic going by just outside of a classroom where students are taking a test, this noise is liable to affect all of the children's

scores in this case, systematically lowering them. Unlike random error, systematic errors tend to be consistently either positive or negative. Because of this, systematic error is sometimes considered to be bias in measurement.

However, William (2010) defines standard error as directly related to the reliability of the test. It is an index of the amount of variability in an individual student's performance in a test due to random measurement error. If it were possible to administer an infinite number of parallel tests, a student's score would be expected to change from one administration to the next due to a number of factors. For each student, the scores would form a "normal" (bell-shaped) distribution. The mean of the distribution is assumed to be the student's score "true score," and reflects what he or she "really" knows about the subject. The standard deviation of the distribution is called the standard error of the measurement and reflects the amount of change in the student's score which could be expected from one test administration to another. Whereas the reliability of a test always varies between 0.00 and 1.00, the standard error of measurement is expressed in the same scale as the test scores. For example, multiplying all test scores by a constant will multiply the standard error of the measurement by that same constant, but will leave the reliability coefficient unchanged. A general rule of thumb to predict the amount of change which can be expected in individual test scores is to multiply the standard error of measurement by 1.5. Only rarely would one expect a student's scores to increase or decrease by more than that amount between two such similar tests in or in terms of gender.

Adeyegbe (2015) affirmed that gender disparity in Mathematics achievement, male candidates performed well in Mathematics than their female counterparts, this is because most of them failed to make better grades in science examinations because of their inability to transfer mathematical knowledge to solving problems in science. Emaikwu (2012) pointed that measurement of ability has always been an important part of the school system such that even the habitual absentees normally turn up to school and present themselves for testing on examination days. The essence of testing is to reveal the latent ability of examinees. The term ability connotes the characteristics of the examinees that the test is intended to measure. It includes factual knowledge, specific skills and general skills. For an examinee's ability to be measured, the examinee has to respond to a sample of questions. A test score based on this sample of questions would be an approximate indicator of examinee's ability, but due to the problems of perception of an individual or group of persons result to their academic performance.

According to the Performance Statistics West Africa Senior School Certificate Examination WASSCE for school candidates, (WAEC, 2017) released 1,567,016 candidates registered for the examination, out of which 1,559,162 candidates sat for the examination. Of the total number of candidates that sat for the exam, 829,853 were males & 729,309 were females, representing 53.22% & 46.27% respectively. Out of the total no. of candidates that sat for the exam, 1,471,151, representing 94.36% have their results fully processed and released. 95,734 candidates, representing 5.64% have a few of their subjects still being processed due to errors traceable to the candidates. Specifically, with respect to Economics achievement, 923,846

candidates, representing 59.22%, obtained minimum of credits in 5 subjects & above, including English Language and Mathematics. Another problem is that, students' lack of interest in Mathematics, as well show great sign of anxiety whenever test in the area of geometry in particular is given to them. Therefore, the thrust of this study is to determine perception of students and teachers on the influence of measurement error in Economics achievement among senior secondary schools in Nasarawa state using school location, teachers and students gender as moderator variables.

Statement of the Problem

Over the years, perceptions of teachers and students toward Economics performance, is a thing of concern on the side of educational stakeholders and the society due to measurement error. Large scale assessments (WASSCE-WAEC, NECO, NABTEB and JAMB) are essential examples of what is designed to measure students' achievement in secondary schools which involves many stages for constructions, development, implementation, presentation and analysis of result or scores. The construction and development of items and task introduce unsystematic error, for example, performance tasks while considered comparable, render alternate form nonequivalent. Unsystematic error results from varied assessment implementation by test developers (teachers) and in different classrooms with different students. This measurement error occurs in three ways thus: the first "errors inherent in the instrument, second the "errors in the use of the instrument" and third the "error emanating from responses of the test takers". There is generally poor performance by students in Economics and other related subjects in particular and this has been a thing of great concern and therefore, it is against this background that this study assessed teachers and students perception on measurement error in Economics performance in senior secondary schools in Nasarawa State, Nigeria. In addressing this problem, the following research questions and hypotheses were raised.

Research Questions

The following research questions guided the study:

1. What is the perception of teachers and students toward the influence of Measurement error in Economics Achievement?
2. What is the perception of male and female teachers on the influence of Measurement error in Economics Achievement?
3. What is the perception of male and female students on the influence of Measurement error in Economics Achievement?

Statement of Hypotheses

The following null hypotheses were developed and tested at the 0.05 level of significance:

- H₀1:** There is no significant influence between the perception of teachers and students on the influence of Measurement error in Economics Achievement.
- H₀2:** There is no significant influence between the perception of male and female teachers on the influence of Measurement error in Economics Achievement.
- H₀3:** There is no significant influence between the perception of male and female students on the influence of Measurement error in Economics Achievement.

Literature Review

In a review of empirical studies, Bala, Hyelni and Muhammad (2016) examined students' perception of factors influencing teaching and learning of Mathematics in senior secondary schools in Maiduguri Metropolis of Borno State, Nigeria. The study used a sample of 1500 male and 1100 female students from six selected senior secondary schools in Maiduguri Metropolis, Borno State, Nigeria. The instrument used for data collection was a self developed questionnaire measuring students' perception of factors influencing teaching and learning of Mathematics. It had a reliability index of 0.81. To analyze the data collected, the research questions were answered using descriptive statistics such as simple frequency, mean and standard deviation. The results indicated that qualification of Mathematics teachers, teaching method, and instructional materials were highly perceived by students as important determinants of their success in learning. Also, students' attitude towards mathematics teaching and learning was an important factor in the performance of students. Based on the results of this study, it was recommended that: There is need to improve the quality of mathematics teachers. Government of Borno State should embark on serious in-service training of Mathematics teachers to equip them with skills for teaching Mathematics in secondary schools. Also, there is need for Mathematics teachers to try and understand the perceptions of their students and try to adopt instructional strategies that whatever student perceives as easy would really turn out to be easy and whatever is difficult may be properly addressed to motivate and encourage students to see the need in learning Mathematics and improve their performance.

Ampadu (2012) examined students' perception of their teachers' teaching methods on how it impacted on their learning experiences. The sample of the study involved 258 students from 12 junior high schools (12-14 years), who were randomly selected to complete a semi-structured questionnaire. The study revealed that students' perception of their teachers' teaching varies as the results established that both teacher-centered and student-centered teaching approach were used by Mathematics teachers. The results of the study revealed that teachers' action and inaction impact positively or negatively on students' learning experience as the majority of the respondents reported that their learning experiences are to a larger extent controlled by the teacher.

Asikhia (2010) conducted a study on students' and teachers' perception of the causes of poor academic performance in Ogun State secondary schools, Nigeria. The study had a targeted population consisting of all (SSII) students in Ogun State. That is 135 (SSII) students and 50 teachers were selected from five (5) secondary schools for the study through stratified random sampling. The instrument used for data collection was a self-designed questionnaire on the perception of students' poor academic performance. The data obtained were analyzed using frequency count and chi-square statistical analysis. Findings showed that teachers' qualification and students' environment did not influence students' performance but teachers' method of teaching influence performance. In addition, some of the factors of poor academic achievement identified were motivational orientation, self-esteem, emotional problem, study habits teacher consultation and poor interpersonal relationship.

Research Methodology

This study adopted a cross-sectional survey design. This is because, it involves the collection of data within a short span of time from a random sample of the target population distributed over a wide area (Anikweze, 2015). The population for the study consists of all 5787 students and teachers and the sample of 350 students and teachers. The study adopted a stratified proportional random sampling procedure. Respondents were stratified alone teachers and students, male-female dichotomy before simple random sampling was employed to obtain 350. Finally, the lottery method of simple random sampling was employed to obtain a sample size of 350. Serial numbers of the elements in the sampling frame were recorded on pieces of paper folded and mixed thoroughly before respondents were asked to pick at once without replacement. This procedure gave the respondents equal opportunity of being selected thereby, reducing the bias effect that may interfere with the validity and reliability of the study. The researchers developed an instrument for data collection called 'Questionnaire for Teachers and Students Perception on Measurement Error in Economics Achievement (QTSPMEEA)' which contained 20 structured items. QTSPMEEA made up of two sections. Section 'A' has 2 items contained the bio-data of respondents such as status and sex. Section 'B' consisted of 18 structured items that expressed statements on teachers' and students' perception toward Measurement error in Economics achievement is based on 5-point Likert type scale given as follows: Strongly Agree=SA, Agree=A, Undecided=UD, Disagree=DA, and Strongly Disagree=SD. QTSPMEEA was subjected to an expert in educational measurement and evaluation for value judgment by checking for appropriateness and relevance of the items, adequacy and agreement with the blueprint, clarity of expression and size of print and the logical consensus of the expert gave 0.82 indexes. Cronbach coefficient Alpha method of estimating reliability was used to compute coefficient of internal consistency of the instrument which yielded 0.81 indexes. The researchers made use of descriptive statistics (simple percentage) to sought 2 demographic information about the respondents were presented in simple bar chart and 18 structured items were used to answer research questions while chi-square (X^2) was used to test hypotheses at the 0.05 level of significance using SPSS version 21.

Presentation of Results

Table 1: Demographic Characteristics of the Respondents by Status

Variables	Frequency	Percentages (%)
Teachers	50	14.29
Students	300	85.71
Total	350	100.00

Source: Field work, (2019)

Table 1 shows demographic characteristics of the respondents by status. The teachers had 50 (14.29%) and the students had 300 (85.71%), this information is presented in the bar-chart fig.1 below:

Fig.1: Demographic Characteristics of the Respondents by Status

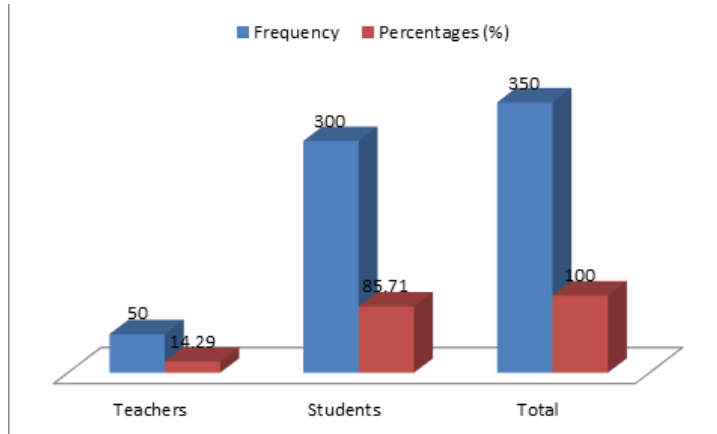


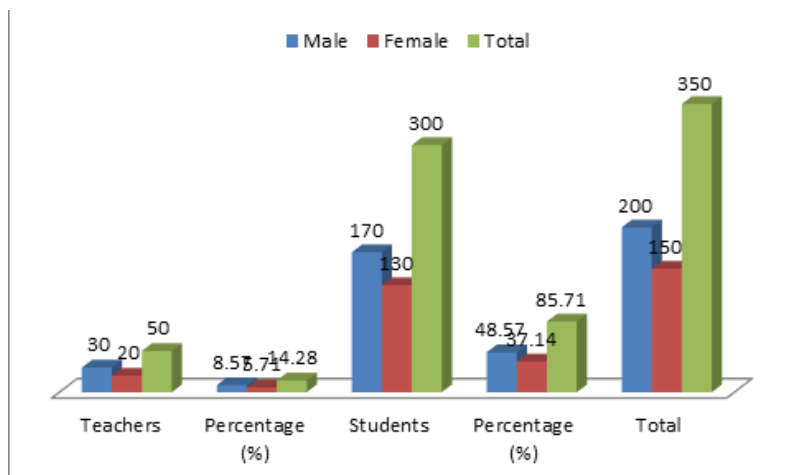
Table 2: Demographic Characteristics of the Respondents by Gender

Gender	Teachers	Percentage (%)	Students	Percentage (%)	Total
Male	30	8.57	170	48.57	200
Female	20	5.71	130	37.14	150
Total	50	14.28	300	85.71	350

Source: Field work (2019)

Table 2 shows demographic characteristics of the respondents by gender. Male teachers had 30 (8.57%) and female teachers had 20 (5.71%) while male students had 170 (48.57%) and female students had 130 (37.14%), this information is presented in bar-chart fig 2 below:

Fig.2: Demographic Characteristics of the Respondents by Gender



Answering of Research Questions

Research Question 1: What is perception of teachers and students toward the influence of Measurement error in Economics Achievement?

Table 3: Mean and Standard Deviation for Teachers and Students Perception on Measurement Error in Economics Achievement

Item Description	Teachers (N=50)					Students (N=300)					X Mean	Std Dev	Decision	
	SA	AG	UD	DA	SD	SA	AG	UD	DA	SD				
3 Errors occur when scoring without marking scheme	20	16	4	10	10	120	90	10	50	30	3.92	0.88	Accept	
4 Every score has error in student Economics achievement	21	12	2	8	7	100	120	5	45	30	3.82	0.72	Accept	
5 Some teachers add scores to students	15	20	-	8	7	130	90	2	40	38	3.92	0.88	Accept	
6 Economics achievement test items with sequence of errors generate confusion	20	10	2	8	10	100	120	3	37	40	3.85	0.72	Accept	
7 Error of language in teaching affect Economics achievement	21	14	2	5	7	110	105	3	37	45	3.23	0.96	Accept	
8 Giving students area of consideration before the Economics test is not an error		21	14	-	10	5	110	120	1	39	30	3.13	0.86	Accept
Pooled mean											3.65	0.85	Accept	

Source: Field work, (2019) Decision line: 2.50

Table 3 above shows the mean and standard deviation on the perception of teachers and students responses toward the influence of measurement error in Economics achievement. All the items ranging from 3,4,5,6,7 and 8 were considered accepted because they had the mean scores above the decision line, therefore the pooled mean score of 3.65 and standard deviation of 0.85 was accepted. This implies that teachers and students perceive errors that occur in Economics achievement either \pm are due to extraneous variables in the process.

Research Question 2: What is the perception of male and female teachers on the influence of measurement error in Economics achievement?

Table 4: Mean and Standard Deviation for Male and Female Teachers Perception on Measurement Error in Economics Achievement

Item Description	Male Teachers (N=30)					Female Teachers (N=20)					X Mean	Std Dev	Decision
	SA	AG	UD	DA	SD	SA	AG	UD	DA	SD			
1 Females commit errors when scoring than the male teachers	10	8	2	7	8	1	1	-	8	10	1.92	0.97	Reject
2 Male teachers award mostly higher scores to female students than the male students	8	7	1	6	8	8	10	-	1	1	2.82	0.72	Accept
3 Teachers add scores to students for money	8	9	1	4	8	8	8	2	1	1	2.77	0.77	Accept
4 Economics achievement test items developed by female teachers have more errors than male teachers	10	8	2	7	8	1	1	-	8	10	1.92	0.97	Reject

5	Most of the female teachers teaching is confusing than the male	10	9	1	7	8	1	1	-	8	10	1.92	0.97	Reject
6	Most of the male teachers give students area of consideration than the female teachers	8	10	1	6	6	8	10	-	1	1	2.82	0.72	Accept
Pooled mean												2.36	0.85	Reject

Source: Field work, (2019) Decision line: 2.50

Table 4 above shows the mean and standard deviation on the perception of male and female teachers' responses toward the influence of measurement error in Economics achievement. The items ranging from 10, 11 and 14 were considered accepted because they had the mean scores above the decision line of 2.50 while items 9, 12 and 13 were rejected due to mean scores below the decision line, therefore the pooled mean score of 2.36 and standard deviation of 0.85 was rejected. This implies that male and female teachers perceive that errors occur in Economics achievement are generous which can occur at any time.

Research Question 3: What is the perception of male and female students on the influence of measurement error in Economics achievement?

Table 5: Mean and Standard Deviation for Male and Female Students Perception on Measurement Error in Economics Achievement

Item Description	Male Students (N=170)					Female Students (N=130)					X Mean	Std Dev	Decision	
	SA	AG	UD	DA	SD	SA	AG	UD	DA	SD				
15 Female students commit errors in exam than the male students	90	60	2	10	8	50	60	2	8	10	2.92	0.97	Accept	
16 Female students cheat in exam than the male students	70	70	2	15	13	60	60	-	5	5	3.42	0.72	Accept	
17 Female students befriend their teachers for high scores	80	60	5	15	10	40	30	20	15	25	2.77	0.77	Accept	
18 Male students use money to buy exam questions from their teachers	55	60	15	20	30	50	60	5	10	5	2.92	0.92	Accept	
19 Most of the female students get confused in exam than the male students	25	30	15	50	60	20	20	-	40	50	1.92	0.97	Reject	
20 Most of the male students allow female friends to copy their answers in exams		80	60	5	15	10	40	30	20	15	25	2.77	0.77	Accept
Pooled mean											2.79	0.85	Accept	

Source: Field work, (2019)

Decision line: 2.50

Table 5 above shows the mean and standard deviation on the perception of male and female students' responses toward the influence of measurement error in Economics achievement. Items 15, 16, 17, 18 and 20 were considered accepted because they had the mean scores above the decision line while item 19 was rejected due to low mean score, therefore the pooled mean score of 2.79 and the standard deviation of 0.85 was considered accepted. This implies that male and female students perceive that errors occur in Economics achievement as a result of the attitudes around their teachers.

Testing of Hypotheses

H₀1: There is no significant influence between the perception of teachers and students on the influence of measurement error in Economics achievement

Table 6: Chi-Square Statistics for Significance Influence between teachers and Students Perception on the Influence of Measurement Error in Economics Achievement

Variables	df	X ² _{cal}	X ² _{tab}	P	Remark
Teachers Perception	4	7.71	9.488	0.05	Accepted
Students Perception					

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Table 6 shows the chi-square (X^2) statistics for significance influence between teachers and students perception on the influence of measurement error in Economics achievement. It is evident that at the 0.05 level of significance and df of 4, the $X^2_{\text{calculated}}$ value of 7.71 which is less than the $X^2_{\text{tabulated}}$ value of 9.488 was obtained. Therefore, since the $X^2_{\text{calculated}}$ value is less than the $X^2_{\text{tabulated value}}$, the null hypothesis was rejected and alternative hypothesis was accepted. Hence, there is a significant influence between teachers and students perception on the influence of measurement error in Economics achievement. This implies teachers and students perceive errors that occur in Economics achievement either \pm is due to extraneous variables in the process.

H₀2: There is no significant influence between the perception of male and female teachers on the influence of measurement error in Economics achievement.

Table 7: Chi-Square Statistics for Significant Influence between Male and Female Teachers Perception on the Influence of Measurement Error in Economics Achievement

Variables	df	X ² _{cal}	X ² _{tab}	P	Remark
Male Teachers Perception	4	9.71	9.488	0.05	Rejected
Female Teachers Perception					

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Table 7 shows the chi-square (X^2) statistics for significant influence between male and female teachers perception on the influence of measurement error in Economics achievement. It is evident that at the 0.05 level of significance and degree of freedom (df) of 4, the $X^2_{\text{calculated}}$ value

of 9.71 which is greater than the $X^2_{\text{tabulated}}$ value of 9.488 was obtained. Therefore, since the $X^2_{\text{calculated}}$ value is greater than $X^2_{\text{tabulated}}$ value, the null hypothesis was accepted and alternative hypothesis was rejected. Hence, there is no significant influence between male and female teacher's perception on the influence of measurement error in Economics achievement. This implies that male and female teachers perceive that errors occur in Economics achievements are generous which can occur at any time.

H₀3: There is no significant influence between the perception of male and female students on the influence of measurement error in Economics achievement.

Table 8: Chi-Square Statistics for Significant Influence between Male and Female Students Perception on the Influence of Measurement Error in Economics Achievement

Variables	df	X^2_{cal}	X^2_{tab}	P	Remark
Male Students Perception	4	8.61	9.488	0.05	Accepted
Female Students Perception					

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Table 8 shows the chi-square (X^2) statistics for significant influence between male and female students' perception on the influence of measurement error in Economics achievement. It is evident that at the 0.05 level of significance and degree of freedom of 4, the $X^2_{\text{calculated}}$ value of 8.61 which is less than the $X^2_{\text{tabulated}}$ value of 9.488 was obtained. Therefore, since the $X^2_{\text{calculated}}$ value is less than the $X^2_{\text{tabulated}}$ value, the null hypothesis was rejected and alternative hypothesis was accepted. Hence, there is no significant influence between male and female students' perception on the influence of measurement error in economics achievement. This implies that male and female students perceive that errors occur in Economics achievement as a result of the attitudes around their teachers.

Summary of the Major Findings

Based on the results of the analysis, the following major findings emerged from the study:

1. There is a significant influence between teachers and students' perception on the influence of measurement error in Economics achievement.
2. There is no significant influence between male and female teachers' perception on the influence of measurement error in Economics achievement.
3. There is a significant influence between male and female students perception on the influence of measurement error in Economics achievement.

Discussion of Results

Table 1 shows details of demographic characteristics of the respondents by status. The teachers had 50 (14.29%) and students had 300 (85.71%), this information is presented in bar-chart fig I while Table 2 shows demographic characteristics of the respondents by gender. Male teachers had 30 (8.57%) and female teachers had 20 (5.71%) and male students had 170 (48.57%) and female students had 130 (37.14%), this information is presented in bar-chart fig II. Research question one sought to find out the perception of teachers and students toward the

influence of measurement error in Economics achievement. All the items ranging from 3, 4, 5, 6, 7 and 8 were considered accepted because they had the mean scores above the decision line, therefore the pooled mean score of 3.65 and the standard deviation of 0.85 was accepted. The result of hypothesis one also revealed that at the 0.05 level of significance and degree of freedom (df) of 4, the $X^2_{\text{calculated}}$ value of 7.61 which is less than the $X^2_{\text{tabulated}}$ value of 9.488 was obtained. Therefore, since $X^2_{\text{calculated}}$ value is less than the $X^2_{\text{tabulated}}$ value, the null hypothesis was rejected and alternative hypothesis was accepted. Hence, there is a significant influence between teachers and students perception on the influence of measurement error in Economics achievement. This implies that teachers and students perceived errors that occur in Economics achievement either \pm is due to extraneous variables in the process. This result is in agreement with that of Bala, Hyelni and Muhammed (2016) opinion that qualification of teachers, teaching method and instructional materials were highly perceived by students as important determinants of their success in learning. Also, students' attitude towards Economics teaching and learning was an important factor in the performance of students. In line with this, Asikhia (2010) argued that teachers' qualification and students' environment did not influence students' performance but teachers' method of teaching influence performance. In addition, some of the factors of poor academic achievement identified were motivational orientation, self-esteem, emotional problem, study habits, teacher consultation and poor interpersonal relationship.

More so, the result of research question two in Table 2 shows the items ranging from 10, 11 and 14 were considered accepted because they had the mean scores above the decision line of 2.50 while items 9, 12 and 13 were rejected due to mean scores below the decision line, therefore, the pooled mean score of 2.36 and the standard deviation of 0.85 was rejected. The result of hypothesis two also confirmed that at the 0.05 level of significance and degree of freedom of 4, the $X^2_{\text{calculated}}$ value of 9.61 which is greater than the $X^2_{\text{tabulated}}$ value of 9.488 was obtained. Therefore, since the $X^2_{\text{calculated}}$ value is greater than the $X^2_{\text{tabulated}}$ value, the null hypothesis was accepted and alternative hypothesis was rejected. Hence there is no significance influence between male and female teachers perception on the influence of measurement error in Economics achievement. This implies that male and female teachers perceived that errors occur in Economics achievement are generous which can occur at any time. This finding is in agreement with that of Ampadu (2012) which revealed teachers action and inaction impact positively or negatively on students' learning experience as the majority of the respondents reported that their learning experiences are to a large extent controlled by the teacher.

Finally, the result obtained in table 3 for items 15, 16, 17, 18 and 20 were considered accepted because they had the mean scores above the decision line while item 19 was rejected due to low mean score, therefore the pooled mean score of 2.79 and the standard deviation of 0.85 was considered accepted. In line with this summation, the result of hypothesis three confirmed that at the 0.05 level of significance and degree of freedom 4, the $X^2_{\text{calculated}}$ value of 8.61 which is less than the $X^2_{\text{tabulated}}$ value of 9.488 was obtained. Therefore, since the $X^2_{\text{calculated}}$ value is less than the $X^2_{\text{tabulated}}$ value, the null hypothesis was accepted and alternative hypothesis was rejected. Hence, there is significant influence between male and female students perception on

the influence of measurement error in Economics achievement. This implies that male and female students perceive that errors occur in Economics achievement as a result of the attitudes around their teachers. This finding corroborated with that of Adeyegbe (2015) who affirmed that gender disparity in Economics achievement, male candidates perform well in Economics than their female counterpart. This is because most of them fail to make better grades in science examinations because of their inability to transfer mathematical knowledge to solving problems in science.

Conclusion

Teachers and students perceive error that occur in Economics achievement either \pm is due to extraneous variables in the process by either teachers favoring students to increase test scores or students buying teachers to increase his/her exams scores. The result of hypothesis one confirmed that there is a significant influence between teachers and students perception on the influence of measurement error in economics achievement. Again, gender also influences error in Economics achievement scores of individual students which could lead to their performance that they do not merit it.

Recommendations

Based on the result of these findings, the following recommendations are suggested:

1. That teachers and students should be counseled toward reducing or minimizing errors in Economics achievement before and after the exam.
2. Emphasis should be placed on moral instructions and value re-orientation on male and female teachers to avoid awarding scores to students freely without them meriting it.
3. Educational stakeholders/parents should place value re-orientation on male and female students to avoid error and any form of exam misconduct.

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