

# Evaluation of Textbook Usage Among Some Nigerian Science Teachers in Secondary School

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Received: October 01, 2019

Accepted: November 01, 2019

**ABSTRACT:** *This study evaluates textbooks usage among some Nigerian Science Teachers in Secondary Schools. The study sample consist of 60 teachers (Male and Female) who were mainly science teachers and which were selected from five Local Government Areas in Ekiti State, Nigeria by using multistage sampling Techniques. Four research questions were formulated to guide the study. The instrument for the study was Newton (1984) 12- item questionnaire (modified). The data collected were analysed using simple percentages and the findings however revealed that: the use of textbooks as sources of students' notes illustrations and exercise by both experienced and inexperienced science teachers are very low (i.e not encouraging).*

**Key Words:** *evaluation, textbook, usage, textbook usage, science teachers.*

## Introduction

In teaching and learning, textbooks is an important tool that the teacher cannot do without; it serves as a supplement to what the teachers have taught in the Class. Omoniyi (1998) said that Textbooks supplement teacher's efforts in educating the child. Lack of it makes the student ill-equipped and substandard for his job. Give the student enough and standard textbook and he will become confidence and courageous, ready to go into battle of learning.

Richards (2001) considered textbooks as an important source to help new teachers in their course and activity design. Litz (2005) textbook can potentially save learners from teacher's incompetency and deficiencies. Mitra and Shahram (2017) cited Liazi (2003) that textbooks are crucial aspects of teaching and learning and second to teacher are regarded as the most vital element in the second/foreign language classroom. Mitra and Shahram (2017) further asserted that whether we like it or not, textbooks represent for both students and teachers the visible heart of any English Language Teaching (ELT) programme.

The textbook has a wider applicability in the pre-lesson, in lesson and post-lesson activities. Evidence from the research studies show that sixty percent of University and training College students read about sixty percent of their Chemistry textbooks, Science teachers preferred to use the textbook for home work assignment rather than use them in the classroom transaction. Preference is given to books printed in attractive covers or the teachers would blindly use the best-selling textbooks which are used in many other places (Tomlinson, 2010).

According to Azizifar (2009) textbook evaluation involves production, assessment and adaption of materials, it is necessary for teachers to regularly execute evaluation process that guarantee the pedagogical contribution of the books to both teaching and learning procedure and also become sure of their sustainability for not only the context, but also the learners who use them.

The prescription of a particular textbook irrespective of its readability is recognised practice at all levels of education. The textual materials are expected to guide teachers in their classroom instruction and also students in their search for information. The ever increasing number of textbooks on the market makes formulating the right choice in textbooks difficult (Wong, 2011). Textbook selection can have a massive impact on the teaching and learning process as teachers would make references to the books (McGrath, 2006). According to Mukundan (2007) wrong choice of textbooks would be likely to negatively affect both teaching and non teaching and also, financial resources would be wasted.

However, science educators in Nigeria have not examined whether or not textual materials possessed by students have been used to guide science teaching and the search for science information. There is therefore a need to evaluate textbook usage practices among science teachers.

## Purpose of Study

The purpose of this study is to evaluate:

- (i) The expressed usage of science textbook and other textbooks not possessed by students in the

science instruction and

- (ii) The pattern of textbook usage between the experienced, old and younger science teachers.

### Research Questions

The following research questions were raised to guide the study:

1. What is the Percentage of expressed usage of class textbook by Science Teachers?
2. What is the Percentage of expressed usage of other textbooks by Science Teachers?
3. What is the Percentage of expressed usage of class textbook based on science teaching experience?
4. What is the Percentage of expressed usage of other textbooks based on Science Teaching Experience?

### Methodology

#### Sample of the Study

Sixty participants who were graduate science teachers were selected for the study. The teachers were randomly selected from five Local Government in Ekiti-State. The graduate science teachers chosen were teaching twelve or more periods of a science subject per week and have varying teaching experience science teachers with more than eight years of teaching experience were categorised as experienced and old teachers while those with less than eight years of teaching categorized as young teachers. Those two categories consist of 30 old teachers and 30 younger teachers.

#### Instrument

Newton (1984) developed a 12- item questionnaire in which two were deleted to evaluate how science teachers use class textbooks to science teaching. Another 10- item questionnaire were developed to evaluate how science teachers use textbooks for pre-lesson, in lesson and after lesson activities. The questionnaires were validated by senior science education lecturers for their review and suggestions. Each item has three response options – often, sometimes and Never used.

#### Data Analysis

As shown in Table 1, on the average more than 50% of the science teachers endorsed “often” category for the preparation of scheme of work, lesson notes, information on practical/demonstration exercise, explanation and description after the lesson and supplementary teaching.

On the average, less than 50% of the science teachers endorsed “often” category for the illustration and diagrams in the lesson and for exercises and problems after the lesson as homework. It is interesting to say that some of these observations are consistent with similar findings (Bello, 1986).

#### Research Question 1

What is the Percentage of expressed usage of class textbook by Science Teachers?

**Table 1: Percentage of expressed usage of class textbook by Science Teachers.**

S/ N	Usage Instances	Often	Sometimes	Never
1.	To prepare scheme of work	80.42	18.56	1.02
2.	To prepare lesson notes	67.25	32.51	0.24
3.	For information useful to yourself on practical and demonstration	61.02	23.40	15.58
4.	To prepare examination question	40.41	32.04	27.55
5.	With your pupils for explanation and descriptions in the lesson	51.02	32.46	16.52
6.	With your pupils for illustrations and diagrams	44.17	43.50	12.33
7.	With your pupils for exercises and problems in the lesson	43.04	40.10	12.86
8.	For explanation and description after the lesson as homework	53.04	42.01	4.95
9.	For exercises and problems after the lesson as homework	45.52	42.19	11.99
10.	For pupils supplementary reading	68.0	31.96	0

#### Research Question 2

What is the Percentage of expressed usage of other textbooks by Science Teachers?

**Table 2: Percentage of expressed usage of other textbooks by Science Teachers**

S/N	Usage Instances	Often	Sometimes	Never
1.	To prepare scheme of work	22.77	52.38	19.85
2.	To prepare lesson notes	45.10	48.42	6.48
3.	For information useful to yourself on practical	58.40	30.25	11.35

	and demonstration			
4.	To prepare examination questions	22.42	64.20	13.38
5.	For illustratuions and diagrams in the lesson	27.52	53.41	19.07
6.	For exercise and problem in the lesson	42.51	44.06	13.43
7.	For explanation and description in the lesson	23.62	48.25	28.13
8.	For exercise and homework after the lesson as homework	26.04	52.40	21.56
9.	For exercises and problems on the lesson	22.19	52.04	25.77
10.	For pupils supplementary reading	25.20	43.40	31.40

These results above (table 2) suggest that science teachers supplement information from other textual materials for the effective classroom transactions.

### Research Question 3

What is the Percentage of expressed usage of class textbook based on science teaching experience?

**Table 3: Percentage of expressed usage of class textbook based on science teaching Experience**

S/N	Usage Instances	Experienced Old Teacher N=30			Young Teacher N=30		
		Often	Sometimes	Never	Often	Sometimes	Never
1.	To prepare scheme of work	60.01	38.81	1.18	70.41	13.20	16.39
2.	To prepare lesson notes	68.20	20.15	11.65	69.68	7.10	25.12
3.	For information useful to yourself on practical and demonstration	61.10	30.17	8.73	60.10	38.00	1.90
4.	To prepare examination question	26.01	52.95	21.04	24.34	68.34	7.32
5.	With your pupils for explanation and descriptions in the lesson	32.75	40.25	27.00	45.86	30.41	23.83
6.	With your pupils for illustrations and diagrams	60.10	24.78	15.12	45.48	44.34	11.98
7.	With your pupils for exercises and problems in the lesson	55.25	40.10	4.65	60.17	35.72	4.11
8.	For explanation and description after the lesson as homework	50.10	45.21	4.69	60.17	39.72	4.11
9.	For exercise and problems after the lesson as homework	50.01	48.10	1.89	35.27	55.41	9.32
10.	For pupils supplementary reading	68.02	21.15	10.83	69.00	24.10	6.90

Table 3 and 4 shows the variations in the expressed usage of classroom textbooks by experienced old and young teachers and variations in the express usage of other textbooks by the experienced old teachers and younger teachers.

The results of table 3 shows that the classes of science teachers endorsed often used categories for the preparation of scheme of

### Research Question 4

What is the Percentage of expressed usage of other textbooks based on Science Teaching Experience?

**Table 4 : Percentage of expressed usage of other textbooks based on Science Teaching Experience**

S/N	Usage Instances	Experienced Old Teacher N=30			Young Teacher N=30		
		Often	Sometimes	Never	Often	Sometimes	Never
1.	To prepare scheme of work	29.72	56.41	13.87	26.10	60.12	13.78
2.	To prepare lesson notes	43.34	40.34	16.32	33.82	52.41	13.77
3.	For information useful to yourself on practical and demonstration	59.78	32.71	7.51	69.75	20.54	9.71
4.	To prepare examination questions	27.75	61.77	10.98	30.41	52.86	16.73
5.	For illustrations and diagrams in the lesson	26.75	51.75	21.50	26.15	60.17	13.68
6.	For exercise and diagrams in the lesson	25.61	62.12	12.27	37.52	38.92	23.56
7.	For explanation and description in the lesson	20.58	60.88	8.54	26.75	53.10	20.15

8.	For exercises and homework after the lesson	20.43	65.95	13.62	32.41	46.24	10.95
9.	For exercise and problems on the lesson	27.57	42.81	29.62	33.25	45.42	21.33
10.	For pupils supplementary reading	26.05	43.25	30.70	30.02	43.89	26.09

of work, lesson notes etc as shows above younger teachers used class text to prepare lesson notes, scheme of work, information useful to yourself on practical or demonstration, explanation and description after the lesson etc.

Table 4 indicates that both classes of teachers endorsed sometimes used categories for preparing scheme of work, examination questions, illustration and diagrams in the lesson etc.

## Conclusion

This study indicate that both experienced old teachers and the younger teachers experienced a strong usage of class text in science teaching, taking into consideration that the scientific age that we are hence we can conclude that the motivation from the teacher in making the student learn science effectively is very low.

The use of class text as sources of students' notes, illustrations and exercises by both experienced and younger teachers are not commendable enough.

Therefore, the reasearchers want to believe that going through the results of this research work, Teachers of Science Classes will be able to change their attitude in terms of textbooks usage in classroom teaching.

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