

THE IMPACT OF INSTRUCTIONAL MATERIALS ON STUDENTS' ACADEMIC PERFORMANCE IN ENGLISH LANGUAGE IN JUNIOR SECONDARY SCHOOL, YOBE STATE

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ABSTRACT

The study investigated the impact of instructional materials on student's academic performance using the English language in a junior secondary school in Yobe State. The study employed self-designed multiple-choice using structural equation modeling to assess and test the relationship between the variables. The population strictly targeted junior secondary school students, of which 230 were sampled. Specialists validated the instrument in the subject area based on the measurement and educational management. The structural equation modeling statistical tool is used to analyze the collected data. The findings indicate a significant relationship between instructional material and student's academic performance in the pre-test and post-test of students in the experimental group. It is also assumed that students who taught using instructional materials performed better than those taught without.

Keywords: Instructional materials, Students, Academic performance, Junior secondary school.

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INTRODUCTION

Nigeria is a country with different ethnic groups and cultures. The questions arise about how people from other ethnic backgrounds who speak different languages communicate and understand one another. This is where the English language comes in. English is an interconnecting language among Nigerians from different ethnicities and geopolitical zones. Furthermore, English is a dominant language in Nigeria, as English is taught at various levels of the Nigerian educational system. Students can only move from a secondary education level into tertiary institutions with a pass in the English language. Furthermore, conversing with its basics is very significant (Aduwa-Ogiegbaen and Iyamu, 2006).

One of the most significant and frequently debated topics in modern education policy is the function of instructional materials in teaching and learning (Aramide and Bolarinwa, 2010). In addition, Ema and Ajayi (2006) saw instructional materials as a way for teachers to support and encourage students in their activities. They said that instructional materials are instruments educators can employ to rectify misconceptions and provide examples of concepts that students will always remember (Foyewa, 2020). Using instructional materials in instructions is to get the best possible outcome (Nne and Ekene, 2021). In addition, teachers should consult notes that any lesson needs to be better thought out with instructional materials (Foyewa, 2020). Farombi (1998) states that instructional materials include books, audiovisual, software, and educational technology hardware, and further states that instructional materials' adequacy, availability, and relevance in teaching and learning situations could positively affect students' learning and academic performance. It can be deduced here that there is a linkage between instructional materials and students' learning outcomes (Foyewa, 2020).

Furthermore, Oni (1992) observes that instructional materials are teachers' strategic factors in organizing and providing education. With the above, the investigation will focus on Yobe State UBE to examine instructional material activities on academic performance in Junior Secondary Schools. Moreover, the role of the English language in Nigeria must be emphasized, as it is an important tool for national development. The study will investigate how instructional materials

impact junior secondary school student's academic performance in the English language.

LITERATURE REVIEW

Albania (2004) asserts that several studies in some areas of Nigeria revealed that students usually fail woefully in Senior School Certificate Examinations in nearly all student's subjects. Abdu-Raheem (2011) observes that non-availability and inadequacy of instructional materials are the major causes of the school system's ineffectiveness and poor performance. According to Ahmed (2003), most secondary schools in Nigeria have extremely unfavorable environments and limited access to necessary resources for instruction and learning. In a different study, Eniyewu (2005) proposed that using instructional aids to deliver teaching is crucial for increasing knowledge and advancing academic standards. Similarly, Chang (2009) confirms that instructional materials in the teaching and learning process help glue discovered facts firmly into students' memory.

Similarly, Akinleye (2010) confirmed that a teacher must employ instructional materials and practical activities to facilitate learning and make it more vivid, rational, realistic, and practical for the students. It is, however, a known fact that most teachers find it convenient to use the conventional or theory-based teaching and learning method. However, it is acknowledged that students tend to learn and perform better when taught with instructional materials. This is corroborated by Eshiwani (1993), who claims that the availability of learning resources is a school-based element that affects students' performance. One of the most significant and frequently debated topics in modern education policy is the function of instructional materials in teaching and learning (Aramide and Bolarinwa, 2010). In addition, Ema and Ajayi (2006) saw instructional materials as a way for teachers to support and encourage students in their activities. They said that instructional materials are instruments that educators can employ to rectify misconceptions and provide examples of what students should retain. The main goal of employing instructional materials in instructions is to get the best possible outcome. Therefore, teachers should consult notes that any lesson needs instructional materials. Farombi (1998) states that instructional materials include books, audiovisual, software, and educational technology hardware.

Further, the adequacy, availability, and relevance of instructional materials in teaching and learning situations could positively affect students' learning and academic performance. It can be deduced here that there is a linkage between instructional materials and students' learning outcomes. Furthermore, Oni (1992) observes that instructional materials are teachers' strategic factors in organizing and providing education. This is so because they help elaborate on the teacher's concept without instructional material. This enables the students to learn more comfortably, positively influencing their academic performance.

Besides, Olumirin et al. (2010) assert that instructional materials help teachers teach conveniently and learn easily without any problems. They further stated that instructional materials have direct contact with all sense organs. As such, the importance of instructional materials should be emphasized. This makes it imperative for any teacher who wishes to accomplish the desired objective(s) for a specific lesson at hand to have a devised pool of instructional materials and keep them even before the need for their uses arises. These materials should be as varied and interesting as possible. Any conscientious teacher must be resourceful and enterprising in his/her use of instructional materials for his/her lesson. However, many teachers find it difficult to use instructional materials due to a lack of training on their application for effective use and dissemination of knowledge. Therefore, teachers must remember the purpose for which instructional materials are used. In another development, Slavin (2010) suggests a catalog of useful visual aids for teaching the English Language, such as pictures, diagrams, maps, film strips, and models.

English language teachers should employ instructional materials to disseminate knowledge to ESL learners for better educational achievement (Alabere, 2017). Omabe (2006) attests that instructional materials are central to teaching and learning the English language because they complement the efficiency of a teacher and effectiveness in lesson delivery. However, regardless of how well-trained a professionally qualified English teacher is, Okebukola and Jegede (1992) contend that if the teaching and learning environment needs more tools and resources, the teacher may find using his or her knowledge challenging. Similarly, Basey (2002) believes that teaching is a resource-intensive art. It could be quite challenging to locate the electronic devices and supplies needed to teach English in schools during a recession. The English language significantly influences the evolution of a country. The poor performance of secondary school pupils on local and standardized English exams is one of the main issues facing Nigeria's educational system.

Over time, it has become a major worry for academics, teachers, and other stakeholders in education. According to Afolabi (2009), ineffective teaching strategies and a shortage of necessary teaching resources contribute to students' typical exam failure. Thus, this study aims to ascertain how instructional materials affect junior secondary school students' academic performance in the English language.

THE VALUE OF EDUCATIONAL RESOURCES IN LANGUAGE TEACHING

It is impossible to overstate the value of instructional materials in teaching and learning. Numerous works have been produced to demonstrate materials' key role in curriculum implementation. Using instructional materials makes learning more engaging, practical, realistic, and appealing. They also allow instructors and students to engage fully and productively in class. They allow for the growth of knowledge and skills and the development of self-actualization and confidence. Ke et al. (2020) noted that instructional tools are crucial for students' and teachers' practical and demonstrative in a classroom setting. Duraippah et al. (2021) defined instructional materials as tools that help teachers deliver lessons to students logically. According to Kirima (2018), instructional materials are visual and audiovisual tools, either concrete or non-concrete, that teachers utilize to enhance the caliber of their lessons and student learning experiences. Ayodele (2020) said all instructional materials appeal to the senses during teaching and learning.

According to Andika (2023), instructional materials are also things or tools that help teachers deliver their teachings to students logically and orderly. Ferri et al. (2020) agreed that teachers employ instructional resources to help explain concepts to students and make learning easier. According to Ferri et al. (2020), a lack of adequate and readily available teaching resources is one of the main reasons the educational system could be more productive, and students could do better. According to Blakey-Milner et al. (2021), the benefits of educational materials include lower production costs, the ability to instruct a large class of pupils at once, the ability to motivate students to pay attention, and the ability to pique their interest.

Castro and Tumibay (2021) provided evidence of the importance of instructional materials as teaching and learning aids. He proposed that to expand on ideas and pique students' interest, teachers should locate other resources for their lessons to augment what is offered in textbooks. Isa et al. (2020) found that the lecture approach was used due to the teacher's inadequate knowledge, which resulted in the learning resources needing to be more available, efficient, and underutilized. They suggested that improvising educational resources for teaching and learning in schools should incorporate the participation of philanthropists, parents, instructors, students, and the parents/teacher association. As a result, Natano (2023) promoted teachers' inventiveness and urged them to look for the appropriate teaching resources locally to augment or replace the required ones. Sirajo and Abdullahi (2023) concurred that improvising is the most excellent way for teachers to employ their manipulative talents to at least somewhat meet the goals of their lessons. According to Alam (2021), instructional materials are essential for making learning tangible and real, substituting one item for another, allowing students to create materials, be cost-effective, and be more focused on the teacher-student relationship. According to Ayeni (2020), teachers in Nigerian schools should innovate essential instructional resources to boost academic standards. This might help to increase the quality of graduates' turnout from schools and the standard of education.

MODEL IDENTIFICATION BASED ON VARIABLES AND EDUCATIONAL RESOURCES

Educational resources educational charts

A chart is a visual summary that combines numerical, graphic, and pictorial elements. "A visual symbol summarizing or comparing or contrasting or performing other helpful services in explaining subject matter" is how Edgar Dale describes a chart. The chart's primary purpose is to display relationships, including comparisons, relative numbers, trends, procedures, categorization, and organization. An object with two dimensions is a chart. These flat visual resources can be diagrams or a compilation of verbal, graphic, pictorial, or numerical information designed to concisely represent key ideas, procedures, or relationships (Franconeri et al., 2021).

Chart graphic toward student's academic performance

Charts illustrate ideas and concepts that could be difficult for listeners to grasp if presented only orally. Yudha and Mandasari (2021) assert that using instructional charts in the classroom helps students become more creative and proficient writers. Charts show an abstract picture of reality since the information is effective in the cognitive learning domain (Rashid et al., 2022). Kyari (2023) carried out an experimental study employing 2×2 factorial arrangements to examine the effect of visual materials on student's academic achievement in history, with 925 students serving as the population size and 120 as the sample size.

Visual poster toward student's academic performance

Posters: A poster is a visual aid used to draw attention and quickly and effectively convey a fact, a concept, a narrative, or an image. A dictionary of Education by Good, "A placard, usually pictorial or decorative, employing an emotional appeal to convey a message intended to reinforce an attitude or urge a course of action," is what is referred to as a poster (Nguyen et al., 2021). To effectively convey a message,

educate a lesson, provide a general idea, or otherwise have a significant impact on the viewer, a poster is a graphic representation of a strong emotional appeal that is carried through a combination of graphic aids such as pictures, cartoons, lettering, and other visual arts on a placard. Posters are a great resource for students' project work (Kemaloglu-Er and Sahin, 2022). The teacher can divide the class into groups, and each group can select the message they wish to post. The finished posters can then be displayed across the school with the other project work the students have accomplished, like reports and maps.

FlashCards toward student's academic performance

Flashcards are little cards with a picture or symbol on them that are used for both teaching and learning activities. Flashcards are a popular teaching tool in the classroom for teaching reading. For example, flashcards can teach the picture and the word together while teaching reading comprehension (Matrutry and Que, 2021). Ask pupils to pronounce the term while glancing at the image. Invite volunteers to come out and match words with pictures after you have given the class several terms they already know (Peng and Chuang, 2020). Once the pupils are proficient readers, you can split them into groups and use the flashcards to play reading games.

Slide presentation toward student's academic performance

Slides and film strips are the most important visual aids among the many materials available for still projection. They have enormous educational value. An optical tool for education is the slide projector. It projects images onto a wall or screen from a transparent slide. It aids in displaying the slide's enlarged image (Ordu and Odukwu, 2023). A transparent slide of the tiny figure is made when the entire class must see the figure or illustration clearly despite its small size. By increasing its size and sharpening the image, the slide projector projects its erect image onto the screen or wall (Dar *et al.*, 2022). The slide or film strip would look more appealing if it were colored. Small and large groups can benefit from using the slide projector (Han *et al.*, 2022).

Flipchart toward student's academic performance

A flipchart is a set of paper sheets stapled together at the top. A sheet can be "flipped" over the top to make room for the following one after use. There are two methods to use a flipchart: Either with newsprint

or blank sheets of paper that the trainer or teacher writes on during the session as a pre-made resource with notes and images (Acosta Guzmán, 2023). You can prepare texts and illustrations beforehand to save yourself from having to write while you speak during the lesson or session. Each flipchart sheet should illustrate one concept from a lecture, discussion, or training session. Turn to the following sheet when you get to the next point. This facilitates understanding for students and learners. It also serves as a tool for you and a reminder of the format of your lecture or presentation (Conley, 2021). Picture flipcharts are especially helpful for development professionals to illustrate key points. On the reverse of the preceding page, you can write any clarifications or extra notes to help you remember what to say or to give information in case you are questioned in-depth (Monday, 2020). This is, especially useful if instructors and trainers are not involved in the flipchart's design but will use it in large quantities. Teachers can assign blank sheets and pens to each small group they are working with. After their discussions, the group can write their conclusions on the sheet (Pollock *et al.*, 2023).

Worksheet toward student's academic performance

Worksheet: A worksheet lists exercises or questions that trainees or students must complete. Because each person can work at their own pace, pre-prepared worksheets can be utilized successfully with groups of people with different abilities or language capabilities. Worksheet use guidelines (Ryabchikova *et al.*, 2020). Worksheets can serve as assignments, a review guide, or contain additional information that needs to be learned for the upcoming class. They can be copied with a banda machine or jelly copier, or they can be photocopied. Worksheets can be used in development work to help trainees remember or reinforce a specific lesson or method (Zarate *et al.*, 2020). Since worksheets can be used singly, in pairs, or in small groups to promote cooperation skills, they offer flexibility both in the classroom and the workshop.

METHODS

Instrumentation and data collection

In this study, the researcher will use the questionnaire adapted to elicit instructional materials on students' academic performance in English. Regarding this set, the participants are expected to one strongly disagree and five strongly agree on a 5-point Likert scale with a statement

Table 1: Variables summary

Variable	Definition	Sources
Chart graphic	Charts illustrate ideas and concepts that could be difficult for listeners to grasp if presented only orally. Walter (1998) asserts that using instructional charts in the classroom helps students become more creative and proficient writers. Charts show an abstract picture of reality since the information is effective in the cognitive learning domain.	Yudha and Mandasari 2021; Rashid <i>et al.</i> 2022; Kyari, 2023
Visual poster	Poster is a visual aid used to draw attention and quickly and effectively convey a fact, a concept, a narrative, or an image. A Dictionary of Education by Good, "A placard, usually pictorial or decorative, employing an emotional appeal to convey a message intended to reinforce an attitude or urge a course of action," is what is referred to as a poster.	Nguyen <i>et al.</i> 2021; Kemaloglu-Er and Sahin, 2022
FlashCards	Are little cards with a picture or symbol on them that are used for both teaching and learning activities. Flashcards are a popular teaching tool in the classroom for teaching reading.	Matrutry and Que, 2021; Peng and Chuang, 2020
Slide presentation	Strips are the most important visual aids among the many materials available for still projection. They have enormous educational value. An optical tool for education is the slide projector. It projects images onto a wall or screen from a transparent slide. It aids in displaying the slide's enlarged image.	Ordu and Odukwu, 2023; Dar <i>et al.</i> 2022; Han <i>et al.</i> 2022
Flipchart	Is a set of paper sheets stapled together at the top. A sheet can be "flipped" over the top to make room for the following one after use. There are two methods to use a flipchart: Either with newsprint or blank sheets of paper that the trainer or teacher writes on during the session as a pre-made resource with notes and images. You can prepare texts and illustrations beforehand to save yourself from having to write while you speak during the lesson or session.	Acosta Guzmán, 2023; Conley, 2021; Monday, 2020; Pollock <i>et al.</i> 2023
Worksheet	A worksheet is a list of exercises or questions that trainees or students must complete. Because each person can work at their own pace, pre-prepared worksheets can be utilized successfully with groups of people who have different abilities or language capabilities. Worksheet use guidelines Worksheets can serve as assignments, serve as a review guide, or contain additional information that needs to be learned for the upcoming class.	Ryabchikova <i>et al.</i> 2020; Zarate <i>et al.</i> 2020

describing the relationship with academic performance. The data were collected through face-to-face interaction with the junior secondary schools in Yobe State, Nigeria. The study also employed validity and reliability to justify the research views and data collected using composite reliability and Cronbach alpha. Then, structural equation modeling was tested for the justification of the relationship between the independent variable and the student's academic performance using the Statistical Packages for the Social Sciences and partial least squares structural equation modeling.

Table 1 discusses the summary of the variables for research, the direction of each variable, its justification in terms of meaning, and the source of the variable generated for the study.

Table 2 shows that of the total respondents gathered, 230, 65% of the respondents indicated male and 35% of the respondents were female for the study testing. Therefore, the number of the male gender superseded the female gender in the respondents of the study.

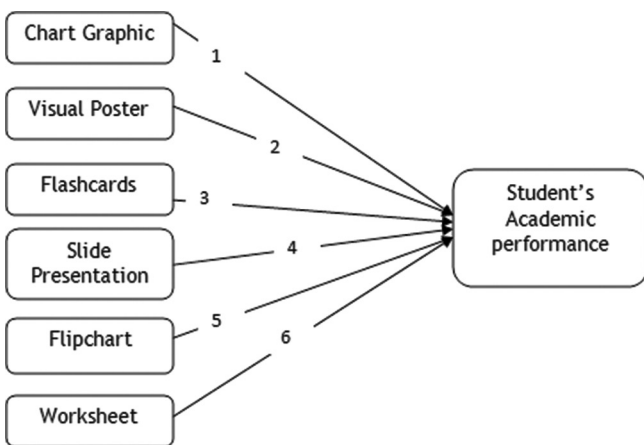


Fig. 1: Model measurement

Table 2: Demographic analysis

Gender	Frequency	Percentage
Male	150	65
Female	80	35

Table 3: Reliability and validity

Variables	Composite reliability	Cronbach's alpha
Chart graphic	0.758	0.762
Visual poster	0.705	0.752
Flashcards	0.850	0.862
Slide presentation	0.755	0.770
Flipchart	0.720	0.750
Worksheet	0.808	0.810
Student's academic performance	0.757	0.790

Table 4: Hypothesis analyses

Path	Estimate	Beta	critical ratio	p value	Hypothesis
CG -> SAP	0.186	0.050	3.720	0.003	Supported (H1)
VP-> SAP	0.195	0.047	4.875	0.000	Supported (H2)
FC -> SAP	0.250	0.080	3.125	0.002	Supported (H3)
SP -> SAP	0.210	0.070	3.000	0.01	Supported (H4)
Fchart-> SAP	0.300	0.075	4.000	0.000	Supported (H5)
WS -> SAP	0.245	0.058	4.224	0.000	Supported (H6)

SAP: Student academic performance, VP: Visual Posterm, CG: Chart graphic, FC: FlashCards, SP: Slide Presentation, Fchart: Flipchart, WS: Worksheet

Table 3 discloses the validity and reliability of the study's variables, where Cronbach's alpha and composite reliability for each variable were identified and tested for the study justification. The results indicate a range between 0.862 and 0.705, as indicated in the table (Hair et al., 2010).

The measurement model indicates the goodness of fit index found fit as the p value at 0.000; Chi-square shows that the measurement was still at the range of 3.513, below <0.5 as recommended by (Manalu and Adzimatunur 2020). The goodness of fit (GFI) and adjusted goodness of fit (AGFI) met the requirement of >0.9 (Zhang et al., 2021), incremental fit index (IFI), Tucker-Lewis index (TLI), and comparative fit index (CFI) were above >0.9 and root mean square error of approximation (RMSEA) 0.034, which is below <0.1 (Byrne, 2013). The above finding indicates that the measurement of the model is appropriately fit and accepted by the different theories.

Table 4 indicates the path analysis of the tested variables, the chart graphic (CG), visual poster (VP), flashcards (FC), slide presentation (SP), flipchart (Fchart), and worksheet (WS) toward student's academic performance were all statistically significant, and that indicates the relationship between the variables of the research at the significant level of p value below 0.01. Furthermore, all the hypotheses have met the expectations.

DISCUSSION

The defined variables activities are covered in Table 1; the demographic analysis of the respondent's gender was defined to perceive the participants' gender based on their frequency and percentile distribution. Construct reliability and validity show that the theories' threshold was satisfied in the absolute measurement assessment in Table 4, as indicated by (Hair et al., 2010); composite reliability was found to be above 0.7, and a threshold of 0.7 was taken into consideration by Cronbach's alpha (Hair et al., 2017). Furthermore, Table 4 details the model's measurement and presents each model fit of AGFI, GFI, IFI, TLI, CFI, and RMSEA. The study verified the connection between independent variables and students' academic performance, focusing on CG, VP, FC, SP, Fchart, and WS. Every scenario demonstrated a favorable correlation between the direct effect and students' academic performance. The findings validated the claim (Nitzl et al., 2016) that all factors acted as a direct relationship between independent and dependent variables. As shown in Tables 4 and 5, with appropriate relationship, the structural funding of student's academic performance established considerable benefits and a strong association between direct effects. To solve fundamental difficulties, the study concludes by highlighting the importance of implementing student academic performance.

Furthermore, most junior secondary schools lack the most fundamental instructional materials to improve the students' academic performance. The incapacity of state institutions to provide such instructional material affects the positive way of delivering academic performance. Therefore, it is necessary to improve a formal system of junior secondary school teaching aids, which involves establishing dedicated institutions and regulatory frameworks toward student's academic performance. The findings also justify the direct effect relationship between the roles of institutional material in promoting sustainable scheme student's academic performance in Northern Nigeria.

Table 5: Measurement model

Variables	Modified model	Recommended value	Theories
χ^2/df	3.513	>0.5	Manalu and Adzimatunur, 2020
p value	0.000		Manalu and Adzimatunur, 2020
GFI	0.900	>0.9	Hu <i>et al.</i> (2021)
AGFI	0.923	>0.9	Zhang <i>et al.</i> (2021)
IFI	0.912	>0.9	Hu <i>et al.</i> (2021)
TLI	0.917	>0.9	Zhang <i>et al.</i> (2021)
CFI	0.970	>0.9	Kline (2010)
RMSEA	0.034	<0.1	Byrne (2013)

GFI: Goodness of fit, AGFI: Adjusted goodness of fit, IFI: Incremental fit index, TLI: Tucker-Lewis index, CFI: Comparative fit index, RMSEA: Root mean square error of approximation

CONCLUSION

The outcome further suggests that instructional materials positively affect students' academic performance. It also revealed that an inadequate supply of instructional materials and other factors that constrained the teachers from effective use of instructional materials affected the student's performance. Similarly, it further indicates that the instructional materials teachers mostly use are human and school environment resources. Thus, audiovisual and community resources are not sufficiently supplied in the school and, thus, were not used by the teachers.

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