

Predictive Validity of English and Mathematics Mock Examination Results of Senior Secondary School Students Performance in WASCE in Ekiti-State, Nigeria

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Abstract: This study was designed to investigate the predictive validity of English and Mathematics MOCK results of students in WASCE in Ekiti-State Nigeria. Three hundred and sixty students were selected by a simple random sampling technique from 12 public secondary schools in 6 Local Government Areas of Ekiti State Nigeria. The design used was an expo-facto type, it made use of already existing data, the data used for the study were the results of WASCE of students and unprocessed raw scores of mock examination from the various schools selected. The findings of the revealed that mock English and Mathematics helped significantly in predicting the success in academic performance of students in WASCE. However, English mock result was a better predictor of success in WASCE than Maths mock. Based on the findings of this study, it was recommended that mock examination should be made compulsory for students intending to sit for WASCE, it has been found to be helpful to students in predicting their performance in WASSCE.

Key words: Predictive validity, performance, English and Mathematics, WASCE, mock results

INTRODUCTION

Every nation that is committed to progress and advancement strives to have a system of education that reflects the changing needs of the nation. Such changes are usually not born out of coercion but out of the desire by both the government and the people to evolve a system that meet their goals, aspirations, immediate and long term needs (Ayodele, 2001).

Thus, education becomes a vital and crucial tool needed for the formation of minds from childhood to adulthood in a designed environment called school, where learning and the acquisition of skills can take place for the total development of each individual the society and the nation as a whole (Ogunkoya, 1988; Ogunsanya, 2004). Educational institution become more and more important to the day to day lives of a nations inhabitants, as these institutions assist succeeding generations to become aware of who they are to come to understand their function, their limitation and most of all, their potentials, capabilities, frustrations and fulfillment (Baris and Juffkins, 1995).

If education is meant to prepare youth for life, there is need for these students to prepare well for both internal (mock) and external (the WASSCE examination). It was for these reasons that this study focused on the predictive validity of mock examination results in English and Mathematics.

Mock examination as a trial examination is selective, predictive and diagnostic in nature. It is suppose to reveal how successful teachers instructions have been mastered. This mock examination being predictive in nature can be used for selection of students who will succeed in further academic endeavors. It also prepares the final year students in readiness for the final examination. Mock examinations are teacher-made tests prepared by the school teachers and are administered to students towards the end of the second term when those classes are supposed to have covered their examination syllabus (Ale, 2002). Teachers rating (achievement and aptitude test scores) have been used to predict academic and occupational success. This is usually achieved by employing various instruments based on inferential statistics.

Ojerinde (1974) further stated that teachers will be involved as never before in the development of curriculum and examinations, assignment which will take into account the childs performance throughout the entire period of school. The predictive validity can be estimated by determining the correlation coefficient between test scores and a suitable criterion measure of success on the job.

Statement of the problem: The alarming rate at which students fail the WASCE every year calls for attention and something urgently need to be done about it. Having

stayed in the school for 6 years with students attempting the teacher-made tests, through continuous assessment and end- of term examination, called mock examination. A teacher therefore should be able to say that these students are well prepared and will be able to face the final examination. But the question which readily comes to mind is that to what extent does scores in the mock examination predict students academic success in the senior secondary school certificate examination. Students who pass in mock examination have been found to fail WASCE, this is of concern.

Research hypotheses: In line with the issues raised above the following research hypotheses were generated and tested at 0.05 level of significance:

- There is no significant relationship between the performance of students in mock English and WASCE English?
- Students performance in mock Mathematics will not significantly predict their success in WASCE mathematics?

MATERIALS AND METHODS

This study used the ex-post facto research design. Three hundred and six students were selected by a simple random sampling technique from 12 public secondary schools in 6 local government areas of Ekiti-State.

The instruments used for this research work were tests constructed standardized, administered and scored by WASCE and raw scores of mock scored teachers in their various schools. The results were collected in English and Mathematics.

RESULTS

The results of the study are presented as follows:

Hypothesis 1: There is no significant relationship between the performance of students in mock and WASCE English?

The results of the students in WASCE English and mock English were collected and compared using correlation analysis and regression equation (Table 1).

The calculated values was 0.237 and the critical value was 0.195. since the calculated value was greater than the critical value, it shows that there is a significant relationship hence we reject the null hypothesis.

Finding the predictive value of mock English over WASCE English, it was revealed that the degree of predicting of mock over WASCE English was 0.2506 i.e 25% (Fig. 1).

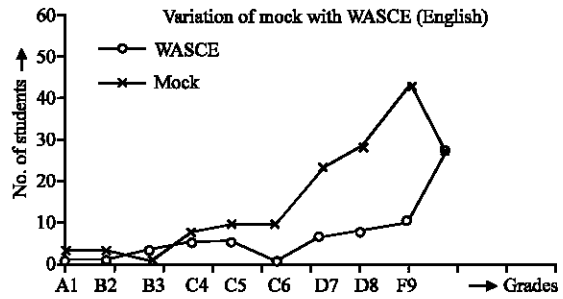


Fig. 1: Graphical representation of Mock english and WASCE english

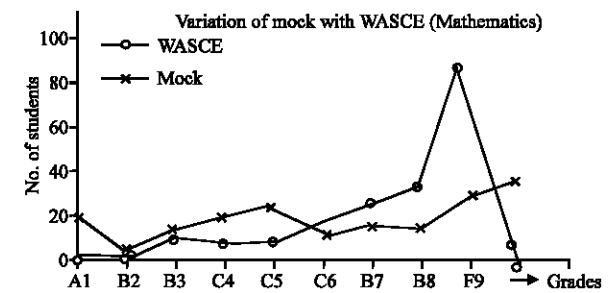


Fig. 2: Graphical representation of Mock mathematics and WASCE mathematics

Table 1: Regression Equation WASCE = 0.206+28.35 m

Variable	No. of cases	r- Calculated	Critical r value	Beta
Mock english	360	0.237	0.195	0.2506
WASCE english	360			

p>0.05

Table 2: A significant relationship between mock and WASCE mathematic

Variable	No. of cases	r- Calculated	Critical r value	Beta
Mock maths	360			
WASSCE maths	360	0.237	0.195	0.2373

p>0.05

H02: There is no significant relationship between the performance of students in mock and mathematics. The result in WASSCE Mathematics and mock mathematics were collected and compared using correlation analysis and regression equation.

Table 2 shows that there exist a significant relationship between mock and WASCE Mathematics. The calculated value of 0.123 was more than the critical value of 0.195. The null hypothesis was rejected. Mock mathematics has 23% predictive value of WASSCE Mathematics (Fig. 2).

DISCUSSION

From Table 1 and 2 it can be seen that mock mathematics and English significantly predict good performance in WASSCE. The above findings is in line

with the findings of Alonge (1983), Ojerinde (1974) and Adewumi (1993) which revealed that pre-test like the mock examination will enhance better performance.

For example in the study of Adewumi (1993) aimed at establishing the degree of relationship between school mock and West Africa Senior School Certificate Examination in Kwara-State, the statistical analysis revealed that there was no statistically significant difference between performance of students in both examinations in all the subject. This also implies that the results of Mock school certificate examination could be used to predict or supplement WASCE results.

However, this study disagree with the studies of Majasan and Bakare (1974) and Ohuche *et al.* (1974) which revealed that pre-tests (equivalent to mock) is not a good predictor of academic performance of university undergraduates. The reason for this can be attributed to a number of factors such as the intellectual capability of the learner, the socio-economic background and the study habit of the learner. Likewise, the nature of the test items, level of difficulty and discriminating power may affect the performance of the students in later examinations.

This study would be a good contribution to literature on predictive validity of mock examination thus providing a database for interested researchers in the area in future.

CONCLUSION

From the analysis of data it can be clearly seen that if the test items in the mock examination can be improved and more supervised by teachers, mock English and Mathematics are predictors of success in WASSCE.

The result of the findings supported the claim of Alonge (1983) who investigated the predictive validity of mock mathematics for WASSCE and came out with the conclusion that mock mathematics helped significantly in predicting success in academic performance of students in WASSCE mathematics.

In the same vein Ojerinde *et al.* (1974) while investigating the predictive ability of the success in school certificate examination found out that among all the variable Arithmetic and English language of N.C.E. were found to be the best predictors of mathematics and English language of WASSCE examination performance, respectively.

Teachers assessment of their pupils plays a significant part in predicting of their academic performance. The final grade a student will make at the end of his secondary school could be predicted from grades assigned to such a student in previous exam or mock examination.

Based on the findings of the study, the following recommendations were made.

RECOMMENDATIONS

- Mock examination should be centralized (at least) in the local government and supervised by the Area education officer in the local government, since it significantly predicted performance in WASSCE.
- Mock examination should be made compulsory for students intending to sit for WASSCE, since it has been found to be helpful to the student.
- Time laps between mock and WASSCE should not be more than 6 weeks for it, to serve as a test-retest form of the SSCE examination.
- Mock examination should undergo some process of standardization to be able to compete favorably with WAEC, which is also a standardized test.

REFERENCES

- Adewumi, J.A., 1993. A correlational study of performance in the mock school certificate and WAEC Examinations in Kwara-State Secondary School. An unpublished doctoral thesis, University of Ilorin, Ilorin Kwara-State.
- Ale, V.M., 2002. Predictive Validity of English and Mathematics Mock Examination Results of Senior Secondary School Students Performance in WASSCE in Ekiti-State. M. ED Thesis (Unpublished), University of Ado-Ekiti.
- Alonge, M.F., 1983. The Predictive Validity of Mock Mathematics Examination in WASSCE. M. ED Thesis (Unpublished). Obafemi Awolowo University Ile-Ife.
- Ayodele, C.S., 2001. Comparability of National Examinations Council and West African Examination Council Results in Ekiti State. M. ED Thesis (Unpublished), University of Ado- Ekiti.
- Barrs and David Juffkins, 1995. Intermediate school kit on the United Nations. UK: Pearson Publishing Ltd.
- Majasan, J.A. and G.M. Bakare, 1974. The predictive validity of Ibadan University entry Qualification. African J. Edu. Res., 1: 61-71.
- Ogunsanya, E.A., 2004. Students perceived causes and effect of examination malpractices: Implication for counseling strategies. Journal of Guidance and Counselling.
- Ohuche *et al.*, 1974. Academic achievement of Nigeria undergraduate, a function of previous educational experience. West African J. Education. Vol. Xviii, No. 2.
- Ojerinde, A., 1974. Prediction of Academic success in school certificate Examination from national common Entrance Examination score. M.ED Dissertation (Unpublished), Faculty of Education, University of Ife, Ile-Ife.