

Assessment of the role of demographic variables in students' performance in economics

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Abstract

Economics as a subject is regarded as the bedrock of all management and social science-based disciplines. The persistently low level of students' achievement in economics in senior secondary school examinations has become a thing of great concern to all stakeholders. This study examined students' performance in the Senior Secondary School economics qualifying examination in Kano State and the influence of sex and schools' nature on their performances in economics. An ex-post facto design of descriptive research was adopted for the study. A proforma was used to collect data from a sample of 300 students, selected using a stratified random sampling procedure from the secondary schools in Kano State, Nigeria. The data were analysed using descriptive statistics and an independent-sample *t*-test to test the hypotheses. Overall results showed that students performed above average and a significant gender difference exists in economics performance. Similarly, there is no significant difference in students' performance with respect to the schools' nature (boarding and day schools).

Keywords: Economics, examination, students' performance, school nature;

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1. Introduction

Education is a pivot under which meaningful national developments can be attained (Karaoglan Yılmaz, Yılmaz, Durak, & Keser, 2019; Rasto, Muhidin, Islamy, & Handayani, 2021). It is the instrument that sets the foundation for the growth and development of any society. To be relevant and effective, education has to be effectively imparted; this can only be achieved through the proper utilisation of appropriate methods and suitable instructional materials. Education is recognised in the National Policy on Education as the country's greatest asset towards the rapid development of its economic potential, sociological and human resources; hence, it focuses on the integration of the individual into a sound and effective citizen. It also plans equal educational opportunities for all at the primary, secondary and tertiary levels.

The teaching and learning process is not complete without an assessment of the learning outcome. The academic performance of a student measures the student's level of achievement. Epunam (1999) sees the academic performance of a child as the learning outcomes of the child, which includes the knowledge, skills and ideas acquired and retained through their course of study within and outside classroom situations.

1.1. Literature review

Abdullahi and Bichi (2015) opined that academic achievement is used as an index of students' future in this highly competitive society. It has been one of the most important goals of the educational process. Academic achievement is considered a key criterion to judge an individual's total potentiality and capability. Similarly, academic achievement occupies a very important place in the educational system. In the words of Crow and Crow (1969), academic achievement is the 'extent to which a learner is profiting from instructions in a given area of learning, i.e., the achievement is reflected by the extent to which skill or knowledge has been imparted to him'. Academic achievement also denotes the knowledge attained and skills developed in the school subject, usually designated by test scores (Karthigeyan & Nirmala, 2012; Yildirim, Avdal, & Ozgursoy Uran, 2018).

The academic performance of secondary school students in the West African Examination Council (WAEC) and National Examination Council (NECO) has taken a dramatic decline in recent times. This poor performance cuts across all subjects, including economics. There is no gainsaying that the purpose of teaching is to facilitate learning such that the students will be able to achieve high academic performance in examinations (Adu, Ojelabi, & Hammed, 2009; Chapek, Krajewska, & Jonas, 2018).

The importance of economics in any educational system, especially in academic performance, cannot be overemphasised. This has been buttressed by Adu (2002), who claimed that the study of economics serves a useful purpose in modern life. It gives facts and shows what may be expected to be the outcome of certain lines of conduct. It helps us to decide which of several alternatives to choose. It charged its recipients to make a wise choice that would satisfy their needs in the presence of unlimited wants and resources.

According to Obemeata (1991), economics as a subject has various values for the learners; it connects learners to the essentials of everyday life and it widens the mental horizon of the learner because it increases the mental capacity to understand various problems of life, analyse situations and draw conclusions that provide a guideline for a successful life. That is, economics is not primarily a body of knowledge; it is a method rather than a doctrine, an apparatus of the mind, a technique of thinking, which helps its possessors to draw a correct conclusion and, in the end, acquire cultural values, intellectual training and vocational training.

Obemeata (1980) stated that the importance of economics education to any nation is to enable both leaders and citizens to understand basic economic concepts and principles, as well as to appreciate

and seek to improve the economic situation for their social good. The understanding of economics is a pre-requisite for good citizenship and being a responsible citizen which involves the ability to take a rational decision on important economic issues with a good basis for doing so. Dutuma (2014) revealed that economics prepares one to deal with issues in a variety of fields, including business, law, politics, history and accounting. Understanding how society affects purchasing decisions helps in a civil servant's office. Furthermore, economics helps to prepare for the future, which affects career prospects, investment decisions and retirement strategies.

Despite the relevance of economics to everyday life in the area of commerce and industry, the teaching of the subject in Nigeria is characterised by many inadequacies (Adu et al., 2009). Nigerian secondary school teachers of economics have a few materials on the teaching of economics to work with (Adu, 2002; Obemeata, 1991). Although, there is an increase in the number of students that are offering the subject, achievement in economics has not been as good as it had been before the introduction of a new economics syllabus that incorporated some elements of mathematics into the subject. The situation has been posing a serious problem for the students in the Senior Secondary School classes partly as a result of the carry-over effects of the negative attitudes they have towards mathematics and ineffectiveness on the part of the teachers (Adu et al., 2009; Gürbüz, Afacan Findıklı, & Özdemir, 2022). The achievement of candidates in economics is not only poor generally but continues to fall over the years to a study (Adu et al., 2009; Tezer, Çavuş, Aslam Orkun, Osum, & Ture, 2021).

In Kano State, Nigeria, the state government usually conducts qualifying examinations for all senior secondary school (SSS II) students to assess their suitability for sponsorship to write the final examinations being conducted by the two public examining bodies in Nigeria (i.e., WAEC and NECO). Although the Kano State Qualifying Examination is used as a criterion to sponsor students to write their final examination conducted by WAEC and NECO., there has been no evidence from the literature that any study was conducted to assess the magnitude of students' performances in this subject.

1.2. Purpose of the study

Therefore, gaining an appreciation of their performance in economics may provide useful insight into their area of weakness and future performance as well as their suitability to be sponsored by the relevant agencies. The findings of the study might help the ministries of education and relevant stakeholders, including the teachers, in evaluating students' performances in their various capacities. Similarly, it is anticipated that the findings of this research will give curriculum developers new insights into emerging issues affecting performance and influence the authorities on policy formulation. It is also expected that students will benefit from the findings because improved economics performance will give them opportunities to pursue business and other related courses in institutions of higher learning in the country. The main objective of this study is to assess the academic achievement of senior secondary school students in economics. Specifically, this study intends to determine the overall secondary school students' performance in economics in Kano State; find out whether gender differences exist in the secondary school students' performance in economics; and find out whether the nature of school influences students' performance in economics in Kano State.

1.3. Research questions

The following research questions were raised to guide the study:

1. How well did the secondary school students perform in economics?
2. Is there any significant gender difference in the secondary school students' performance in economics?
3. Does schools' nature influence students' performance in economics?

1.4. Hypotheses

The following hypotheses were generated and tested at a 0.05 level of significance:

Ho₁: There is no significant gender difference in students' performance in economics.

Ho₂: There is no significant difference in students' performance in economics with respect to schools' nature (boarding and day schools).

2. Materials and methods

2.1. Research design

Ex-post-facto research design was employed to assess students' performance in economics. The data used was collected from the Monitoring and Evaluation Unit of the Kano State Senior Secondary Schools Management Board. The data contain all details of the students, including their responses and scores.

2.2. Participants

The population of this study comprises all the senior secondary school (SSII) students in Kano state who are ready to write their final examinations. Similarly, 300 senior secondary school (SS II) students, aged 16–18 years from 4 secondary schools in Kano State were selected for the study based on a stratified random sampling technique. The strata recognised the school nature [boarding (115, 38.3%) and day (185, 61.7%)] and gender [161 male (53.7%) and 139 female (46.3%)], as presented in Table 1.

Table 1
Distribution of the Participants

	Gender		Nature of school		
Male	161	53.7%	Day	185	61.7%
Female	139	46.3%	Boarding	115	38.3%
Total	300	100%	Total	300	100%

2.3. Data collection instruments

The Economics Achievement Test (EAT), constructed for Kano State Senior Secondary school qualifying examination to assess students' suitability for government sponsorship to write the final examinations being conducted by the two public examining bodies in Nigeria (i.e., WAEC and NECO), was used for this study. The MAT comprises 40 multiple-choice items with 5 answer choices/options (A–E). The test items covered the whole senior secondary school Mathematics syllabus prepared for SSCE by WAEC and NECO as well as the economics curriculum prepared by the Federal Ministry of Education in Nigeria.

2.4. Data collection procedure

The EAT with 40 multiple-choice items was administered to the sample after receiving specific instruction for the test by teachers under the supervision of the Monitoring and Evaluation Unit of the Senior Secondary Schools Board Kano State at the end of students' SS II in July 2014. The data used are the scores obtained from the test after marking by teachers following the designed marking scheme. The available records of the student's performance were collected by the researchers from the official students' records of the Kano State Senior Secondary Schools Management Board at the Monitoring and Evaluation Unit of the Board.

2.5. Data analysis

The data collected were analysed using Statistical Package for the Social Sciences 20v. The mean, standard deviation and independent sample *t*-test statistics were used. The level of significance was set at 0.05 for all statistical tests.

3. Results

3.1. Research question 1: How well did the secondary school students perform in economics?

To answer this question, the mean and standard deviation with the percentage of the students' performances were computed and presented in Table 2.

Table 2
Performance of Students in EAT

Variables	N	Mean	Std. deviation	Performance %
Economics performance (Scores)	300	60.27	11.472	60.27

Table 2 presents the mean students' academic achievement as measured by their performance in the EAT. The result revealed the mean performance to be 60.27 out of a total score of 100. This is barely about 60.27% and is above 50% which means the performance of the students in economics was above average. Comparing the hypothetical pass mark of 40.00 with the students' mean score of 60.27 indicated that the students performed well. Looking at the requirements for admission into higher institutions of learning in Nigeria at the credit level (50%), the overall secondary student achievement in economics can be considered good and above average.

Hypothesis 1: *There is no significant gender difference in students' performance in economics*

To test the above hypothesis the mean economics performances of male and female students were used to conduct a test of differences. The coefficient of the differences was determined using a two-tailed *t*-test at a 0.05 level of significance as presented in Table 3.

Table 3
The Difference in Students' Performances With Respect to Gender

Gender	N	Mean	SD	<i>t</i>	df	Sig. (2-tailed)	H ₀₁
Male	161	66.74	9.726				
				13.216	298	0.00	Reject
Female	139	52.78	8.373				

The descriptive statistics and a test for differences using the independent sample *t*-test obtained, as shown in Table 3, indicate that male students on the average performed better ($M = 66.74$, $SD = 9.726$) than female students ($M = 52.78$, $SD = 8.373$), where $t(298) = 13.216$, $p = 0.00$ and $\alpha = 0.05$. The result of the analysis revealed the mean of male students ($M = 66.74$, $SD = 9.726$) is statistically significantly higher ($t = 13.216$, $df = 298$, two-tailed $p < 0.05$) than the mean of female students. The null hypothesis which says there is no statistically significant gender difference is therefore rejected since $0.00 < 0.05$. This implies that there is a significant difference in performance between male and female students in economics. The difference was in favour of males, meaning that they performed better than females in economics.

Hypothesis 2: *There is no statistically significant difference in students' performance in economics with respect to the schools' nature.*

To test the above hypothesis the mean economics performances of day and boarding students were used to conduct a test of differences. The coefficient of the differences was determined using two-tailed *t*-tests at a 0.05 level of significance as presented in Table 4.

Table 4
Difference in Students' Performances Concerning Nature of School

Nature of school	N	Mean	SD	<i>t</i>	df	Sig. (2-tailed)	Ho ₂
Day	185	60.26	10.739				
				-0.20	298	0.984	Accept
Boarding	115	60.29	12.611				

The descriptive statistics and a test for differences using the independent sample *t*-test obtained, as shown in Table 4, indicate that day school students' performance is $M = 60.26$, $SD = 10.739$ and that of boarding school students is $M = 60.29$, $SD = 12.611$, where $t(298) = -0.20$, $p = 0.984$ and $\alpha = 0.05$. The result of the analysis revealed the mean of day school students ($M = 60.26$, $SD = 10.739$) is not significantly higher ($t = -0.20$, $df = 298$, two-tailed $p > 0.05$) than the mean of boarding students. The null hypothesis which says there is no statistically significant difference in students' performance in economics with respect to schools' nature is therefore accepted since $0.984 > 0.05$. This implies that there is no significant difference in performance between day and boarding school students in economics. There was no difference in favour of any group. This is evident in the fact that the mean scores recorded were 60.26 and 60.29 for day and boarding school students, respectively. The conclusion is that both day and boarding school students did well in the EAT.

4. Discussion

This study assessed the student's academic achievement in the economics qualifying examination in senior secondary schools in Kano State, Nigeria. The findings revealed that the performance of students in the economics qualifying examination is a little below average as measured by the mean scores of the students in their academic performance in the economics qualifying examination. Even though the student's performance is higher than the hypothetical pass mark of 40%, it is still below the credit level (50%) required for admission into higher institutions of learning in Nigeria. This result is in agreement with that of Amuda, Ali, and Durkwa (2016), whose findings revealed that students perform higher than hypothetical pass marks on secondary school economics tests (WAEC and NECO).

The analysis based on gender differences revealed that the males had a higher mean score compared to females in their academic achievement in economics. This indicates that males performed better than females in economics. Thus, hypothesis 1, which stated that no significant gender difference in students' academic performance in economics, is rejected. This finding is consistent with that of Amuda et al. (2016), who found males outperformed female students in introductory economics.

On whether the nature of school influences performance in the economics examination, the result showed that, the economics performance of students from day schools and that of boarding schools is higher and almost the same. This result is possible since economics has been made a compulsory requirement or pre-requisite for admission into higher institutions of learning to study business, management and social sciences-related courses in Nigeria; hence, the students have been monitored by their parents and guardians, highly motivated with extra lessons and exposed to good study habits. Perhaps parental guidance day enjoy motivates them to study hard, similarly, coaching and another extra lesson that boarding students receive help them to develop a favourable attitude

towards economics which has manifested in their high performance (Cakmak & Uzunboylu, 2018; Sarac & Daglioglu Yazici, 2018).

5. Conclusion

The main focus of this study was to assess secondary school students' performance in economics. The influence of gender and the nature of schools on their performance were also evaluated. The findings of this study revealed an interesting development concerning economics achievement in the Kano State Qualifying Examination. Firstly, the stakeholder's effort has brought about improvement in our school system, the academic achievement of students in economics is generally above the hypothetical pass mark and it falls within the required average mark for admission into Nigerian universities.

Secondly, gender differences in economics achievement exist. Lastly, despite all the advantages accorded to boarding schools, the result of this research has revealed that the performance of students in economics does not favour any group. It is generally believed that day school students are lacking in so many areas of improvement in learning, for example, boarding school students hardly violate rules and regulations such as involved in drug abuse, lateness, absenteeism or truancy as they are properly monitored and are secured in one place. Day school students enjoyed such parental guidance, however, there should be a concern on whether there is any magic performed in day schools.

Based on the findings of this study and considering the important place of economics in our educational system, the following are recommended:

- 1) Teachers and other stakeholders should pay special attention to encouraging and motivating students to develop good study habits to improve their academic achievement in economics for credible performance in the external examinations (WAEC and NECO).
- 2) Secondly, teachers may need to be more sensitive to the different needs of male and female students. Hence, caution has to be paid when teaching both genders.
- 3) Authors of economics textbooks and curriculum developers should shift emphasis from teachers' activities to students' activities that will promote learning by doing.
- 4) Item analysis should be conducted on the Kano State Qualifying Examinations items to ensure standardisation for better performance in external examination

References

- Abdullahi, S., & Bichi, A. A. (2015). Gender issue in students' academic achievement in the English language. *Kano Journal of Educational Studies*, 4(2), 31–38. Retrieved from https://www.researchgate.net/profile/Ado-Bichi/publication/281590724_GENDER_ISSUE_IN_STUDENTS'_ACADEMIC_ACHIEVEMENT_IN_ENGLISH_LANGUAGE/links/55ef045408ae0af8ee1b0465/GENDER-ISSUE-IN-STUDENTS-ACADEMIC-ACHIEVEMENT-IN-ENGLISH-LANGUAGE.pdf
- Adu, E. O. (2002). *Two problem-based learning strategies, quantitative ability, and gender as determinants of students' academic achievement in economics* (Ph.D. Thesis, p. 210). Department of Teacher Education, University of Ibadan, Ibadan, Nigeria.
- Adu, E. O. (2004). *An introduction to economics education: A basic text for tertiary institutions students*. Ibadan, Nigeria: Educational Research and Study Group.
- Adu, E. O., Ojelabi, S. A., & Hamed, A. (2009). Quantitative ability as correlates of students' academic achievement in secondary school economics in Oyo State, Nigeria. *African Research Review*, 3(2), 322–333. Retrieved from <https://www.ajol.info/index.php/afrev/article/view/43633>

- Amuda, B. G., Ali, D. G., & Durkwa, H. (2016). Gender difference in academic performance in SSCE economics subject among senior secondary school students in Maiduguri Metropolis, Borno State, Nigeria. *American Journal of Educational Research*, 4(3), 288–293. Retrieved from <http://article.scieducationalresearch.com/pdf/EDUCATION-4-3-10.pdf>
- Cakmak, K., & Uzunboylu, H. (2018). The roles of universities in the process of change. *IIOAB Journal*, 9(3), 109–120. Retrieved from https://www.iioab.org/IIOABJ_9.S3_109-120.pdf
- Chapek, K., Krajewska, S., & Jonas, K. (2018). Conditions for changes in the programme and teaching methodology of accounting in terms of integrated reporting challenges. The prospect of the academic teacher. *New Trends and Issues Proceedings on Humanities and Social Sciences*, 5(3), 183–192. <https://doi.org/10.18844/prosoc.v5i3.3923>
- Crow, L. D., & Crow, A. (1969). *Adolescent development and adjustment*. New York, NY: McGraw-Hill.
- Dutuma, N. (2014). *Economics in action, the benefits of studying economics*. The Economics Network of the Higher Education Academy. Retrieved from <http://whystudyeconomics.ac.uk/blog/2012/thebenefitsofstudyingeconomics>.
- Epunam, C. (1999). *Influence of school environment variables on academic performance as perceived by students* (Unpublished M. Ed. Thesis). ABU, Zaria, Nigeria.
- Gürbüz, U., Afacan Fındıklı, M., & Özdemir, Ş. (2022). Digital HR: A study on how game-based assessments can attract talents. *Global Journal of Information Technology: Emerging Technologies*, 12(1), 22–33. <https://doi.org/10.18844/gjit.v12i1.6941>
- Karaoglan Yılmaz, F. G., Yılmaz, R., Durak, H. Y., & Keser, H. (2019). Examination of students processes of searching information in education informatics network via eye tracking. *World Journal on Educational Technology: Current Issues*, 11(1), 65–73. <https://doi.org/10.18844/wjet.v11i1.4011>
- Karthigeyan, K., & Nirmala, K. (2012). Academic achievement in English: An analysis through gender lens. *MIER Journal of Educational Studies, Trends & Practices November 2012*, 2(2), 144–157. Retrieved from <http://mierjs.in/index.php/mjestp/article/view/1600>
- Obemeata, J. O. (1991). Effective teaching of economics in senior secondary schools. *West African Journal of Education*, 1(1), 9–13.
- Obemeata, J. O. (1980). Pupil's perspective of the purpose of economics education in Nigeria secondary grammar schools. *West African Journal of Education*, 21(2), 113–121. Retrieved from <https://www.africabib.org/rec.php?RID=190109718>
- Rasto, R., Muhidin, S. A., Islamy, F. J., & Handayani, D. (2021). The influence of knowledge sharing and competence on academic performance. *Cypriot Journal of Educational Sciences*, 16(3), 928–938. <https://doi.org/10.18844/cjes.v16i3.5764>
- Sarac, H. S., & Daglioglu Yazici, O. (2018). Comparing NLP and communicative approach: A study on spoken performance in ELT. *Global Journal of Foreign Language Teaching*, 8(2), 63–67. <https://doi.org/10.18844/gjflt.v8i2.573>
- Tezer, M., Çavuş, S., Aslam Orkun, M., Osum, A., & Ture, A. (2021). Examination of opinions of elementary school students on mathematics course in the COVID-19 pandemic process. *International Journal of Learning and Teaching*, 13(1), 42–53. <https://doi.org/10.18844/ijlt.v13i1.5279>
- Yildirim, J. G., Avdal, E. U., & Ozgursoy Uran, B. N. (2018). Examination of attitudes, perceptions, and behaviours of the elderly with diabetes based on the health belief model. *New Trends and Issues Proceedings on Advances in Pure and Applied Sciences*, 10, 78–81. <https://doi.org/10.18844/gjpaas.v0i10.3746>