Abstract
The topic of the research is ‘predictive validity of S.S III chemistry MOCK Examination in relation to WAEC examination of some selected secondary schools in Dambam Local Government of Bauchi State, Nigeria. The aim of the research is to test the student performance in both WAEC and MOCK Examinations for 2012 and 2013 session. An observational checklist was used to collect the data from the study area and correlation coefficient was used to determine the difference between the MOCK and WAEC and t-test was used to test the significance of the hypothesis raised. The findings of the research indicated that there was a positive relationship between students’ performance in MOCK and WAEC chemistry for both 2012 and 2013 except in government day secondary school Dambam for 2012 which was found to be significant. Based on the findings, appropriate recommendations were made.

Keywords: Validity, Reliability, Correlation, MOCK, WAEC

Introduction
Chemistry Education enhance the quality of teaching, research and developments and also aimed at improving the quality of life as reported by (Khanam, 2018). Predictive validity is concern with the usefulness of test in predicting some future performance. It has to do with how accurately a person’s test score can be used to estimate what the criterion score will be at the later time as reported by (Othniel, 2013). Also, MOCK
Examinations are tools for preparing for an examination and the institution of certified book-keeper suggests that, every student should attend MOCK exam. This will give the student clue on how the actual exam will be like and will assist him/her in knowing at which speed he/she will need to work in order to complete the examination.

Therefore, correlation research was conducted to determine the relationship between chemistry MOCK and WAEC Examination.

**Description of the Study Area**

Dambam Local Government is located in Bauchi state within Misau emirate council covering an area of about 1,026km-2 and sharing boundary with Yobe State. The three districts in Dambam local government are Dambam, Jalam and Dagauda. They are the oldest districts in Misau emirate council and over 80% of the inhabitants are karai-karai by tribe, in which Jalam is the origin of karai-karai worldwide.

The introduction of Junior Secondary School was in October 1982. After many years, the schools were run under the community level which started around 1998 to 2003. The two schools at Dambam and Dagauda districts were upgraded to Government Day Secondary Schools status in which science course were introduced between 2009 and 2010. The other school in Jalam was also upgraded to Government Day Secondary School between September 2006 and November 2006 while the introduction of science subjects were started in September 2010 to November 2011. The science subjects are chemistry, physics and biology.

![Fig 1: Google Map of Dambam area](image-url)
Fig 2: Google Map of Jalam area

Fig 3: Google Map of Dagauda area
Statement of the Problem
New subjects were introduced to the schools and the level of the students' IQ needs to be tested. Are they really understanding the new science subjects or not. Do they have enough qualified teachers on the new subjects or not. Are the students really prepared to take the SSCE examination or not. Based on this fact, serious examination management has to be taken, because examination malpractice has eaten deep into the fabrics of our society, some measures really have to be taken to normalize the examination system in our society (Uche, 2005).

Objectives of the Study
The basic objectives are to:

i. To determine the relationship between performance in MOCK and WAEC chemistry of three (3) different schools for the year 2012 and 2013.

ii. To test the significance differences between students’ performance in MOCK and WAEC of the three selected schools.

iii. To determine the overall differences between the students’ performance in MOCK and WAEC examinations

Research Hypothesis
The following null hypothesis were raised;

i. There is no significant difference between the students’ performance in MOCK and WAEC Examinations

ii. There is no significant difference between the standardized WAEC and MOCK Examinations

Scope of the Study/Limitations
In this research, the test validity of the S.S. III Students MOCK Examination in relation to WAEC Examination of three selected Schools in Dambam Local Government were studied. The research was limited to only three schools because they are the only schools offering Chemistry. Also, the research was conducted in 2014 that is why it was only focus on 2012 and 2013 results.
Research Design
The type of design for this research is correlation research design of the result of S.SIII Students on chemistry MOCK Examination and WAEC Examination of some selected secondary schools in Dambam Local Government of Bauchi State.

Population of the Sample
The total populations of the three selected schools for both the examinations were one thousand four hundred and seventy six students (1,476) and four hundred and ninety two (492) students that write Chemistry Examinations were sampled and used for this research.

Research Instrument
The instrument used for this research was an observational checklist.

Method of Data Collection
The data were collected by the observational checklist of the result of the three selected secondary schools of Dambam Local Government.

Method of Data Analysis
The data collected were analyzed by correlation coefficient ($\gamma$) of the relationship between students’ result performance in MOCK and WAEC Chemistry Examination in various schools and t-test was used in order to test whether there is significant differences between students’ performance in MOCK and WAEC Examination in all the three schools.

Results
Table 1: Result for the Test Calculated and the Critical Value under 2-Tail Test and Correlation Coefficient

<table>
<thead>
<tr>
<th>School</th>
<th>Year</th>
<th>$\gamma$</th>
<th>t-calculated</th>
<th>t-table</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Government Day Secondary School Dambam</td>
<td>2012</td>
<td>0.96</td>
<td>2.17</td>
<td>1.96</td>
<td>Significant</td>
</tr>
<tr>
<td></td>
<td>2013</td>
<td>0.99</td>
<td>0.16</td>
<td>1.96</td>
<td>Insignificant</td>
</tr>
<tr>
<td>Government Day Secondary School Jalam</td>
<td>2012</td>
<td>0.88</td>
<td>1.05</td>
<td>2.00</td>
<td>Insignificant</td>
</tr>
</tbody>
</table>
Discussion

Comparing WAEC and MOCK, the level of significance was checked under 2-tail test at 0.05 significance level with the degree of freedom (N-2) where N is the total number of students.

The table shows that there is high correlation between MOCK and WAEC for government day secondary school Dambam in the year 2012 and 2013 with correlation coefficient value of 0.99 and 0.99 respectively. This implies that there is no significance difference between students’ performance in both MOCK and WAEC Examination. On the other hand, for Government Day Secondary School Jalam shows high correlation coefficient of 0.88 for 2012 while the correlation coefficient for 2013 was 0.17 (very low), this implies that there is significance difference in the performance of the students in MOCK and WAEC Examinations. Results of Government Technical Secondary School Dagauda shows that there is high positive correlation between MOCK and WAEC examinations for both 2012 and 2013 where the correlation coefficient were found to be 0.97 and 0.98 respectively. This implies that there is no significant difference in the performance of the students in this two examinations.

In testing the hypothesis, the t-test was used in order to test whether there is significant difference or not between students’ performance in MOCK and WAEC.

The decision rule as stated by Othniel, (2013)

i. Reject the null hypothesis if the calculated value of the test is greater than the critical value (table value)

ii. Do not reject the null hypothesis if the value of the test is less than the critical value (table value)

For Government Day Secondary School Dambam, the t-calculated is greater than the t-tabulated, therefore, the null hypothesis was rejected and the alternative one was uphold, which shows that there is significant difference in 2012 and then it was said to be insignificant.
For both 2012 and 2013, the t-calculated is less than the t-table for government day secondary school Jalam, therefore, the null hypothesis was not rejected and therefore the correlation was insignificant. For Government Technical Secondary School Dagauda, the t-calculated is less than the t-table value, therefore, the null hypothesis was accepted and correlation was insignificant.

**Findings of the Study**

The following major findings were made by the researcher in this study:

1. There was a positive significant difference between students’ performance in MOCK and WAEC in government secondary school Dambam for the year 2012
2. There was no significant difference between students’ performance in MOCK and WAEC examination in government day secondary school Dambam in the year 2013.
3. There was no significant difference between students’ performance in MOCK and WAEC chemistry examination in government day secondary school Jalam for both the year 2012 and 2013.
4. There was no significant difference between student’s performance in MOCK and WAEC Chemistry examination in government secondary school Dagauda for both 2012 and 2013 as the t-calculated is less than the t-tabulated, therefore, the null hypothesis was rejected.

The findings of the study revealed that a student who has credit in MOCK chemistry would have at least a pass in WAEC Chemistry exam. Majority of the students who had credit in MOCK chemistry obtained at least pass in WAEC Chemistry and those who failed in MOCK, most of them also failed in WAEC Chemistry. The correlation coefficient calculated for all of the schools studied indicated that there was a positive relationship between students’ performance in MOCK and WAEC Chemistry in both 2012 and 2013 only for the 2013 in Government Day Secondary School Jalam that was insignificant which may be due to lack of preparation by the school and students.
In this study, the research hypothesis states that, there is no significant difference between students’ performance in MOCK and WAEC Examinations in all the three schools was found to be invalid. High marks in mock implies high marks in WAEC Chemistry as indicated in government secondary school Dambam for the year 2012.

Another research hypothesis that say; there is no significant difference between the standardized WAEC and MOCK Examination was found valid as indicated in Government Day Secondary School Jalam, And Government Secondary School Dagauda for both 2012 and 2013 chemistry examinations.

The high correlation coefficient ($\gamma=0.99$) calculated for this study was from Government Secondary School Dambam. However, a unique case occur at government secondary school Dagauda which had ($\gamma=0.98$) meaning that students performance here were closely related in both MOCK and WAEC for the year 2013.

**Summary and Conclusion**
This research was on how to test the performance of S.S. III students in MOCK Examination of 2012 and 2013 session and to further test whether their performance in WAEC Examination are related to those of MOCK or not. Three (3) schools were selected and an observational checklist was used to collect data from the area of the study and correlation coefficient was used to determine the relationship between the two variables (WAEC and MOCK) and $t$-test was used to test the significance of the hypothesis raised.

**Recommendations**
Based on the findings, summary and conclusion, the following recommendations were made:

i. Chemistry teachers and school authorities should encourage the students to prepare adequately for both the examinations

ii. Students should be encourage to be reading their books as the research shows that most of the students failed both the examinations
iii. Government should provide textbooks and laboratory equipment to the schools so as to improve students preparation for the examination with a standard laboratory

iv. Government should also provide standard and enough qualify teachers as there is lack of chemistry teachers in all the three school as observed

v. Parent should also put more effort for the educations of their children

**Suggestion for Further Work**
The researcher have no available data to explain why there was high positive correlation coefficient in MOCK and WAEC Chemistry in one school than the other. It is therefore suggested that further work be undertaking along that line by future researchers.

**References**
Lajium, D.A.D. (2006). Assessment Of Chemistry Learning Environments And Students’ Attitutes Toward Chemistry. 3rd ICMEE


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www.maplandia.com>misau>dam...
www.maplandia.com>misau>jalam