

Assessing the Impact of Teaching Aids for Effective Teaching and Learning of Economics for Senior Secondary School in Adamawa State, Nigeria

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Abstract: *This study was set to achieve certain objectives among which are to assess the impact of teaching aids for effective teaching and learning of Economics in senior secondary schools in Yola north. The study adopted survey research design. The area of the study was Yola north, Adamawa state. The target population for this study consisted of 111 senior secondary schools in Yola educational zone Yola north and 1597 teachers out of which only Economics teachers will be sampled. Random sampling technique was used in this study. The researcher randomly picked five secondary schools in urban and five secondary schools in rural. The instrument used in this study was availability and utilization of teaching aids questionnaire (AUSFQ). The questionnaire was subjected to face validation by three (3) experts in the field of educational management, measurement and evaluation. The researcher and two of research assistant (RA's) administered the questionnaire on both the principals and teachers'. The data collected will be analyzed using mean and standard deviation to answer research questions; while the null hypothesis will be analyzed using statistical tool of t-test. All the hypotheses tested at 0.05 level of significance were rejected. Based on the data collected and analysed statistically. Conclusion was made that there is a significant difference between the impact of teaching aids for effective teaching and learning of Economics in senior secondary schools in Yola north. Recommendations are made that Government and non-governmental organisations should sponsor Economics teachers for training in how to use available teaching aids.*

Keywords: *Teaching aids, teaching and learning and Economics.*

INTRODUCTION

Teaching aids is crucial to teaching and learning processes. A dedicated classroom teacher feels satisfied when he realizes the objectives he has set out to achieve for every lesson. In order to achieve this, a trained teacher employs a number of methods, design and actions, one of which includes the use of teaching aids. Teaching aids are referred to as the resources which both the teachers and students use for the purpose of effective teaching and learning. Akpan (2011) defined teaching aids as those materials that teachers can use in teaching to facilitate the learning of a particular subject or lesson. The lists of teaching aids are inexhaustible and their limit is the teacher's level of resourcefulness, creativity and imagination. Dare (2009) listed teaching aids to include newspaper, magazines, audio visuals, textbooks, chalkboard, laboratory equipment, posters,

bulletins, journal, radio, television, audiocassettes, tapes, film scripts and slides. Others are overhead and opaque projector, real objects and computer.

Dare (2011) describe teaching aids as information multipliers because they are capable of providing learners with opportunities to learn beyond teacher's capabilities when utilized for instruction? Utilization of teaching aids is the act of using and applying the available teaching aids in the actual teaching/learning process. Where resources are supplied for instructional use, teachers are expected to utilize them to support a smooth and meaningful flow of instruction and promote understanding of the content being taught. To facilitate the teaching and learning of Economics in senior secondary schools, the skillful teacher can select those teaching aids that are relevant to the Economics curriculum. This could be implemented from the numerous teaching aids that abound in the market or that are available in the school. When teaching aids are not utilized, effective teaching and permanent learning are difficult to take place because students cannot actively participate in a way that challenge them to think creatively. Despite the intention of the Universal Basic Education (UBE) Programme, adequate provision and utilization of teaching aids for effective teaching and learning of Economics has not been attained.

The Universal Basic Education (UBE) programme of Nigeria is designed among other things, to facilitate the standard of literacy, and improve societal development. The UBE is a nine-year programme that covers six years of primary education and three years of junior secondary schools. The three years of junior secondary school is known as senior secondary schools (Upper Basic). Economics is one of the vocational subjects taught under the Universal Basic Education and it is designed to promote health in the home and society. Ibrahim (2010) described Economics as the study of the relationship of people and aspect of their environment such as clothing, housing and finance. Economics is a discipline with a broad scope that covers virtually all aspects of an individual's daily living (Maina, 2009). Uchendu (2010) described teaching aids played a very important role in Economics as a skill-oriented, decision-making subject that equips learners with skill and knowledge which will help them to be self-employed and at the same time contribute effectively to the socio-economic development of the family and society.

Since these teaching aids are said to be numerous and varied for a subject, the government may not have enough resources to effectively provide all that is required. This is because most factory-finished materials are very expensive due to various factors and inputs in the production process and sometimes the length of time taken to bring out the finished materials (Murfwang, 2006). This situation now challenges a practicing teacher to explore his environment and discover materials which can be used in place of the factory finished or imported ones. The teacher's effort to find alternative for the supply of locally made material elicits the innate act of improvisation. Improvisation is usually associated with the use of local resources, where and when professionally or commercially produced materials are not available a teacher, devices a substitute. Improvisation of instructional material is the imitation of those teaching aids or resources which the teacher and in fact the entire class utilize for the purpose of making teaching/learning more effective.

Statement of the Problem

Results from Economics baseline studies revealed that many Economics teachers displayed poor mastery of content, lacked basic practical skills and innovativeness, and used poor teaching methods. This was manifested in the theoretical teacher-centered approach to teaching. There were general complaints about lack of teaching and learning materials and available resources were hardly used.

The challenges in utilization of available resources were not investigated which was the main concern of this study. Inadequacy of instructional resources has been cited as one of the major causes of poor teaching techniques and too much theoretical teaching of Economics makes the subject to look too abstract and difficult to students. Other studies done both in Economics and other subjects in various schools in Yola North also found out that instructional resources were quite inadequate in many schools. The problem of inadequacy of teaching and learning resources affects the number of activities that a teacher can plan for a lesson thus limiting teachers in their efforts to vary their teaching techniques.

However, Economics teachers have to be more creative and use locally available materials in instruction. Explanations as lack of school facilities such as libraries and well equipped laboratories. There was a critical shortage of textbooks, equipment's and physical facilities in most public schools in Yola North. Further, there existed inter and intra Provincial resource variations in availability contributing directly to poor performance in National examinations. These are mainly student centered approaches where students are engaged in practical activities that lead to discovery of ideas. The teachers either ignored the teaching aspects emphasized by to face challenges in implementation which was another concern of this study. It was in view of these findings that the researcher felt that there could be specific challenges affecting the utilization of instructional resources as a teaching technique and which had not been well identified at least in the Yola North.

The essence of this research was therefore to establish these key challenges. This implies that teaching aids could be sourced from the local environment. Whether or not Senior secondary schools Economics teachers in Yola north utilize teaching aids is yet to be empirically ascertained. Hence this study is to investigate and assess the impact of teaching aids for effective teaching and learning of Economics in senior secondary schools in Yola north.

Objectives of the Study

The specific objectives are:

1. Identify the various teaching aids available for teaching senior secondary schools Economics.
2. Determine the utilization of the available teaching aids by the senior secondary schools teachers of Economics.
3. Identify the various teaching aids planned for teaching senior secondary schools Economics students.
4. Ascertain the various ways teaching aids are being maintained for teaching senior secondary schools Economics students.
5. Assess the impact of teaching aids for effective teaching and learning for teaching Senior secondary schools Economics students.

Research Questions

The following questions were answered in the course of this study

1. What teaching aids are available for teaching senior secondary schools Economics students?
2. What is the various teaching aids being planned by senior secondary schools teachers of Economics?
3. To what extent do Home Economic teachers of senior secondary schools utilize the available teaching aids?
4. In what ways are the various teaching aids being maintained for teaching Senior secondary schools Economics students?
5. To what extent does the schools assessed teaching aids for teaching Senior secondary schools Economics students.

Hypotheses

The following null hypotheses were be tested at 0.05 level of significance

HO₁: There is no significant difference in the mean response of senior secondary schools Economics teachers (urban and rural) on their extent of utilization of available teaching aids for teaching.

HO₂: There is no significant difference in the mean response of senior secondary schools Economics teachers (urban and rural) on the ways through which they plan various teaching aids.

HO₃: There is no significant difference in the mean response of senior secondary schools Economics teachers (urban and rural) on the problems they encounter in utilizing teaching aids.

HO₄: There is no significant difference in the mean response of senior secondary schools Economics teachers (urban and rural) on the problems they encounter in maintaining teaching aids.

HO₅: There is no significant difference in the mean response of senior secondary schools Economics teachers (urban and rural) on the various teaching aids assessed by them.

Methodology

In this chapter researcher adopted survey research design. The area of the study was Yola north. Adamawa is a state. The target population for this study consisted of 111 senior secondary schools in Yola educational zone Yola north and 1597 teachers out of which only Economics teachers was sampled. Random sampling technique was used in this study. There were 111 senior secondary schools in Yola educational zone of Yola north. The researcher randomly picked five secondary schools in urban and five secondary schools in rural. The instrument used in this study was availability and utilization of teaching aids questionnaire (AUSFQ). The questionnaire was subjected to face validation. After the construction of the instrument, three (3) experts in the field of educational management, measurement and evaluation. The researcher and two of research assistant (RA’s) will go to each of the selected schools and administered the questionnaire on both the principals and teachers’. The data collected was analyzed using mean and standard deviation to answer research questions; while the null hypothesis was analyzed using statistical tool of t-test.

Findings

Data Analysis and Presentation of Results

Five research questions were raised and answered using descriptive statistics of mean and standard deviation. Five hypotheses were formulated and tested at 0.05 level of significance using Spearman correlation coefficient.

Research Question 1

What teaching aids are available for teaching senior secondary school Economics students?

Table 1: Mean and Standard Deviation for the Extent of teaching aids are available for teaching senior secondary school Economics students.

| S/No | Items | N | Mean | S.D | Remark |
|-------------------|--|----|-------------|-------------|----------|
| 1 | To what extent does your school make charts available | 25 | 4.03 | 1.29 | A |
| 2 | To what extent does your school make graphs available | 25 | 2.54 | 1.27 | A |
| 3 | To what extent does your school make models available | 25 | 2.83 | 1.39 | A |
| 4 | To what extent does your school make flannel board available | 25 | 2.40 | 1.12 | D |
| 5 | To what extent does your school make kinds available | 25 | 3.61 | 1.31 | A |
| 6 | To what extent does your school make fabrics available | 25 | 2.19 | .95 | D |
| 7. | To what extent does your school make audio visuals available | 25 | 4.53 | 1.00 | A |
| 8 | To what extent does your school make flash cards available | 25 | 3.40 | 1.36 | A |
| 9 | To what extent does your school make flip charts available | 25 | 1.93 | 1.09 | A |
| 10. | To what extent does your school make puppets available | 25 | 2.97 | 1.32 | A |
| Grand Mean | | | 3.04 | 1.21 | A |

Key: SD = Standard deviation,

The descriptive statistics in Table 1 above shows the mean and standard deviation of teachers’ responses on the Extent of teaching aids are available for teaching senior secondary school Economics students. Finally, the result as indicated on Table 1 by the grand mean of 3.04. This implies that there is a moderate extent of teaching aids is available for teaching senior secondary school Economics students.

Research Question 2

What teaching aids are planning of teaching aids in senior secondary school Economics students?

Table 2: Mean and Standard Deviation for the Extent of planning of teaching aids in senior secondary school Economics students.

| S/No | Items | N | Mean | S.D | Remark |
|------|--|----|-------------|-------------|----------|
| 11 | To what extent does your school plan for charts | 25 | 4.12 | 1.19 | A |
| 12 | To what extent does your school plan for graphs | 25 | 3.24 | 1.30 | A |
| 13 | To what extent does your school plan for models | 25 | 2.41 | 1.47 | D |
| 14 | To what extent does your school plan for flannel board | 25 | 3.70 | 1.31 | A |
| 15 | To what extent does your school plan for kinds | 25 | 3.34 | 1.02 | A |
| 16 | To what extent does your school plan for fabrics | 25 | 2.59 | 1.15 | A |
| 17 | To what extent does your school plan for audio visuals | 25 | 3.10 | 1.36 | A |
| 18 | To what extent does your school plan for flash cards | 25 | 2.71 | 1.21 | A |
| 19 | To what extent does your school plan for flip charts planned | 25 | 2.65 | 1.16 | A |
| 20 | To what extent does your school plan for puppets | 25 | 4.05 | 1.02 | A |
| | Grand Mean | | 3.19 | 1.22 | A |

Key: SD = Standard deviation,

The descriptive statistics in Table 1 above shows the mean and standard deviation of teachers’ responses on the Extent of teaching aids are planned for teaching senior secondary school Economics students. Finally, the result as indicated on Table 1 by the grand mean of 3.04. This implies that there is a moderate extent of teaching aids is planned for teaching senior secondary school Economics students.

Research Question 3

To what extent does Economics teachers utilized teaching aids in senior secondary schools?

Table 3: Mean and Standard Deviation for the Extent of utilization of teaching aids in senior secondary school Economics students.

| S/No | Items | N | Mean | S.D | Remark |
|------|---|----|-------------|-------------|----------|
| 21 | To what extent does your school utilize for charts | 25 | 3.82 | 1.09 | A |
| 22 | To what extent does your school utilize for graphs | 25 | 3.32 | 1.38 | A |
| 23 | To what extent does your school utilize for models | 25 | 2.95 | 1.36 | A |
| 24 | To what extent does your school utilize for flannel board | 25 | 3.29 | 1.38 | A |
| 25 | To what extent does your school utilize for kinds | 25 | 2.64 | 1.25 | A |
| 26 | To what extent does your school utilize for fabrics | 25 | 2.76 | 1.38 | A |
| 27 | To what extent does your school utilize for audio visuals | 25 | 2.82 | 1.03 | A |
| 28 | To what extent does your school utilize for flash cards | 25 | 3.84 | 1.31 | A |
| 29 | To what extent does your school utilize for flip charts | 25 | 3.48 | 1.19 | A |
| 30 | To what extent does your school utilize for puppet | 25 | 3.11 | 1.36 | A |
| | Grand Mean | | 3.20 | 1.27 | A |

Key: SD = Standard deviation,

The descriptive statistics in Table 3 above shows the mean and standard deviation of teachers’ responses on the extent of utilization of teaching aids in senior secondary school Economics students. The table indicates

high extent for items 21 and 28; and moderate extent for items 22-27 and 29-30, all items concern the Extent of utilization of teaching aids in senior secondary school Economics students. Finally, the result as indicated on Table 3 by the grand mean of 3.20. This implies that there is a moderate extent of utilization of teaching aids in senior secondary school Economics students.

Research Question 4

To what extent does Economics teachers Maintained teaching aids in senior secondary schools?

Table 4: Mean and Standard Deviation for the Extent of Maintenance of teaching aids in senior secondary school Economics students.

| S/No | Items | N | Mean | S.D | Remark |
|------|--|----|-------------|-------------|----------|
| 31 | To what extent does your school maintained charts | 25 | 3.27 | 1.35 | A |
| 32 | To what extent does your school maintained graphs | 25 | 3.17 | 1.24 | A |
| 33 | To what extent does your school maintained models | 25 | 3.40 | 1.15 | A |
| 34 | To what extent does your school maintained flannel board | 25 | 2.89 | 1.17 | A |
| 35 | To what extent does your school maintained kinds | 25 | 3.22 | 1.26 | A |
| 36 | To what extent does your school maintained fabrics | 25 | 2.41 | 1.16 | A |
| 37 | To what extent does your school maintained audio visuals | 25 | 3.55 | 1.30 | A |
| 38 | To what extent does your school maintained flash cards | 25 | 2.60 | 1.20 | A |
| 39 | To what extent does your school maintained flip charts | 25 | 3.33 | 1.31 | A |
| 40 | To what extent does your school maintained puppets | 25 | 3.21 | 1.21 | A |
| | Grand Mean | | 3.11 | 1.24 | A |

Key: SD = Standard deviation,

The descriptive statistics in Table 4 above shows the mean and standard deviation of teachers’ responses on the extent of Maintenance of teaching aids in senior secondary school Economics students. Finally, the result as indicated on Table 4 by the grand mean of 3.11. This implies that there is a moderate extent of Maintenance of teaching aids in senior secondary school Economics students.

Research Question 5

To what extent does Economics teachers assess teaching aids in senior secondary schools?

Table 5: Mean and Standard Deviation for the extent of assessment of teaching aids in senior secondary school Economics students.

| S/No | Items | N | Mean | S.D | Remark |
|------|--|----|------|------|--------|
| 1 | To what extent does your school assess charts | 25 | 3.16 | 1.18 | A |
| 2 | To what extent does your school assess graphs | 25 | 2.78 | 1.49 | A |
| 3 | To what extent does your school assess models | 25 | 3.85 | 1.00 | A |
| 4 | To what extent does your school assess flannel board | 25 | 3.02 | 1.35 | A |
| 5 | To what extent does your school assess kinds | 25 | 2.58 | 1.30 | A |
| 6 | To what extent does your school assess fabrics | 25 | 2.60 | 1.21 | A |
| 7 | To what extent does your school assess audio visuals | 25 | 2.65 | 1.21 | A |
| 8 | To what extent does your school assess flash cards | 25 | 3.48 | 1.13 | A |

| | | | | | |
|-------------------|--|----|-------------|-------------|----------|
| 9 | To what extent does your school assess flip charts | 25 | 2.86 | 1.31 | A |
| 10 | To what extent does your school assess puppets | 25 | 3.29 | 1.26 | A |
| Grand Mean | | | 3.03 | 1.24 | A |

Key: SD = Standard deviation,

The descriptive statistics in Table 5 above shows the mean and standard deviation for the extent of assessment of teaching aids in senior secondary school Economics students. Finally, the result as indicated on Table 5 by the grand mean of 3.03. This implies that extent of assessment of teaching aids in senior secondary school Economics students is Moderate.

Hypotheses Testing

The hypotheses were tested using T-test at 0.05 level of significance.

H0₁: There is no significant difference in the mean response of Senior secondary schools Economics teachers (urban and rural) on their extent of utilization of available teaching aids for teaching.

Table 6: Summary of T-test Statistic for mean response of Senior secondary schools Economics teachers (urban and rural) on their extent of utilization of available teaching aids for teaching.

| Variables | N | \bar{X} | SD | df | t-cal | t-crit | P>0.05 |
|--------------------------|----|-----------|------|-----|-------|--------|-------------|
| Urban Economics teachers | 18 | 27.03 | 5.89 | 425 | 22.12 | 1.96 | Significant |
| Rural Economics teachers | 7 | 14.56 | 4.63 | | | | |

Note: table value = 1.96 at 0.05 significant level.

In table 6, the t calculated values for the each of the items exceed the t critical of 1.96 with 425 degrees of freedom tested at 0.05 level of significance. This indicates that the t-test for each of the items was significant. In summary, since this value was greater than the t-critical 1.96 (df 425; P> 0.05), the decision is to reject the null hypotheses. Therefore, there was a significant difference in the mean response of Home Economic teachers in urban and rural areas on their extent of utilization of available teaching aids for teaching.

H0₂: There is no significant difference in the mean response of Senior secondary schools Economics teachers (urban and rural) on the ways through which they plan various teaching aids.

Table 7: Summary of T-test Statistic for the mean response of Senior secondary schools Economics teachers (urban and rural) on the ways through which they plan various teaching aids.

| Variables | No | \bar{X} | SD | df | tcal | tcrit | P>0.05 |
|--------------------------|----|-----------|-------|-----|-------|-------|-------------|
| Urban Economics teachers | 18 | 191.25 | 15.71 | 425 | 19.49 | 1.96 | significant |
| Rural Economics teachers | 7 | 121.77 | 34.87 | | | | |

Note: table value = 1.96 at 0.05 significant level.

In Table 7, the t calculated values for the each of the items exceed the t critical of 1.96 with 425 degrees of freedom tested at 0.05 level of significance. This indicates that the t-test for each of the items was significant. Generally, the t-calculated value for the entire items in Table 7 was 19.49 which was also higher than the t-critical 1.96 (df 425; P> 0.05). The decision is to reject the null hypotheses. Therefore, there was a significant difference in the mean response of Home Economic teachers in urban and rural areas on the teaching aids plan for teaching Economics.

H0₃: There is no significant difference in the mean response of senior secondary schools Economics teachers (urban and rural) on the problems they encounter in utilizing teaching aids.

Table 8: Summary of T-test Statistic for the mean response of senior secondary schools Economics teachers (urban and rural) on the problems they encounter in utilizing teaching aids.

| Variables | No | \bar{X} | SD | df | t-cal | tcrit | P>0.05 |
|--------------------------|----|-----------|------|-----|-------|-------|-------------|
| Urban Economics teachers | 18 | 27.03 | 5.89 | 425 | 22.12 | 1.96 | Significant |
| Rural Economics teachers | 7 | 14.56 | 4.63 | | | | |

Note: table value = 1.96 at 0.05 significant level.

In table 8, the t calculated values for the each of the items exceed the t critical of 1.96 with 425 degrees of freedom tested at 0.05 level of significance. This indicates that the t-test for each of the items was significant. In summary, the t-calculated value for the entire items as presented in Table 8, was 22.12. This value was greater than the t-critical 1.96 (df 425; P> 0.05), thus resulting in the decision to reject the null hypotheses. Therefore, there was a significant difference in the mean response of Home Economic teachers in urban and rural areas on how they utilize teaching aids for teaching.

H0₄: There is no significant difference in the mean response of Senior secondary schools Economics teachers (urban and rural) on the problems they encounter in maintaining teaching aids

Table 9: Summary of T-test Statistic for the mean response of Senior secondary schools Economics teachers (urban and rural) on the problems they encounter in maintaining teaching aids

| Variables | No | \bar{X} | SD | df | t-cal | tcrit | P>0.05 |
|--------------------------|----|-----------|------|-----|-------|-------|-------------|
| Urban Economics teachers | 18 | 51.96 | 4.06 | 425 | 13.84 | 1.96 | significant |
| Rural Economics teachers | 7 | 39.33 | 8.89 | | | | |

Note: table value = 1.96 at 0.05 significant level.

Table 9, shows that the t calculated values for the each of the items exceed the t critical of 1.96 with 425 degrees of freedom tested at 0.05 level of significance. This indicates that the t-test for each of the items was significant.

In summary, Table 9 also shows a calculated t-value of 13.84 with a critical t-value of 1.96 at 0.05 level of significance. The t-calculated was greater than the t-critical indicating that the t-test was significant. The hypothesis that there is no significant difference between the mean ratings of Economics teachers in urban and rural areas on the problems they encounter in the maintenance of teaching aids was rejected. Therefore, there was a significant difference between their mean ratings with respect to the problems.

H0₅: There is no significant difference in the mean response of Senior secondary schools Economics teachers (urban and rural) on the various teaching aids assessed by them.

Table 10: Summary of T-test Statistic for the mean response of Senior secondary schools Economics teachers (urban and rural) on the various teaching aids assessed by them.

| Variables | No | \bar{X} | SD | df | t-cal | tcrit | P>0.05 |
|--------------------------|----|-----------|-------|-----|-------|-------|-------------|
| Urban Economics teachers | 18 | 59.17 | 0.38 | 425 | 9.95 | 1.96 | significant |
| Rural Economics teachers | 7 | 47.81 | 11.51 | | | | |

Note: table value = 1.96 at 0.05 significant level.

In table 10, the t calculated values for the each of the items exceed the t critical of 1.96 with 425 degrees of freedom tested at 0.05 level of significance. This indicates that the t-test for each of the items was significant. In summary, the t-calculated value for the entire items as presented in Table 10 was 9.95. This value was greater than the t-critical 1.96 (df 425; P> 0.05), thus resulting in the decision to reject the null hypotheses.

Therefore, there was a significant difference in the mean response of Home Economic teachers in urban and rural areas on the strategies for enhancing their assessment of teaching aids.

Conclusion

On the basis of finding of the study the following conclusion was made:

The findings of this study have indicated that there was a significant difference between availability, planning, utilizing, maintenance, and assessment of teaching aids for teaching Home Economic students in urban and rural areas of Yola north, Adamawa state.

Recommendations

The following recommendations are made based on the research findings.

- 1) Government and non-governmental organisations should sponsor Economics teachers for training in how to use available teaching aids.
- 2) Principals, heads of Economics departments and supervisors from the State Education commission should sensitize Economics teachers on the potentials of using teaching aids for teaching. This would help the teachers become more knowledgeable and plan teaching aids to improve their teaching
- 3) Principals of schools that have computers should allow Economics teachers to utilize them for teaching.
- 4) Government should provide a vast array of electronic instructional facilities such as films, computers, videos, and several supplementary Internet facilities in Economics laboratories/ workshops.
- 5) Teacher education institutions should intensify training for student-teachers in maintenance and use of teaching aids. They should expose Economics student teachers to a range of practical tasks on teaching aids to help them become more aware and competent to assess and utilize when they become teachers.
- 6) Partnerships and other strategies identified in this study should be implemented by relevant bodies.

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