

Effect of Instructional Software on Students' Interest and Academic Achievement in Marketing Education in Abia State College of Education (Technical), Arochukwu, Nigeria

OBAA, GLORIA

Department of Business Education, Abia State College of Education (Technical), Arochukwu, Nigeria

Abstract- *This study examined the effect of instructional software on students' interest and academic achievement in Marketing Education in Abia State College of Education (Technical), Arochukwu, Nigeria. Two research questions and two null hypotheses guided the study. A quasi-experimental research design, specifically the pre-test, post-test control group design, was adopted. The population of the study comprised 47 NCE 1 and NCE 2 Marketing Education students during the 2025/2026 academic session. Since the population was small and manageable, the entire population was used. The 21 NCE 1 students constituted the experimental group and were taught using instructional software, while the 26 NCE 2 students constituted the control group and were taught using the lecture method. Both groups were taught six selected Marketing Education topics over a period of six weeks. Data were collected using the Marketing Education Achievement Test (MEAT) and Marketing Education Interest Scale (MEIS), with reliability indices of 0.74 and 0.79, respectively. Mean and standard deviation were used to answer the research questions, while analysis of covariance (ANCOVA) was used to test the hypotheses at 0.05 level of significance. The results showed that students taught using instructional software recorded a higher mean gain in academic achievement (38.72) than those taught using the lecture method (19.18). The ANCOVA result showed a significant difference in achievement between the two groups, $F(1, 88) = 11.532, p < .001$. Similarly, the instructional software group recorded a higher mean gain in interest (0.82) than the lecture method group (0.58), with the ANCOVA result showing a significant difference in interest, $F(1, 85) = 5.021, p = .005$. The study concluded that instructional software significantly contributed to the greater academic achievement and interest in Marketing Education. It was recommended among others that instructional software should be integrated into the teaching of Marketing Education in Colleges of Education.*

Keywords: *instructional software, students' interest, academic achievement, Marketing Education, lecture method*

I. INTRODUCTION

Education is a lifelong process through which knowledge, skills, values, and attitudes are developed by individuals in order to be self-reliant, positively impact their society, and respond to personal, social and economic challenges. In the views of Okorieocha and Ugwunali (2025), education is defined as the training individuals to develop their skills, potentials, and talents for their overall development and that of their society. Beyond the acquisition of academic knowledge, education equips individuals with competencies that enable them to make informed decisions, contribute to their communities and adapt to emerging challenges (UNESCO, 2026). As the demands of society and the world of work become more specialised, education has gradually developed into diverse fields designed to prepare learners for specific areas of human endeavour. One such field is Technical and Vocational Education and Training (TVET).

Technical and Vocational Education and Training (TVET) is an important aspect of education which is designed to equip learners with the requisite knowledge, practical skills, competencies, professional values, and attitudes required for productive participation in the world of work. The Federal Republic of Nigeria (FRN, 2013) described TVET as a branch of education that ensure the acquisition of practical skills including general education studies, scientific and technological knowledge concerning several aspects of life.

Similarly, Okorieocha et al. (2024) referred to TVET as an aspect of education that is aimed towards the acquisition of practical skills and knowledge for gainful employment. Additionally, one of the goals of TVET is to ensure the acquisition of relevant skills by individuals for self-reliance (FRN, 2013). Unlike education that is predominantly oriented towards theoretical knowledge, TVET emphasises on the acquisition and application of occupational competencies, thereby linking learning more directly with employment, entrepreneurship, productivity and economic development. Okorieocha and Ugwunali (2025) further noted that major occupational areas under TVET are; Agricultural Education, Business Education, Home Economics Education, Fine Arts Education, and Industrial Technology Education among others.

Business Education is a specialised area of education that combines business knowledge, occupational skills and pedagogical competencies to equip learners for productive participation in the world of work and for the teaching of business-related subjects. The National Universities Commission (NUC, 2023) describes Business Education as a specialised profession designed to develop knowledge, skills and competencies for employability, advancement in office, distributive and service occupations, teaching of business subjects, self-employment and entrepreneurship. The Commission further identifies Accounting, Entrepreneurship, Marketing and Office Management as specialised areas through which Business Education connects general education with practical business competencies (NUC, 2023). Thus, Business Education is aimed at developing learners who can understand business processes, apply relevant competencies in practical situations, pursue employment or self-employment, and effectively communicate business knowledge to others.

Marketing Education is an important branch of Business Education which provides learners with knowledge and competencies required to understand and apply principles relating to the exchange of goods and services, consumer behaviour, product development, pricing, distribution, promotion and other marketing activities. It is expected to prepare learners to gain knowledge and understanding of marketing concepts, and apply such knowledge in

practical business and educational situations. Some of topics covered under Marketing Education in Nigeria include Introduction to marketing; marketing environment and consumer behaviour; market segmentation, targeting and positioning; marketing mix; channels of distribution; and promotion and e-marketing among others (National Commission for Colleges of Education [NCCE], 2023). Hence, teaching such topics may be enhanced when using digital methods.

In the views of Owuho et al. (2023), digital infrastructure has become very important to the development and delivery of Marketing Education in Nigerian tertiary institutions. The researchers emphasised that digital education involves interconnected elements such as software, hardware, internet facilities, platforms and human users. This therefore suggests that the success of marketing education heavily depends on the technological environment within which teaching and learning occur. As earlier mentioned, TVET programmes are designed to produce graduates who can be self-reliant and self-employed in their various areas of specialisation. Thus, for self-reliance and self-employment in fields such as marketing education, students are expected to demonstrate a high level of proficiency in the field, which may be achieved through mastery of some skills. Such mastery may further be achieved when students have sufficient interest in marketing.

The concept of “interest” has been widely discussed and has continued to attract specific attention in education because of its concerns on how students engage with learning activities. Okafor and Umezulike (2021) defined interest as a student’s willingness to participate in academic activities, which could be demonstrated by the individual’s curiosity, enjoyment, and commitment to subject matter under discussion. It could be defined as an affective variable that significantly determines if students react to a subject with passion, enthusiasm or resistance. Students’ interest is an important affective dimension of learning because it influences the extent to which learners attend to, engage with and sustain their involvement in particular subject matter or learning activities. Hidi and Renninger (2006) conceptualised interest as a psychological state that develops progressively from a

temporarily triggered situational interest to a more enduring individual interest. This implies that interest is not necessarily a fixed personal characteristic but can be stimulated and developed through appropriately designed learning experiences. Thus, in this study, students' interest is considered as the extent to which students demonstrate attention, engagement and sustained involvement in learning Marketing Education when exposed to instructional software compared with the lecture method.

In Marketing Education, students' interest may therefore be reflected in their willingness to engage with marketing content, participate in instructional activities, explore marketing concepts and sustain their engagement with the subject. Daus et al. (2023) provided specifically distinguished among course interest, content interest and job interest. Their work demonstrates that students' interest in Marketing Education can take different forms and constitutes a meaningful educational outcome that can be systematically assessed. Renninger and Hidi (2019) further explained that interest can support learners' attention, motivation and meaningful engagement with learning activities, suggesting that the quality of the instructional environment can be important in stimulating and maintaining students' interest. Consequently, instructional approaches that provide opportunities for interaction, active participation, meaningful challenge and feedback may be very relevant to the development of students' interest which could further improve students' academic achievement.

Academic achievement could be referred to as the level of knowledge, understanding, competence and accomplishment that a learner demonstrates after engaging in an educational experience. According to the American Psychological Association (APA, 2018), academic achievement is a level of proficiency in scholastic work generally or in a specific skill, with evidence commonly obtained through assessments of performance. Similarly, Meißner et al. (2025) defined academic achievement as performance outcomes that indicate the extent to which learners have accomplished specific goals established within instructional environments, noting that achievement may be evidenced through knowledge, understanding, grades and performance on educational achievement

tests. In the views of Samuel et al. (2021), academic achievement is an important measure of educational outcomes and an indication of the extent to which students attain stated educational goals. Additionally Onwusa (2021) explained academic achievement in terms of the extent to which learners benefit from instruction, with the resulting knowledge and skills reflected in achievement test scores.

These perspectives establish academic achievement as a measurable cognitive outcome of instruction rather than merely a general impression of students' academic success. In Marketing Education, academic achievement therefore concerns the extent to which students acquire and demonstrate the knowledge, understanding and application of marketing concepts and principles presented during instruction. This is very important because Marketing Education requires learners to move beyond the recall of terminology to the understanding and application of marketing knowledge in relevant business situations. Several researchers demonstrated that instructional approaches can make a difference in students' achievement in Marketing. Uranta et al. (2024), for example, found significant differences in the achievement scores of students taught Marketing using Zoom, Google Classroom and the lecture method, providing evidence that technology-supported instructional approaches can influence achievement outcomes in Marketing. Similarly, Okon et al. (2026) reported that specialised areas of Business Education, including Marketing and Distributive Education, significantly predicted the academic achievement of Business Education students, reinforcing the importance of the instructional and curricular experiences through which students encounter business-related knowledge. These findings provide a rationale for investigating whether instructional software can produce comparable benefits in Marketing Education.

Instructional software refers to computer-based programmes specifically designed to deliver, support, organise or enhance instructional activities and learners' interaction with a particular subject. Dogan et al. (2021) explained that instructional software constitutes a category of technology used to support instruction and includes computer-assisted learning applications such as drill-and-practice programmes

and simulations, with the particular form of software depending on the subject and instructional purpose. Similarly, Njoku and Okigbo (2019) described instructional software as a computer-based instructional package designed to teach specific subject concepts through features such as text, animation, narration, learner activities and evaluation, while also providing interactive functions that enable learners to navigate instructional content and receive feedback on their responses. Additionally, Ajimotokan et al. (2022) described interactive instructional software as a computer-aided learning package capable of presenting instructional materials through multimedia resources and supporting learner-centred and activity-oriented instruction. This demonstrates that instructional software is an instructional medium capable of organising content, presenting information in multiple forms, engaging learners in activities, providing opportunities for practice and feedback, and supporting individualised or self-paced learning.

The pedagogical value of such software could also depend on how its technological features are aligned with instructional objectives and subject content. Dogan et al. (2021) noted that instructional software use may include computer-assisted learning applications such as simulations and drill-and-practice activities, suggesting that software can provide learning experiences that differ qualitatively from conventional teacher exposition. This potential is relevant to Marketing Education because students are expected to understand marketing concepts and apply them to practical business situations. Interactive instructional software can present marketing concepts through text, graphics, animation, demonstrations, examples, exercises and immediate feedback, thereby creating opportunities for students to interact actively with the content rather than relying solely on the lecturer's teaching.

The changing nature of marketing consequently places corresponding demands on the way Marketing Education is taught. Owioke et al. (2023) argued that the sustainability of Marketing Education in Nigeria requires attention to digital design, digital delivery and digital collaboration. This implies that the effectiveness of Marketing Education is influenced not only by the content of the curriculum but also by the instructional processes through which students

encounter and engage with that content. The instructional process is also important because the same curriculum content may produce different learning outcomes when delivered through different instructional approaches. The lecture method is a useful means of organising and presenting substantial amounts of subject matter within a relatively limited period. However, when instruction is predominantly centred on lecturer exposition, students may have fewer opportunities to interact with instructional materials, practise concepts, receive immediate feedback and explore practical situations independently.

Several studies have demonstrated the effectiveness of instructional software. Hudu et al. (2022) developed and tested instructional software for teaching Transport System and found that students exposed to the software achieved higher scores and demonstrated significantly different interest levels compared with students taught using the conventional method. Similarly, Ajimotokan et al. (2022) found that an interactive instructional package produced significant differences in students' academic achievement, skill transfer and retention, with combined conventional and computer-aided instruction producing stronger outcomes than either approach used independently. Njoku and Okigbo (2019) also reported that students taught Geometry using the GeoTAN Instructional Software Package obtained significantly higher interest scores than those taught using the conventional method. These findings suggest that well-designed instructional software can influence both cognitive and affective learning outcomes. However, most of the existing Nigerian studies have focused on subjects such as Transport System, Geometry, Chemistry and Engineering Graphics rather than Marketing Education, which creates a contextual gap that warrants further investigation. In the present study, therefore, instructional software refers to the researcher-selected computer-based instructional programme used to present Marketing Education content to students in Abia State College of Education (Technical), Arochukwu.

Abia State College of Education (Technical), Arochukwu (ASCETA) is a Nigerian Higher Education Institution established in 1993 by the Abia State Government (Ozuronye, 2026). Its core

mandate is to produce educators, technical specialists and innovators and emphasises the integration of pedagogical preparation with practical training, problem-solving skills and technical competencies (ASCETA Website, 2026a). The College was created to produce professionally competent teachers with the pedagogical knowledge, technical expertise, and practical skills required to meet the manpower needs of Nigeria's basic and secondary education sectors. Over the years, the institution has remained committed to the preparation of qualified teachers through the integration of academic knowledge, practical training, innovation, and community service. In addition to its statutory mandate of teacher preparation, the College contributes to human capital development by promoting technical and vocational education, entrepreneurship, research, and community engagement in line with national educational goals (Ojeka et al. 2023). The College currently operates six academic schools with accredited academic programmes and continues to expand its academic programmes and institutional capacity in response to emerging educational and technological demands. Marketing education is among the disciplines offered in ASCETA under the Department of Business Education in the School of Vocational And Technical Education. However, the course is taught using conventional lecture, demonstration and discussion methods. Hence, there is a need to find out if instructional software could increase students' interest and improve academic achievement in the course. It is against this background that this study seeks to determine empirically whether exposing students to instructional software would produce differences in their academic achievement and interest when compared with the lecture method.

II. STATEMENT OF THE PROBLEM

Marketing Education is expected to provide learners with the knowledge, skills and competencies required to understand marketing principles and apply them effectively in educational, occupational and entrepreneurial contexts. Consequently, the teaching of Marketing Education ought to employ instructional approaches that go beyond transmitting information from lecturer to student. Such approaches should stimulate students' interest, promote active engagement with marketing concepts, facilitate

meaningful understanding and enable learners to demonstrate the knowledge acquired through measurable academic achievement. Hence, students learning Marketing Education should be exposed to instructional experiences that simultaneously promote their interest in the subject and enable them to attain satisfactory levels of academic achievement.

However, in ASCETA presently, the conventional lecture-based instruction remains a common approach and may provide limited opportunities for students to interact actively with instructional content. The problem, therefore, is that despite the expected role of Marketing Education in developing knowledgeable, competent and practically oriented learners, and despite emerging evidence that technology-supported instruction can improve students' interest and academic achievement, there remains insufficient empirical evidence on whether instructional software can produce significant improvements in both outcomes among Marketing Education students in a Nigerian College of Education, especially in Abia State College of Education (Technical), Arochukwu. If this gap remains unaddressed, lecturers may continue to rely predominantly on conventional instructional approaches without sufficient context-specific evidence to determine whether instructional software can enhance students' interest and academic achievement in Marketing Education. This may limit opportunities to identify more effective instructional approaches for improving students' learning experiences and outcomes. It is against this background that the present study seeks to determine the effect of instructional software on students' interest and academic achievement in Marketing Education in Abia State College of Education (Technical), Arochukwu, Nigeria.

III. PURPOSE OF THE STUDY

The general purpose of this study was to examine the effect of instructional software on students' interest and academic achievement in Marketing Education in Abia State College of Education (Technical), Arochukwu, Nigeria. Specifically, the study sought to:

1. determine the mean achievement scores of students taught Marketing Education using instructional software and those taught using the lecture method in Abia State College of Education (Technical),

Arochukwu, Nigeria.

2. determine the mean interest scores of students taught Marketing Education using instructional software and those taught using the lecture method in Abia State College of Education (Technical), Arochukwu, Nigeria.

Research Questions

The following research questions guided the study:

1. What are the mean achievement scores of students taught Marketing Education using instructional software and those taught using the lecture method in Abia State College of Education (Technical), Arochukwu, Nigeria?
2. What are the mean interest scores of students taught Marketing Education using instructional software and those taught using the lecture method in Abia State College of Education (Technical), Arochukwu, Nigeria?

Hypotheses

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

H₀₁: There is no significant difference between the mean achievement scores of students taught Marketing Education using instructional software and those taught using the lecture method in Abia State College of Education (Technical), Arochukwu, Nigeria.

H₀₂: There is no significant difference between the mean interest scores of students taught Marketing Education using instructional software and those taught using the lecture method in Abia State College of Education (Technical), Arochukwu, Nigeria.

IV. METHODOLOGY

The study adopted quasi-experimental research design, specifically the pre-test, post-test, and control group design. The design was considered appropriate because the study involved two naturally existing and intact groups of Marketing Education students. Consequently, the existing NCE 1 and NCE 2 groups were retained as intact groups, with the NCE 1 group serving as the experimental group and the NCE 2 cohort serving as the control or comparison group. The population of the study comprised 47 Marketing Education students enrolled in NCE 1 and NCE 2 during the 2025/2026 academic session at Abia State

College of Education (Technical), Arochukwu, consisting of 21 NCE 1 students and 26 NCE 2 students (ASCETA Admissions Unit, 2026). Because the population was small, accessible and manageable, the researcher adopted a census sampling technique, whereby all the 47 students in the population participated in the study. The 21 NCE 1 students constituted the experimental group, while the 26 NCE 2 students constituted the control group. Both groups were taught the same six selected Marketing Education topics over a period of six weeks, with the following topics taught respectively each week: Introduction to Marketing; Marketing Environment and Consumer Behaviour; Market Segmentation, Targeting and Positioning; Marketing Mix; Channels of Distribution; and Promotion and E-Marketing. The selection of these topics was guided by the marketing content contained in the NCE curriculum materials of the NCCE (2023). The Marketing Education Achievement Test (MEAT) and the Marketing Education Interest Scale (MEIS) developed by the researcher were used for data collection. The MEAT was developed by the researcher to measure students' academic achievement in the six selected Marketing Education topics and consisted of objectively scored test items constructed from a table of specifications to ensure adequate representation of the content areas and cognitive levels covered during the intervention. The MEIS was developed to measure students' level of interest in Marketing Education and consisted of positively and negatively worded items rated on a five-point Likert-type response scale, with response options ranging from Strongly Agree to Strongly Disagree. The instruments were validated by three experts, two from the Business Education Unit of the Department of Agricultural and Vocational Education, and one from the Measurement and Evaluation Unit of the Department of Science Education, all at the Michael Okpara University of Agriculture, Umudike Aba State. The MEAT was subjected to trial-testing to determine its reliability, while the scores obtained from the trial testing were analysed using the Kuder-Richardson Formula 20 (KR-20), which yielded a reliability index of 0.74. The MEIS was also trial tested while the scores obtained from the trial testing were analysed using Cronbach's Alpha method to determine its internal consistency, which yielded a reliability index of 0.79. The experimental group was taught by the researcher using the instructional

software, while the control group was taught by a qualified Marketing Education lecturer who served as the research assistant using the lecture method. The researcher served as the instructor for the experimental group to ensure direct and faithful implementation of the software-based treatment, while the research assistant taught the control group using the conventional lecture method. The instructional software was used as the principal instructional medium for the experimental group and was structured to present the selected Marketing Education content through appropriate combinations of explanations, text, illustrations, multimedia resources, examples, learner activities, practice exercises and feedback, thereby providing students with opportunities for active interaction with the instructional content. The control group received the same content through conventional lecture activities. Before treatment, the two instruments were administered as pretests to both groups. The instrument lasted for six weeks after which the MEAT and MEIS were administered again to both groups as posttests. The pretest and posttest scores were used for data analysis to determine changes in students' academic achievement and interest following exposure to the respective instructional methods. Mean and standard deviation were used to answer the research questions. The null hypotheses were tested using analysis of covariance (ANCOVA) at 0.05 level of significance, with the relevant pretest score used as the covariate and the corresponding posttest score used as the dependent variable. The decision rule was that a p-value less than 0.05 would result in the rejection of the corresponding null hypothesis, whereas a p-value equal to or greater than 0.05 would result in failure to reject the null hypothesis. The data analysis was computed with a computer software programme; statistical package for the social sciences (SPSS).

V. RESULTS

Research Question 1

What are the mean achievement scores of students taught Marketing Education using instructional software and those taught using the lecture method in Abia State College of Education (Technical), Arochukwu, Nigeria?

Table 1:

Mean achievement scores of students taught marketing education using instructional software and those taught using the lecture method

Pretest Method N	Post- test		Mean SD	Gain
	Mean	SD		
Instructional Software	2139.42	11.71	78.14	5.64538.72
Lecture Method	2636.21	12.27	55.39	7.62619.18

Source: Field Work, 2026

Table 1 presents the pretest and post-test mean achievement scores and standard deviations of students taught Marketing Education using instructional software and those taught using the lecture method. The results indicate that students taught Marketing Education using instructional software had a pretest mean achievement score of 39.42 and a post-test mean of 78.14, giving a mean gain of 38.72. In comparison, students taught using the lecture method recorded a pretest mean of 36.21 and a post-test mean of 55.39, resulting in a mean gain of 19.18. Although students in both groups demonstrated improvement in achievement following the instructional period, the instructional software group recorded a considerably higher mean gain than the lecture-method group. The difference in mean gain suggests that students exposed to instructional software made greater improvement in their academic achievement in Marketing Education than those taught using the lecture method. This implies that the use of instructional software was linked to the improved academic achievement among the students.

Research Question 2

What are the mean interest scores of students taught Marketing Education using instructional software and those taught using the lecture method in Abia State College of Education (Technical), Arochukwu, Nigeria?

Table 2

Mean interest scores of students taught marketing education using instructional software and those taught using the lecture method

Pretest		Post-test	Mean
Method	N	Mean	SD
Instructional Software	212.92	0.923.74	0.650.82
Lecture Method	261.91	0.812.49	0.860.58

Source: Field Work, 2026

Table 2 presents the pretest and post-test mean interest scores and standard deviations of students taught Marketing Education using instructional software and those taught using the lecture method. The results shows that students taught Marketing Education using instructional software recorded a pretest mean interest score of 2.92 and a post-test mean of 3.74, resulting in a mean gain of 0.82. Students taught using the lecture method, on the other hand, recorded a pretest mean interest score of 1.91 and a post-test mean of 2.49, yielding a mean gain of 0.58. The results show that students in both groups experienced an increase in interest following instruction, although the increase was greater among students exposed to instructional software. The higher mean gain recorded by the instructional software group suggests that exposure to the software-supported learning experience was associated with a greater improvement in students' interest in Marketing Education than the lecture method. Thus, the results suggest that instructional software may provide a more engaging learning experience for students.

Hypothesis 1

There is no significant difference between the mean achievement scores of students taught Marketing Education using instructional software and those taught using the lecture method in Abia State College of Education (Technical), Arochukwu, Nigeria.

Table 3:

Analysis of covariance of the mean achievement scores of students taught marketing education using instructional software and those taught using the lecture method

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	2896.911 ^a	2	965.637	7.688	.000
Intercept	21622.840	1	21622.861	172.178	.000
Pretest	12.535	1	12.535	.100	.753
Learning Method	2896.636	1	1448.317	11.532	.000
Error	13939.813	88	157.271		
Total	33364.000	91			
Corrected Total	16831.730	89			

Source: Field Work, 2026

Table 3 presents the analysis of covariance of the mean achievement scores of students taught Marketing Education using instructional software and those taught using the lecture method. The results in Table 3 indicate that learning method had a statistically significant effect on students' academic achievement, $F(1, 88) = 11.532, p < .001$. Since the p-value is less than the 0.05 level of significance, the null hypothesis was rejected. This indicates that there was a significant difference in the academic achievement scores of students taught Marketing Education using instructional software and those taught using the lecture method, after controlling for their pretest achievement scores. This finding confirms that the instructional software had a statistically significant positive effect on students' academic achievement in Marketing Education compared with the conventional lecture method. This result further demonstrates that the higher post-test performance recorded by students exposed to the instructional software was not merely due to chance but resulted from the effectiveness of the instructional strategy.

Hypothesis 2

There is no significant difference between the mean interest scores of students taught Marketing Education using instructional software and those taught using the lecture method in Abia State College of Education (Technical), Arochukwu, Nigeria.

Table 4

Analysis of covariance of the mean interest scores of students taught marketing education using instructional software and those taught using the lecture method

Source	Type Sum of Squares	IIIDfMean Square	F	Sig.
Corrected Model	2745.003 ^a	2 915.000	5.516	.001
Intercept	20304.342	1 20304.342	122.421	.000
Pretest	969.362	1 969.360	5.844	.017
Learning Method	1666.005	1 833.001	5.021	.005
Error	18409.917	85165.853		
Total	42115.000	92		
Corrected Total	21153.922	79		

Source: Field Work, 2026

Table 4 presents the analysis of covariance of the mean interest scores of students taught Marketing Education using instructional software and those taught using the lecture method. The results indicate that learning method had a statistically significant effect on students' interest in Marketing Education, $F(1, 85) = 5.021$, $p = .005$. Since the p-value is less than the 0.05 level of significance, the null hypothesis was rejected. This indicates that there was a significant difference in the interest scores of students taught Marketing Education using instructional software and those taught using the lecture method, after controlling for their pretest interest scores. This finding confirms that the instructional software had a statistically significant positive effect on students' interest in Marketing Education compared with the lecture method. This implies that the use of the instructional software significantly enhanced students' interest in learning Marketing Education more than what was achieved through the lecture method.

VI. DISCUSSION OF FINDINGS

The findings of the study showed that students taught Marketing Education using instructional software performed better than those taught using the lecture method. The results showed a greater improvement in the achievement of students exposed to instructional software, with a mean gain of 38.72 compared with 19.18 for students taught using the lecture method.

More importantly, the ANCOVA result showed that the difference in achievement between the two groups was statistically significant, $F(1, 88) = 11.532$, $p < .001$. This implies that the instructional software had a statistically significant positive effect on students' academic achievement in Marketing Education compared with the conventional lecture method. The finding agrees with Hudu et al. (2022), who found that students taught Transport System using instructional software achieved higher scores than those taught using the conventional method. The finding also agrees with Ajimotokan et al. (2022), who reported significant differences in students' academic achievement, skill transfer and retention following the use of an interactive instructional package. This suggests that the use of instructional software can support students' understanding and achievement when learning subject content. The findings of this study therefore shows that instructional software can also support academic achievement among Marketing Education students in a College of Education in Abia State. Hence, these findings provides further support for the use of technology-supported instructional approaches in teaching business-related subjects.

The study also found that students taught Marketing Education using instructional software recorded greater improvement in interest than those taught using the lecture method. The instructional software group recorded a mean gain of 0.82, compared with 0.58 for the lecture-method group. The ANCOVA result further showed a statistically significant difference in students' interest between the two groups, $F(1, 85) = 5.021$, $p = .005$, after controlling for their pretest interest scores. This implies that the instructional software had a statistically significant positive effect on students' interest in Marketing Education compared with the lecture method. This implies that the use of the instructional software significantly enhanced students' interest in learning Marketing Education more than what was achieved through the lecture method. This finding agrees with Njoku and Okigbo (2019), who found that students taught Geometry using GeoTAN Instructional Software Package recorded higher interest scores than those taught using the conventional method. Although these studies were conducted in different subject areas, their findings are similar to the present result because they demonstrate that instructional

software can support students' affective engagement with learning. The finding is also in line with Onah et al. (2024), who reported effects of web-based instructional delivery on students' interest and academic achievement. Although their study focused on Visual Basic Programming rather than Marketing Education, the similarity suggests that technology-supported learning environments may provide opportunities for greater learner interaction and engagement. In the present study, this may have been particularly relevant because the instructional software allowed students to interact with Marketing Education content through different forms of presentation and learning activities.

VII. SUMMARY OF FINDINGS

1. Students taught Marketing Education using instructional software recorded greater improvement in academic achievement than those taught using the lecture method. The instructional software group recorded a higher mean gain in achievement, and the difference between the two groups was statistically significant after controlling for their pretest achievement scores.
2. Students taught Marketing Education using instructional software recorded greater improvement in interest than those taught using the lecture method. The difference in students' interest scores was statistically significant after controlling for their pretest interest scores.

VIII. CONCLUSION

The study concludes that instructional software was associated with significantly better academic achievement and greater interest in Marketing Education than the lecture method among the students studied. Students exposed to the software demonstrated greater improvement in both outcomes, while the ANCOVA results confirmed statistically significant differences between the two instructional groups after controlling for their respective pretest scores. The findings therefore suggest that integrating well-designed instructional software into the teaching of Marketing Education can provide a more interactive learning experience and support improved students' learning outcomes in the study setting.

IX. RECOMMENDATIONS

Based on the findings of the study, the following recommendations are made:

1. Lecturers of Marketing Education should integrate instructional software into regular classroom teaching to help students interact more actively with marketing content
2. The management of Abia State College of Education (Technical), Arochukwu should provide adequate computer facilities and other necessary digital resources to enable Marketing Education students to access and use instructional software during teaching and learning.
3. The Department of Business Education should organise practical training for Marketing Education lecturers on the effective use of instructional software. The training should focus on selecting appropriate software, presenting marketing content, managing learner activities, and using software-based exercises and feedback effectively.
4. The College should encourage the development and use of locally relevant instructional software for Marketing Education. Such software should reflect the NCE Marketing Education curriculum and include examples and business situations that are familiar to Nigerian students.
5. The College management should provide reliable electricity and supporting digital infrastructure to ensure that instructional software can be used consistently during Marketing Education lessons.

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