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**RELEVANCE AND ADEQUACY OF GRAPHICAL ILLUSTRATION IN  
RECOMMENDED ECONOMICS TEXTBOOKS FOR SENIOR  
SECONDARY SCHOOLS IN EKITI STATE, NIGERIA**

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**INTRODUCTION**

The crux of education is teaching and learning which involves the teacher, student, instructional methods, materials and curriculum. Amaele (2003) described learning as the end result of teaching, thus to make learning occur, veritable methods and materials as well as activities should be employed in the process. Also, Jekayinfa (2005) posited that teaching involves taking concepts, ideas and subject matter from simple details and from complex, known to unknown, general to specific or details from induction. Thus, Yusuf (2000) submitted that instructional materials, textbooks and other curriculum materials should be employed to facilities the objectives of concrete learning and teaching. Woodward and Elliot (1990) opined that the veritable role of teaching materials and their complimentary roles to teaching cannot be overemphasized especially the traditional print materials. For instance, textbooks. Textbooks are valuable instructional tools which provide teachers, and with a clear path to provide teachers and students with a clear to follow in the teaching and learning process. Textbooks are widely used in classrooms and are necessary as the classroom itself because they define what, how and when to learn. Equally, they enhance greater acquisition of knowledge of facts to ensure longer retention of information gained. Koutsoyiannis (2003) admitted that extensive use of diagrams, which is used to illustrate the verbal exposition, aids, mathematical proofs and equally makes economics textbook adequate for use. Yusuf (2004) opined that to ascertain that graphical illustration is adequate in textbooks; it must be relevant, related and applicable exposition and concept. On the basis of the usefulness (relevance) of diagrams, curve and graphical illustrations, this study tends to ascertain whether graphical illustrations in recommended economics textbook for senior secondary school certificate examination are adequate for learning and teaching purposes.

**Rationale for studying economics** Economics is a precise discipline and a social science subject, which is taught in secondary schools for the mastery of business



education. The life blood of almost any organization is trading business or a charitable institution and the use of money, the need for financial planning and recording arise because the stakeholders of the organization need to know where the money is coming from and how it is being spent. Economics could be define as the science which studies the process and institution where by insatiable human wants are satisfied with limits imposed by resource, which have alternative uses. Essang (1979) and Jimoh (1999) posited that economics is concerned with the manner in which human beings and societies attempt to satisfy their unlimited and often conflicting wants by means of resources which is not only limited but have alternative uses. Jhingan (2004) highlighted the scope of economics as resource allocation, income distribution and economic growth. The idea of introducing economics as a senior secondary certificate examination subject into the secondary school curriculum is hinge on the need to equip students with basic principle of economics necessary for useful living and for higher education, prepare and encourage student to be prudent and effective in the management of scarce resources, raise students to acquire knowledge for practical solutions of the economic problems of the society.

According to CESAC (2001), economics is studies to allocate resources equitable, distribute income and decision that are wise on what to produce, how to produce and for whom to produce. Economics help to solve societal problems such as resource allocation distribution who get what, when and how. Jimoh (1999) asserted that economics is essential to help individual maximize utility, firms to minimize cost and use the best option available for decision making and optimum utility, firms to maximize cost and use the best option available for decision making and optimum utilization of resources. Economics is the core subject in secondary schools. Adu (2000) opined that economics was first taken in the West African School Certificate Examination as a school subject in Nigeria in 1967. Since school certificate, economics was a two year course, it may be said that economics came into the secondary school curriculum in Nigeria in 1966, much later than the most other secondary school subjects. Economics was however, taken by private candidates in the general certificate in Education both at ordinary and advance level.

**Status of Economics in SSCE curriculum** Economics is a popular subject that every senior secondary school student must offer. Adu (2000) opined that economics is recognized in the senior secondary certificate examination curriculum to contribute to students' intellectual development and provide solution to the nation's development. Economics curriculum has been reviewed from time to time, taking a look at a syllabus, when economics started in 1967 to the 80s; economics was more of normative and qualitative. Obeamata(1979) asserted that the changes in economics curriculum are visible in topics that are geared towards solving recent economics problem in Nigeria. Currently, there are twenty five topics in the syllabus, which covers micro and macro economics. This is to exposed students to problems and how best to solve them.

**Values of textbooks in teaching and learning Economics** Textbooks comprise



print materials used to facilitate teaching and learning. Elliot (1990) confirmed that textbooks are valuable instructional tools, which provides students with a clear part to follow in the teaching and learning process. Textbooks are used in all forms of schooling because it is a central tool that makes students learn at their pace. Garbar (1990) opined that textbooks contain a pedagogical approach to the art and science of teaching and learning which enhances student's performance and retention. Textbooks are essential to teaching and learning of economics because it affords students the opportunity to reveal and re-organize concept, ideas and the subject matter. Yusuf (2000) opined that the printed pages of textbooks that are expressed through index table of content, glossary, etc help student to refresh their memory. Adu (2000) confirmed that economics is a scientific procedure such that mathematics, statistic and graphical application are used. This connotes that students should make use of textbooks to gain mastery of concepts, graphs and mathematical and algebraic application to economic reality.

**The concept of graphical illustration in teaching and learning economics** Since economics deals with variables and their relationships, economics often rely on geometry and graphs to illustrate this relationship. Heinrinch, Moland and Russel (1985) defined graphics as non-photographic, two-dimensional materials' designed specifically to communicate message to the viewers. These often include verbal as well as symbol visual uses. As per classroom situation, graphics demand special caution in use by teacher because the images are usually symbolic rather than fully representational; they leave more room for viewers to misinterpret the intended meaning. Anyauwuocha (1993) Opined that graphics such as tables, pie charts, bar charts, pictograms, frequency distribution are used in economics.

**Objectives of the Study** The general purpose of the study is to examine the relevance and adequacy of graphical illustrations in recommended economics textbooks for senior secondary schools certificate examination specifically. The research work intends to investigate into:

- (i) Recommended economics textbooks used constantly or frequently in secondary schools for senior secondary certificate examination by teachers in order of popularity.
- (ii) The economics syllabus topics requiring graphical illustration in the economics syllabus.
- (iii) Proportion of economics topics requiring graphical illustration treated in recommended economics textbooks.
- (iv) Extent of relevance and adequacy of graphical illustrations in recommended economics textbooks in terms of titling, labeling, size or legality, complementary remarks, accuracy, colour combination or aesthetics and representation of ideas and concept as they are meant to illustrate.



### Research Questions

- (i) What are the recommended economics textbooks predominantly used by the teachers and students for senior secondary school economics?
- (ii) What proportion of economics syllabus requires graphical illustration are treated in recommended economics?
- (iii) What economics syllabus topics require graphical illustrations are treated in recommended economics?
- (iv) How relevance and adequate are the graphical illustrations in terms of titling, labeling size or legibility, complimentary remarks, accuracy, colour combination or aesthetics and representation of ideas and concept they meant to illustrate.

**RESEACH METHODOLOGY** The research work is a descriptive research of survey method. The survey method was considered appropriate for this study because it is used to investigate phenomenon in their natural setting so as to examine the true nature of the subject under discussion (Hassan, 1994).thus descriptive survey method was designed to collect information relevant on the relevance and adequacy of graphical illustration in recommended economics textbooks for senior school certificate Examination.

### Sample and Data collection

The sample included economics teachers of selected schools in Ekiti State, as they responded to the questionnaire designed by the researcher. A sample of twenty senior secondary schools were selected from the population using simple random sampling technique and five (5) economics teacher in each of the twenty secondary schools using purposive sampling techniques for their opinion about the topics. A total of one hundred (100) teachers were selected for the study.

**Instrumentation** The research designed questionnaire, which was employed in order to elicit information from economics teachers for the research work. The close-ended questionnaire contains six Sections (A-E). Section A consists of teacher's demography data, section B1 comprises of item on the list of recommended economics textbook for senior school certificate examination. Section B2 consist the recommended economics textbooks constantly used by the student and teachers in the secondary school in order of popularity. Section C comprises of the list of topics in the syllabus requiring graphical illustrations. Section D contains the number of topics treated with graphical illustrations in recommended economics textbooks and section E contain item on appropriateness of title, labeling, accuracy of point of co-ordinates, legibility, colour combination and complementary remarks of graphical illustration in the economics textbooks constantly used. The expected responses was structured along Yes or No, Relevant and Adequate (RA), very Relevant and adequate, Not Relevant and Adequate grading by using four number ranging from 1-4, 3:4 validation of the instrument.

**Administration of instrument** The questionnaire was administered solely by the



researcher in all the selected five secondary schools in Ekiti state. The questionnaire was distributed to economics teachers with the permission of the schools authorities. Collection was made on the spot to ensure maximum return of the questionnaire to avoid loss.

**Data analysis Technique** The data collected from the respondents was analyzed using frequency counts and percentage to answer the research questions. **RESULTS**

**Question 1:** What are the recommended Economics textbooks predominantly used by the teachers and students for Senior Secondary School Economics?

**Table 1: Distribution of Economics Textbooks predominantly used by teachers and students**

S/N	NAME OF RECOMMENDED ECONOMICS TEXTBOOK	YES		NO	
		F	%	F	%
1	John U.A (2003) Comprehensive Economics for SSS.	20	100	0	0
2	Ewaudu D, Agu G.A (1989) New System Economics for SSS.	18	90	2	10
3	Fajana C, (1989) Countdown to senior Secondary School.	11	55	9	45
4	Ande C.E (2005) Essential Economics.	6	30	14	70
5	Anyanwuocha R.A.I (1993) Fundamental of Economics for SSS.	12	60	8	40
6	Falodun A.C (2003) New Approach Economics.	3	15	17	85
7	Falodun P.N and Omogie (1997) round up Economics for SSCE.	12	60	8	40
8	Lawal O.A (1983), Essentials Economics for O'level Economics	7	35	13	65
9	Rotimi Ajjola (2003) Economics principles & practice for O'level.	9	45	11	55
10	Bunmi Fashola (1997), New Approach to Senior Secondary School Economics.	8	40	12	60

It is clearly shown on Table 1 that two recommended economics textbooks are predominantly used by teachers and students in secondary school out of the textbook recommend. The textbooks predominantly used as indicated by respondents are Johnson U.A (2003) Comprehensive Economics for senior secondary school and Ewaudu D, Agu G.A (1989) new system Economics with 100% and 90% respectively. Other textbooks have very lower percentage of patronage. To this end, illustration is highly relevance and adequate to some extent for the largest percentage of the respondent to recommends these two textbooks.

**Note:** SSS= Senior Secondary School

**Question 2:** What Economics Syllabus topics require graphical illustration?



**Table 2: Distribution of the Economics syllabus Topics requiring graphical illustration**

S/N	ECONOMICS SYLLABUS TOPICS	YES		NO	
		F	%	F	%
1	Definition and scope of Economics	0	0	20	100
2	Types and basic features of Economics System	0	0	20	100
3	Basic tools of Economics Analysis	20	100	0	0
4	Theory of Consumer Behaviour	16	80	4	20
5	Demand	20	100	0	0
6	Supply	20	100	0	0
7	Theory of price Determination	16	80	4	20
8	Production and Theory of cost	14	70	6	30
9	Business Organization	0	0	20	100
10	Market Structure	14	70	6	30
11	Distributive Trade	7	35	13	65
12	Population and Labour Market	9	45	11	55
13	Agriculture	1	5	19	95
14	Industrialization	2	10	18	90
15	National Income	7	35	13	65
16	Money and Inflation	11	55	9	45
17	Financial Institutions	3	15	17	85
18	Public Finance	2	10	18	90
19	Economic Development and Planning	3	15	17	85
20	Inter. Trade and Balance of Payment	5	25	15	75
21	International Economics Organizations	14	70	6	30
22	Major Natural Resources	2	10	18	90

The above table shows that the topics requiring graphical illustrations according to the respondents are items 3,4,5,6,7,8,10,16 and 20 respectively. The implication is the nine (9) out of 22 recommended Economics topics requiring graphical illustration seriously required graphical illustration and they are part of the most common and relevant topics of economics of today, therefore in recommending textbooks for use in senior secondary school, graphical illustration in them are inevitable.

**Question 3:**

What proportion of Economics syllabus topics requires graphical illustrations are treated in Economics textbooks.



**Table 3: Distribution of the number of topics treated with graphical illustration.**

Book	No of topics with graphical illustration	Proportion of syllabus Topics with graphical illustration	No and % of Topics treated with graphical illustration		No and % of Topics treated without graphical illustration	
			Numbers	%	Numbers	%
Book 1	22(Twenty two)	3:7of Economics syllabus Topics	9	40.90	13	59.09
Book 2	22(Twenty two)	1:3of Economics Syllabus Topics	7	31.81	15	68.18

Table 3 above, shown that 3:7 and 1:3 are the ratio or proportion of syllabus topics treated with graphical illustrations for book 1 (Johnson U.A. (2003) comprehensive economics and book 2 (Ewaudu D. Agu G.A. (1989) new system economics respectively while the number of topic treated with graphical illustration 9 and 7 for book 1 and 2 and the percentage are 40.90% and 31.81% respectively. With the level of the percentage of both books in respect to the recommended topic in the syllabus i.e. 22, the books has what it takes for recommendation according to the findings because they are having a reasonable percentages.

**Question 4:**

How relevance and adequate are the graphical illustration in terms of titling, labeling, accuracy, colour combination or aesthetics, representation of ideas and concepts as they are meant to illustrate.

**Table 4: Distribution of Graphical Illustration in Term of the Quality of Ideas and Concepts as they are meant to illustration**

Items	Comprehensive Economics						New System Economics						Rank
	V.RA	RA	N.RA	F	%	F	%	F	%	F	%		
Appropriateness of title of the graph	12	60	7	35	1	5	9	45	4	20	7	35	RA
Labeling of X and Y axis on the graph	10	50	9	45	1	5	6	30	9	45	5	25	RA
Legibility of Economics graph	13	65	7	35	0	0	10	50	3	15	7	35	RA
Colour combination or attractiveness of the graph	6	30	8	40	6	30	16	80	3	15	1	5	RA
Accuracy of point of co-ordinates on the graph	11	55	7	35	2	10	7	35	5	25	8	40	RA
Explanation or complementary remarks on the graph	8	40	12	60	0	0	3	15	9	45	8	40	RA

Table above shows that all the items on the quality of the economics recommended textbooks in term of graphical illustrations are adequate and relevant to the highest percentage.



**Key to the table:**

- RA** = Relevant Adequate  
**V.RA** = Very Relevant and Adequate  
**N.RA** = Not Relevant and Adequate  
**F** = Frequency  
**%** = Percentage

**DISCUSSION** The findings from this studies showed that the recommended economics textbooks for senior secondary schools are Johnson U.A. (2003) comprehensive economics for senior secondary schools, Ewaudu D. and Agu G.A (1989) New system economics for senior secondary schools, Ande C.E (2005), Essential Economics for senior secondary schools, Falodun A.C Nnadi K.N (2003) New approach Economics to senior secondary schools. This findings is consistent with the finding of Okeniyi (2006) and Gbadeyan (2006) which state that above mentioned textbooks are also used for senior secondary schools. Result also revealed that Johnson U.A. (2003) comprehensive Economics was predominantly used by teachers in senior secondary schools in the state. These findings were corroborated with the findings of Okeniyi (2006) and Joseph (2006) which they came out with the submission that Ewaudu and Agu G.A (1989) New System Economics were predominantly used by teacher but contrary to the submission of Ademugba (2005) and Jimoh (1999) that the essential Economics for O'level Economics by Lawal O.A (1983) was Predominantly used. Another finding revealed proportion of Economics syllabus topics that are treated with graphical illustrations in the recommended Economics textbooks. For book one(1), it was 40.90% and for book two (2), it was 31.81%, this finding was contrary to the finding of Okeniyi (2006) who opined that more than 40.90% and 31.81% of the Economics syllabus topics should be treated with graphical illustrations, either quantitative and qualitative or micro-macro aspects. This research also revealed that the recommended economics textbooks are adequate in terms of appropriateness of title of the graph, accuracy of points of coordinates on the graphs, colour combination or physical attraction, remarks on the graphs and after the graph. These findings conformed with the findings of Okeniyi (2006) and Shaba (2006) who opined that graphical illustrations in Economics textbooks possess relevance and adequacy in terms of appropriateness of title of the graphs, labeling of X and Y axis on the graph, accuracy of point of co-ordinate on the graph, legibility of economics graph and explanation or complementary remarks on the graph and after the graphs.

**SUMMARY AND RECOMMENDATIONS**

A critical data presentation, summary of findings and discussion, conclusion were drawn from the research work. Analysis revealed that most of the textbooks recommended by West African Examination Council and National Examination Council (The senior School Certificate Examination Bodies), ministry of Education and all other agencies are not used by teachers and student for the teaching and learning of economics at senior secondary schools. Although, this may be traced to some factors





like the adequate finding to really know the book to purchase, inaccessibility and non-availability and other factors.

This has a negative impact on the teaching and learning of Economics and academic performance will be affected in the Examination such as WASSCE and NECO because the teachers are unaware of the subject matter. This does not allow the students to have good knowledge of subject matter, major Economics ideas and concept and applicability of Economics. Meanwhile, it was discovered that the recommended Economics textbooks are adequate in terms of graphical illustrations. This potted that Economics textbooks will make Economics concept and idea more concrete, attract phenomena and real life situation will be easier for the student to understand without stress. Equally, it will improve and encourage the academic performance of the student. The findings connote that the reliability level of Economics textbooks will increase and student will learn at their own pace. Teachers should recommend the Economics textbooks with good and appropriate graphical illustrations. They should make the students understand the necessity of graphical illustration in the mastery of Economics subject matter, concept and ideas. They should assess textbooks properly to find out the adequacy of graphical illustration before recommending such. Student should understand the essence of graphical illustrations in Economics textbooks. Every stakeholder in the Educational sector, such as: authors, Publishers, Curriculum agencies, Examination bodies (WAEC, NECO), Ministry of Education should play their expected roles effectively and efficiently. Most especially, ministry of Education should monitor and ensure that the textbooks sold are the recommended ones and also to sanction textbooks that are not adequate and relevant in terms of graphical illustrations and encourage students not to patronize such books because it has adverse effects on learning and performance.

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