

Examination of Teachers' Perceptions in Some Approved Science Textbooks as Useful Instructional Aid to Them in Junior Secondary Schools in Ebonyi State of Nigeria

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Abstract

This study was designed to examine the teachers' perceptions in some approved computer textbooks as useful instructional aid to them in Junior Secondary Schools in Ebonyi State of Nigeria. The sample of the study consisted of three (3) approved computer textbooks, 30 computer teachers randomly selected from the three (3) Education zones of the State. The instrument used for data collection is Teachers' Perception Rating Scale (TPRS). The data were analysed using descriptive statistics (mean computation). The results of the findings showed that the teachers' perceptions in the approved computer textbooks in use in Junior Secondary Schools in Ebonyi State was adequate. Based on the findings, conclusion were drawn and it was recommended that teachers should use many of the approved computer textbooks in both studies and lessons

Introduction

Many scholars have defined textbooks in different ways and these definitions are more or less the same. According to UNESCO (2005) "Textbook is the core learning composed of text and/or images designed to bring about a specific set of educational outcome; traditionally a printed and bound book including illustrations and instructions for facilitating sequences of learning activities". Science textbooks as believed by Biber (2006) are important element in educational settings and are widely used in higher education without which no progression can occur in students knowledge. Okafor (2004) sees textbook as a book which can provide intellectual stimuli that are the requisite for purposeful learning and Nwafor (2013) defined a textbook as a resource instruments used to disseminate information about teaching and learning for attainment of educational goals. From these definitions, textbooks can be regarded as a storing device or an information bank where teachers and students resort to, in order to update and improve their knowledge. Textbooks are also learning

instrument used to assist programme of instruction.

Textbooks as resource materials are used by both teachers and learners to make teaching and learning meaningful. It is important to determine the adequacy of textbooks in use in teaching activities. According to Oakes (2004), textbooks plays a pivotal role in classroom setting. To make the most effective use of a textbook, teachers as major stake holders in teaching and learning enterprise must decide which textbooks are appropriate for their needs. A teacher needs to determine the extent to which a textbook focuses on and alignes with a well organized set of significant, age-appropriate, student learning goals that have been identified as integral to the understanding of the progress in a particular academic subject. They must also assess how well a textbook's instructional design effectively supports the attainment of those specific learning goals. One of the ways to gain this information is through careful examinations of teachers' views on the adequacies of the textbooks in use. Therefore, their opinion about textbooks' usefulness to them in teaching and learning activities cannot be ignored.

Purpose of the Study

The purpose of the study was to examine teachers' perceptions in some approved science textbooks as useful instructional aid to them in Junior Secondary Schools (JSSs) in Ebonyi State.

Scope of the Study

The study was delimited to the examination of teachers' perceptions in some approved computer textbooks as useful instructional aid to them in Junior Secondary Schools in Ebonyi state. The textbooks include:

- Computer Made Easy-A Practical Guide for Junior Secondary Schools. Book 1-3 by Maria Eze (Text A).
- Computer Studies for Beginners. Books 1-3 by Oduronke Eytayo and Adekunle Eytayo (Text B).
- Log on to IT. Book 1-3 by Roland Birbal, Michele Taylor (Text C).

Research Question

What is the teachers' perception index of the approved computer textbooks in use in Junior Secondary Schools (JSS) in Ebonyi State?

Research Design

The study adopted the descriptive design. This design are mainly concerned with describing events as they are without any manipulation of what caused the event or what is being observed (Ali 2006). This design is useful because the study examined the teachers' perceptions in some approved computer textbooks as useful instructional aid to them in Junior Secondary Schools in Ebonyi state.

Area of the Study

The study covered all the three education zones (Abakaliki, Afikpo and Onueke) in Ebonyi State of Nigeria. The State is located in the South East Zone of Nigeria, which was created in 1996 from both Abia and Enugu State specifically. This study was carried out in these zones because of the need and no such study had been done there since 1996.

Population of the Study

The populations of the study were all the seventeen (17) approved computer textbooks in use in Junior Secondary Schools in Ebonyi State and all the computer teachers in public junior secondary schools (19, 14 and 23 computer studies teachers for Abakaliki, Afikpo and Onueke education zones respectively).

Sample and Sampling Techniques

Three (3) textbooks (Book 1-3) out of seventeen (17) approved computer textbooks in Junior Secondary Schools in Ebonyi State were drawn using simple random sampling techniques and ten (10) computer teachers were randomly drawn from each of the Education Zones, marking the total of thirty (30) teachers.

Instrument for Data Collection

The instrument used for the data collection is Teachers' Perception Rating Scale (TPRS) of 20-items.

Validation of the Instrument

The instrument was validated by three specialists from Measurement and Evaluation.

Reliability of the Instrument

The reliability index was found to be 0.85, using Cronbach procedure because items of the instrument are non-dichotomous.

Method of Data Collection

Data were collected using the Teachers' Perception Rating Scale (TPRS), in which copies of the instrument was administered to the teachers in respect of the sampled computer textbooks. All the instruments administered were completed and returned, which represents 100% return rate.

Method of Data Analysis

The data was analysed using descriptive (mean computation) and a mean of 3.00 was accepted as the decision mean.

Result of the Analysis

Research Question

What is the teachers' perception index of the approved computer textbooks in use in Junior Secondary Schools (JSS) in Ebonyi State? The data used in answering this research question were obtained from the "Teachers' Perception Rating Scale" (TPRS). The mean rating of teachers' perception index in the Computer Textbooks were computed and presented in the tables below:

Table 1: Text A

S/N	Book1(JS 1)	Book2(JS 2)	Book3(JS 3)
1	3.03	3.01	3.09
2	3.02	3.05	3.04
3	3.01	3.06	3.09
4	2.32	2.35	2.36
5	3.40	3.51	3.55
6	3.28	3.30	3.29
7	3.27	3.24	3.26
8	3.55	3.57	3.59
9	2.74	2.79	2.76
10	3.36	3.31	3.42
11	2.18	2.14	2.19
12	3.22	3.28	3.31
13	3.76	3.74	3.82
14	2.71	2.72	2.81
15	3.16	3.11	3.28
16	2.68	2.64	2.71
17	3.32	3.38	3.36
18	1.59	1.56	1.54
19	3.49	3.54	3.56
20	3.78	3.79	3.86
MEAN	3.04	3.05	3.10
GRANDMEAN	3.06		
N			

Acceptance range = 3.00 to 5.00

Table 2: Text B

S/N	Book1(JS1)	Book2(JS2)	Book3(JS3)
1	3.06	4.01	3.95
2	3.00	3.52	3.51
3	2.64	2.66	2.74
4	2.32	2.66	2.64

5	3.51	3.63	3.61
6	3.26	3.78	3.79
7	3.27	3.45	3.46
8	3.56	3.31	3.22
9	2.75	3.74	3.76
10	3.36	3.09	3.04
11	2.19	2.96	2.99
12	3.24	3.41	3.43
13	3.73	3.65	3.59
14	2.75	4.01	4.03
15	3.19	3.48	3.46
16	2.69	2.68	2.69
17	3.35	3.56	3.48
18	1.61	1.55	1.59
19	3.51	3.55	3.51
20	3.76	2.82	2.85
MEAN	3.04	3.28	3.27
GRANDMEAN	3.20		
MEAN			

Acceptance range = 3.00 to 5.00

Table 3:Text C

S/N	Book1(JS 1)	Book2(JS 2)	Book3(JS 3)
1	3.96	4.01	3.85
2	2.73	2.75	2.64
3	3.61	3.65	3.59
4	3.69	3.73	3.61
5	3.21	3.25	3.15
6	3.56	3.61	3.54
7	3.39	3.41	3.35
8	2.42	2.45	2.41
9	3.55	3.59	3.48
10	4.19	4.22	4.15
11	3.09	3.15	3.07
12	3.17	3.12	3.05
13	3.45	3.57	3.44
14	3.69	3.75	3.61
15	3.35	3.41	3.37
16	4.27	4.22	4.15
17	3.21	3.25	3.19
18	3.42	3.45	3.41
19	4.01	4.05	3.99
20	3.83	3.82	3.75
MEAN	3.49	3.52	3.44
GRANDMEAN	3.48		
N			

Acceptance range = 3.00 to 5.00

Tables above revealed the teachers' perception rating indices for all the three approved computer textbooks in use in Junior Secondary Schools in Ebonyi State. The results presented in the Tables reveals that the teachers' perceptions examined are within the acceptance range.

Discussion

The summary of the results was presented on table 1 to 3; it revealed the mean rating scores of computer teachers in the three computer textbooks based on the class levels of JS 1, JS 2 and JS 3 respectively.

The questionnaire items which the teachers rated were drawn from the computer studies curriculum. Following areas was covered:

1. **Content coverage:** The textbook coverage of topics and sub-topics specified in the syllabus
2. **Presentation of content:** How the content is presented to direct learners' attentions to the main ideas.
3. **Illustrations:** The alternative ways of presenting or explaining information as in diagrams, graphs, pictures, tables, charts etc. to reach learners of different abilities.
4. **Problems solving activities:** Analyzing and manipulating data, drawing conclusions and making predictions.
5. **Experimental and investigative activity:** Doing scientific experiments and planning investigations in order to develop the skills.
6. **Study questions:** Questions and exercises at the end of chapters or sub-topics meant to promote development of thinking skills and problem solving strategies.
7. **Worked examples:** Questions and their solutions in the textbooks to demonstrate problems-solving and applications of knowledge.

8. **Readability:** The ease with which learners can read and understand the textbook.

The teachers' perception in the three computer textbooks as their instructional aid was presented in table 1 to 3 which has the grand mean rating scores as follows: Text C had 3.48 with mean scores of 3.49, 3.52 and 3.44 for JS1, JS2 and JS3 respectively, Text B had 3.20 with mean scores of 3.04, 3.28 and 3.27 respectively for the class levels and Texts A had 3.06 with mean scores of 3.04, 3.05 and 3.10 for JS1, JS2 and JS3 respectively. Since these results were above 3.00, it implies that the teachers agreed that these textbooks provide instructional support to them.

Teachers' perception of a text is very important that is why this work considered it necessary to get their opinion on this. The effect of their perception is therefore directly or indirectly felt by students. Although it is pertinent to note that a text can be termed adequate by the teacher and not adequate for the students because of the level of exposure and education one has. Therefore, computer teachers should make use of many computer textbooks while preparing their lessons to enable them get the best materials for their instruction.

Conclusion

Based on the results of the study it was found that the teachers' perceptions in the computer textbooks in use in Junior Secondary Schools in Ebonyi State was adequate.

Recommendation

Based on the findings and conclusions of this study, the researcher made the following recommendations:

1. Students and teachers are advised to use many of the approved computer textbooks in both their studies and lessons. The students should consult the

computer studies curriculum before deciding on the computer studies textbook to use. Those computer textbooks that are readable and has high content validity should be selected.

2. One textbook should not be recommended for both teachers and students. It is always better to use more than one textbook in any particular subject because what one textbook did not cover may be covered or treated better by others.

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