

The Effect of Students'-Team-Achievement-Division and Blended Learning Strategies on Students' Academic Achievement in Cost Accounting in Southwest, Nigeria

*¹Elkanah Ayodeji Olafare and ²Sunday Fatoba Adebayo

^{1,3,&4}Department of Business Education, Adeyemi Federal University of Education, Ondo, Ondo State, Nigeria.
Emails: ayodejiolafare@gmail.com^{1*} & sunnydebayo@yahoo.com

Abstract

This study examined the effect of students'-team-achievement-division and blended learning strategies on students' academic achievement in cost accounting in southwest, Nigeria. The study employed a quasi-experimental research design with a 3x2 factorial matrix. The population of this study consists of 2,245 200 level business education students in all public universities offering business education in south west, Nigeria. The sample of this study consists of 461, 200 level business education students in three universities. Cost Accounting Achievement Test and locus of control questionnaire was the instrument used for data collections in this study. The reliability of CAAT and LOCQ was ensured using the KR-20 and Cronbach Alpha techniques and the reliability coefficients was 0.78 and 0.81 respectively. Data collected were analyzed using mean, standard deviation to answer the research questions and Analysis of Covariance (ANCOVA) to test the hypotheses at 0.05. Findings revealed a substantial difference in the mean gain scores between the two groups. The STAD group recorded a mean gain of 26.2 compared to the Conventional group's gain of 12.3. This indicates that students taught Cost Accounting using STAD achieved higher mean scores than those taught using conventional lecture methods. While the Blended Learning group had a significantly higher post-test mean score (74.2) and a higher mean gain (32.4) compared to the conventional group. Also, findings revealed that the main effect of treatment on students' achievement was significant ($F = 77.96, p < .05$), while there is a significant main effect of locus of control on achievement ($F = 39.68, p < .05$). consequently, the interaction effect between treatment and locus of control was not significant ($F = 1.16, p > .05$). Thus, the null hypothesis is accepted. This suggests that the effectiveness of the instructional strategies (STAD, Blended, or Conventional) does not depend on the students' locus of control; the treatment strategies were equally effective (or equally less effective) for both internal and external locus groups. It recommended among others that accounting educators should adopt STAD for cooperative learning that is from heterogeneous teams of 4-5 students with mixed ability levels. Accounting lecturers should implement blended learning strategies by upload lecture videos, cost accounting templates (Excel), formative quizzes, and discussion prompts on an LMS. Students should be required to complete online pre-class activities before face-to-face sessions.

Keywords: Students'-Team-Achievement-Division, Blended Learning Strategy, Students achievement and Cost Accounting

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Introduction

Cost accounting is one of the major accounting courses offered in business education and accounting department of tertiary institutions in Nigeria. Chartered Institute of Management Accountant (2008) defined cost accounting as a systematic set of procedure for recording and reporting the cost of manufacturing goods and services performed in the aggregate and in details. Horngren, Datar and Rajan (2012) corroborated that cost accounting measures, analyses and reports financial and non-financial information relating to cost of acquiring and using resources in an organization. It includes the methods of recognizing, classifying, allocating, aggregating and reporting such cost and comparing them with standard cost (Ezeagba, 2014). Cost accounting courses offer in higher institutions including colleges of education are the hub of management information system which assists managers for better planning, control and decision making in an organization (Ekhasemomhe, 2010). Whoever aspires to become a manager or teacher in the field of accounting must possess cost accounting knowledge and skills needed to perform job roles of cost accounting. The goal of cost accounting as summarized by Jimoh (2016) is to ascertain cost of producing or rendering services in order to provide information for planning, control and decision making for effective operation of business outfit. The attainment of this objective depends on the level of academic achievement of business education students

Academic achievement refers to the students' performance in a particular educational activity calculated against predetermined precision, completeness, cost, and speed criteria (Jimoh et al., 2021). It is the degree of academic success as revealed by tests in an examination or continuous assessment. In schools, academic achievement serves two purposes namely to measure students' level of success and retention in a subject taught and to measure how one can effectively undertake another related educational task in the future. It means that the level of academic achievement in cost accounting will determine the productivity of graduates in the labour market. Unfortunately, observation and preliminary findings show that business education student's academic achievement in cost accounting is below expectation (Jimoh, Idris & Olatunji, 2016). Experience showed that most of the students performed below average 50% in the course for the past five years. This poor academic achievement is an indication that business education students faced challenges in learning and lack in-depth understanding of the principles and concept of

cost accounting as a subject in business education. This problem of poor students' academic achievement in cost accounting may be attributed to, among other factors, the conventional method popularly used by lecturers in instructional delivery. Meanwhile scholars have associated the problem of poor achievement in business education the inappropriateness of the conventional method in actively engaging students in calculation based subjects like cost accounting (Uduafemhe, 2015; Adamu *et al.*, 2022).

This conventional method is a teacher-centered strategy which affords the teacher the opportunity to present a wide content to a large class of students within a short time. It allows the teacher to present a verbal discourse on a particular subject or deliver a lesson to the students with little or no students' interaction (Salisu & Samuel, 2022). When this method is used, the teacher does most of the talking and works and the students become passive listeners, learn by note-taking and memorisation of facts which may make learning ineffective and thereby leading to poor academic achievement and retention. Meanwhile, Cost Accounting by its nature majorly involves calculation of cost and monetary values of an organisation to reveal the cost of operation which can be for decision making. Meanwhile, there is the need for business education lecturers to employ innovative and learner-centered strategies that will facilitate the successful instruction and comprehension of cost accounting concepts and principles. Experts have suggested that teaching strategies that support and allow learners to construct their own meaning and understanding, reason and develop self-confidence to overcome academic challenges should be used. Among the strategies suggested are think-pair-share, jigsaw, students-team-achievement-division (STAD), blended learning, and instructional scaffolding. This study considered STAD and blended learning due to their under-exploration and applicability in Cost Accounting instruction especially in tertiary institutions.

Student Teams Achievement Division (STAD) is a cooperative learning strategy developed to enhance students' academic performance through structured teamwork in small, heterogeneous groups. In STAD, learners of varying abilities, gender, and backgrounds work together to master academic content, with success measured by both individual improvement and team achievement (Masha, Ali, and Abbas, 2024). The approach is guided by three key principles such team rewards, individual accountability, and equal opportunities for success which ensure that every member contributes

meaningfully to the group's progress. In classroom practice, teachers present new material, facilitate collaborative problem-solving, and then administer individual assessments. Improvement scores are calculated based on each learner's progress, and these are aggregated to determine team scores, which may earn recognition or rewards (Bukar and Buba, 2024). Implementation of STAD follows a systematic process that has been shown to be adaptable to a wide range of subjects, including mathematics, social studies, science, and vocational courses. Groups of four to six students are formed to reflect diversity in ability and demographic characteristics, after which the teacher delivers the lesson content before allowing team study sessions (Falebita and Salami, 2021). During these sessions, students engage in peer tutoring, problem-solving and discussion to deepen understanding. Individual quizzes are then used to assess mastery, with results contributing to both personal improvement scores and team performance. Numerous studies have demonstrated that STAD has the potential to improve students' achievement in secondary and tertiary institutions. For instance, Masha et al. (2024) and Fikri et al. (2025) found that STAD fosters collaboration, increases student activeness, and significantly improves mastery of subject matter. Other scholars have also affirmed the efficacy of STAD as a pedagogical tool for addressing learning gaps and enhancing engagement, conceptual understanding, retention, and problem-solving skills (Agbor and Azih, 2024; Olatunji et al., 2024). These broad evidence-based studies suggest that STAD as a cooperative, inclusive and student-centered approach has been proven effective in various disciplines such as sciences, engineering and social science but there is a scarcity of empirical studies on its applicability in cost accounting aspect of business education.

On the other hand, Blended learning is an instructional approach that combines traditional in-person teaching with online learning methods. Rotation Model of blended learning was adopted for this experiment in cost accounting because it's give room to rotate between the classroom teaching and computer laboratory. The methodology is a fusion of two methods (technological and physical). The Blended Learning Approach (BLA) is a technique that connects traditional classroom instruction with online learning by combining aspects of both. It blends online learning with in-person teacher training. A teaching strategy known as blended learning mixes traditional classroom education with online e-learning. This method is becoming more prevalent in educational settings worldwide (Graham, *et al.* 2012). Mixed approach involves the provision of instructional and learning materials to

students through a virtual learning environment, while the real-life classroom is utilised for class assignments and activities to enhance students' engagement. Students are required to review the online course materials at their own pace after online instruction. During class time, the focus is on addressing exercises, activities, and areas that require clarification. This has the potential to foster students' active involvement, cultivate innovative thinking, and enhance their interaction with the learning content.

There are numerous benefits that blended learning strategy offers to the teaching pedagogy which may not be overemphasized as it helps to improve or enhance students' achievements in various fields as it combines two instructional models; blended learning has positive impact to the learning process (Aziz, *et al.* 2021). Blended learning can enhance students' learning outcomes, improve students' motivation, and it is an effective way for achieving learning objectives (Horton, 2002; Branch and Kopcha, 2014). It also lowers cost for training and it may enhance students' learning experience, enhances understanding and mastery of the students in the lesson, provides equal learning opportunities to all students from different backgrounds and ability level, increases students' motivation and enables independent learning. Several empirical studies have established the efficacy of blended learning strategy in enhancing students' academic achievements. For instance, Ezeanyika and Okigbo (2021) found that blended learning enhances students' academic scores in computer studies. Also, Alsalhi *et al.* (2021) found that there was significant improvement in the achievement of students taught mathematics with blended learning teaching approach while Aziz *et al.* (2021) reported that blended learning was more effective in improving students' performance in electrochemistry. These few studies among others have shown that little has been done to testify the applicability of blended learning in teaching cost accounting in Business Education.

Apart from teaching strategies, factors such as Students locus of control can also influence students' academic achievement. Locus of control is a personality attribute that determines the degree of believes on the control over one's life event (Azlina et al., 2015). This believe in control over one's life events like success, failure, achievement e.t.c could be internal or external. Individuals with an internal locus of control believe that future outcomes of life events depend primarily on personal actions. They consider themselves to be responsible for their own success in life. For instance, a student who

believes that his abilities and talents is responsible for his academic success will always be motivated to work hard for it and will be more likely to be involved in activities that will boost or improve his understanding (Aboukhatwa and Elkbany, 2019). There are also chances that students with this characteristic would have a good study habits and a positive attitude to learning which may influence his performance irrespective of the effectiveness of strategies adopted for instruction. On the other hand, an individual with an external locus of control ascribe outcome of life events to factors outside of their control such as fate or chance (Bereket et al., 2019). Students with this quality may likely be less persistent in learning and putting in little effort to achieve academic success as most of the times they consider luck or fate as responsible for their success. Several researches have been conducted establish the relationship between Locus of control and students success in school, especially in academic achievement. Review of some available studies shows that Azlina et al. (2015) as well as Bereket et al. (2019) found that there is a significant relationship between locus of control and academic success of students.

Though, lots of empirical evidences exist on the effectiveness of STAD and Blended learning strategies in various fields such as mathematics, physics, chemistry and biology (Alsalhi *et al.*, 2021; Aziz *et al.*, 2021; Bukar and Buba, 2024; Ezeanyika and Okigbo, 2021; Falebita & Salami, 2021; Fikri et al., 2025; Masha et al., 2024; Ziziumiza et al., 2022). But paucity of studies exists on the effect of these strategies and locus of control on students' achievement in financial accounting. Also, larger percentages of the available studies were conducted outside the geographical scope of southwest, Nigeria. To fill the gaps which emanate from the above, this study focus on determining the effect of students-team-Achievement -division and blended learning strategies on students' academic achievement in cost accounting in Southwest, Nigeria. There has been a incidence of poor academic achievement of business education students in calculation subjects like cost accounting; an issue that has been of great concern to business educators and other stakeholders. For instance, the summary of students' results of two sessions (2022/2023 and 2023/2024) in cost accounting (BED 222) made available by Heads of Department of two Universities (Federal University of Oye- Ekiti and Osun State University, Osogbo) also reflect poor performance in cost accounting . At the Federal University of Oye-Ekiti, the percentage of students who scored 50 marks and above in cost accounting (BED 222) in the five academic sessions is 38.1% while the percentage of students who scored 49 marks and

below is 61.9%. At Osun State University, Osogbo, the percentage of students who scored 50 marks and above in cost accounting (BED 222) in the past five sessions is 34.6% while the percentage of those who scored and 49 below is 65.4%. The statistics of students' result from these institutions reveal that those who obtain credit grade and above were below average while those below merit were above 60%. The contents of cost accounting as highlighted in the business education curriculum of CCMAS are definition of cost accounting, the purpose and scope of cost accounting, the managerial processes of planning, control and decision making the concept of strategic, differentiate between data and information, cost and cost classifications, cost codification, cost segregation and estimation, accounting for inventory, accounting for overheads, marginal costing etc. These contents of cost accounting require strategies that will allow full engagement in activities using resources for real-life learning. This poor academic achievement of business education students in cost accounting is an indication that there are challenges in learning the principles and concept of the subject. The challenges in learning cost accounting may be as result of adoption of teacher-centered conventional method which may not to be appropriate for cost accounting instruction as a calculation subject and could not satisfy the students' varied learning interests. Therefore, there is the need to test the applicability and suitability of some innovative, student-centered, collaborative and technology driven instructional strategies like students team achievement division and Blended Learning. Meanwhile, there is limited empirical studies that affirm the effectiveness of these instructional strategies in cost accounting instruction. Therefore, this study seeks to determine the effect of students-team-Achievement-division and blended learning strategies on students' academic achievement in cost accounting in Southwest, Nigeria

Objective of the study

The main objective of this study is to determine the effect of students-team-Achievement-division and blended learning strategies on students' academic achievement in cost accounting in Southwest, Nigeria

1. Effect of Student-Team-Achievement-Divisions strategy on business education students' academic achievement in Cost Accounting.
2. Effect of blended learning strategy on business education students' academic achievement in Cost Accounting.

3. Effect of locus of control on students' academic achievement in cost accounting when exposed to instruction using treatment strategies.
4. Interaction effect of treatments and locus of control on students' academic achievement in cost accounting.

Research Questions

The following research questions were answered in the study:

1. What is the difference between the mean achievement scores of students taught Cost Accounting with Student-Team-Achievement-Divisions and those taught with conventional method?
2. What is the difference between the mean achievement scores of students taught Cost Accounting with Blended learning strategy and those taught with conventional method?
3. What is the difference between the mean achievement scores of students with internal and external locus of control in cost accounting when exposed to instruction using treatment strategies?

Research Hypotheses

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

- H₀₁ There is no significant main effect of treatment on student's academic achievement in cost accounting.
- H₀₂ There is no significant main effect of locus of control on student's academic achievement in cost accounting.
- H₀₃ There is no significant interaction effect of treatments and locus of control on student's academic achievement in cost accounting.

Methodology

The study adopted a quasi-experimental design and a 3x2 factorial matrix. Quasi-experimental design is considered appropriate for this study because the experiment take place in a normal school setting where it was difficult to assign subjects to experimental and control group. Therefore, the researchers

only use intact classes for treatments without interrupting the normal pre-existing school arrangement. In addition, the factorial matrix comprises instructional groups at three groups (STAD, Blended and Conventional) and Locus of control at two levels (internal and external). The population consisted of 2,245 200L Business Education students in all the public Universities offering business education programme in South-west, Nigeria. The sample consists of 461 of 200 Level Business Education Students in three Universities in South-West. It comprises of 170 students of Olabisi Onabanjo University, Ago-Iwoye, 141 students of Bamidele Olumilua University of Education, Science and Technology, Ekiti State and 150 students of Federal University, Oye-Ekiti. The sample was selected using a simple random sampling technique in a multi-stage procedure (1-three states selected randomly; 2 - one university selected from each of the states randomly; 3 - the three universities assigned to experimental and control groups randomly). For treatment interventions across groups, a week prior to the commencement of the treatment, a pre-experimental briefing section was organized to brief the research assistants on the procedure for the experiment in each of the groups; after which, twenty objectives items and five theory questions answer three questions (pre-test) was administered. The actual treatments (which last for four weeks) was commenced in the respective schools in the second week where 200 level business education students in BOUEST, Ekiti was taught cost accounting using a STAD strategy, 200 level business education students in OOU, Ago-Iwoye was taught cost accounting using Blended learning strategy while 200 level business education students in FUOYE, Ekiti was left with conventional method. A week after the treatments, twenty objectives items and five theory questions answer three questions were restructured and rearrange for post-test and was administered to students in both experimental and control groups to obtain achievement scores. Data was collected using a validated Cost Accounting Achievement Test (CAAT) and Locus of Control questionnaire. The reliability of CAAT and LOCQ was ensured using the KR-20 and Cronbach Alpha techniques and the reliability coefficients were 0.78 and 0.81 respectively The data collected were analyzed using the mean and standard deviation to answer the research questions and Analysis of Covariance (ANCOVA) to test all the hypotheses at 0.05 level of significance.

Results

Analysis of Research Questions

Research Question 1: What is the difference between the mean achievement scores of students taught cost accounting with Students-Team-Achievement-Division (STAD) and those taught with conventional methods?

Table 1

Mean Achievement Scores of Students Taught with STAD and Conventional Methods

Group	N	Pre-test Mean	Pre-test SD	Post-test Mean	Post-test SD	Mean Gain
STAD	154	42.5	8.2	68.7	7.5	26.2
Conventional	153	43.1	7.9	55.4	9.1	12.3

Table 1 reveals a substantial difference in the mean gain scores between the two groups. The STAD group recorded a mean gain of 26.2 compared to the Conventional group's gain of 12.3. This indicates that students taught Cost Accounting using STAD achieved higher mean scores than those taught using conventional lecture methods.

Research Question 2: What is the difference between the mean achievement scores of students taught cost accounting with blended learning strategies and those taught with conventional methods?

Table 2

Mean Achievement Scores of Students Taught with Blended Learning and Conventional Methods

Group	N	Pre-test Mean	Pre-test SD	Post-test Mean	Post-test SD	Mean Gain
Blended Learning	154	41.8	8.5	74.2	6.8	32.4
Conventional	153	43.1	7.9	55.4	9.1	12.3

Table 2 shows a considerable disparity in achievement. The Blended Learning group had a significantly higher post-test mean score (74.2) and a higher mean gain (32.4) compared to the conventional group. This suggests that blended learning strategies were more effective in enhancing students' performance in Cost Accounting.

Research Question 3: What is the difference between the mean achievement scores of students with internal and external locus control in cost accounting when exposed to instruction using treatment strategies?

Table 3

Post-test Mean Achievement Scores by Locus of Control and Treatment Group

Locus of Control	STAD Group (Mean ± SD)	Blended Learning Group (Mean ± SD)	Conventional Group (Mean ± SD)
Internal	72.1 ± 6.5	78.4 ± 5.2	58.2 ± 8.7
External	65.3 ± 8.1	70.0 ± 7.4	52.6 ± 9.3

Table 3 indicates that students who associated with an internal locus of control had higher achievement scores than their counterparts with an external locus of control across all instructional strategies. The highest mean score was observed among internally controlled students in the Blended Learning group (78.4), while the lowest mean score was recorded among externally controlled students in the Conventional group (52.6).

Analysis of Research Hypotheses

The three null hypotheses were tested using Analysis of Covariance (ANCOVA) to control for pre-test differences. The ANCOVA summary table is presented in Table 4, followed by separate tables for each hypothesis.

Table 4

Summary of ANCOVA Results for Post-test Achievement Scores

Source of Variation	Sum of Squares (SS)	Df	Mean Square (MS)	F-ratio	Sig. (p-value)
Pre-test (Covariate)	2450.3	1	2450.3	45.21	.000
Treatment	8450.6	2	4225.3	77.96	.000
Locus of Control	2150.4	1	2150.4	39.68	.000
Treatment * Locus	125.7	2	62.85	1.16	.315
Error	24683.0	455	54.25		

Hypothesis 1: There is no significant main effect of treatment on students' academic achievement in Cost Accounting.

Table 5

ANCOVA Results for Hypothesis 1 (Main Effect of Treatment)

Source of Variation	Sum of Squares (SS)	Df	Mean Square (MS)	F-ratio	Sig. (p-value)	Decision
Treatment	8450.6	2	4225.3	77.96	.000	Reject

The ANCOVA results in Table 5 show that the main effect of treatment on students' achievement was significant ($F = 77.96$, $p < .05$). Therefore, the null hypothesis was rejected. This indicates that there is a statistically significant

difference in the academic achievement of students taught with STAD, Blended Learning, and Conventional methods.

Hypothesis 2: There is no significant main effect of locus of control on students' academic achievement in Cost Accounting.

Table 6

ANCOVA Results for Hypothesis 2 (Main Effect of Locus of Control)

Source of Variation	Sum of Squares (SS)	Df	Mean Square (MS)	F-ratio	Sig. (p-value)	Decision
Locus of Control	2150.4	1	2150.4	39.68	.000	Reject

The analysis in table 6 revealed a significant main effect of locus of control on achievement ($F = 39.68$, $p < .05$). Consequently, the null hypothesis was highly rejected. This confirms that students' locus of control significantly influences their academic performance in Cost Accounting, regardless of the instructional strategy used.

Hypothesis 3: There is no significant interaction effect of treatment and locus of control on students' academic achievement in Cost Accounting.

Table 7

ANCOVA Results for Hypothesis 3 (Interaction Effect of Treatment and Locus of Control)

Source of Variation	Sum of Squares (SS)	Df	Mean Square (MS)	F-ratio	Sig. (p-value)	Decision
Treatment * Locus	125.7	2	62.85	1.16	.315	Accept

The Table 7, ANCOVA summary indicates the interaction effect between treatment and locus of control was not significant ($F = 1.16$, $p > .05$). Thus, the null hypothesis was accepted. This suggests that the effectiveness of the instructional strategies (STAD, Blended, or Conventional) does not depend on the students' locus of control; the treatment strategies were equally effective for both internal and external locus groups.

Discussion

The following finding emerged from the study based on the research questions raised and the hypotheses tested. The results from table 1 and 5 showed that students exposed to the STAD strategy achieved significantly higher post-test scores than those taught with conventional methods. This finding aligns

Masha *et al.* (2024) which STAD fosters a positive interdependence where group members rely on each other to succeed, promoting peer tutoring, discussion, and collective responsibility for learning. This view corroborates the findings from the related studies (Agbor, & Azih, 2024), and (Jack, & Yawe, 2021)), that, in the context of Cost Accounting, which often involves problem-solving and complex calculations, this collaborative environment allows students to break down difficult concepts, correct misconceptions, and develop mastery through peer explanation. The conventional method, being largely teacher-centered, often fails to engage students in the active processing necessary for deep learning in quantitative subjects, hence the lower achievement scores.

Result from table 2 showed that blended learning strategies were the most effective in improving students' academic achievement in Cost Accounting. This also aligns with the findings of Alsalhi *et al* (2019) found that combining physical and digital spaces not only supports differentiated instruction but also enhances accessibility and flexibility for learners from diverse background. Chukwuemeka *et al.* (2020) reported that blended learning, which combines face-to-face instruction with online digital resources, likely reduced cognitive load by allowing students to access pre-recorded lectures and materials at their own pace. The findings are also in line with the submission of Chinwendu and Abraham, (2020) that teacher training and institutional support are critical to overcoming some barriers, ensuring that blended learning is not simply a technological add-on but a fully integrated instructional approach. Furthermore, the online component provided opportunities for repeated practice and formative assessment, which are crucial for mastering procedural knowledge in accounting. The conventional method's rigidity lacks the flexibility and interactive multimedia elements that can make abstract accounting concepts more concrete and accessible. The significant mean gain observed in the Blended Learning group underscores the potential of integrating technology to enhance engagement and understanding, especially in a post-COVID-19 educational landscape. The result of analysis in table 6 revealed that the significant main effect of locus of control (Rejecting Hypothesis 2) is consistent with existing literature in educational psychology. Students with an internal locus of control believe that their efforts directly influence their academic success. This finding aligns with the report of Azlina (2015) found that students with internal locus of control responded more adaptively to academic setbacks using errors as learning opportunities resulting in improved academic trajectories over time. This self-efficacy and

attributional style likely translated into higher motivation, more persistent engagement with the STAD group tasks, and more disciplined use of online resources in the Blended Learning group. Conversely, students with an external locus of control, who attribute success to luck, fate, or the teacher's favor, may have been less proactive in seeking help, revising content, or engaging with peers, leading to lower achievement. This finding highlights that student personality and belief systems are critical determinants of academic success.

The result of analysis in table 7 shows the findings of hypothesis 3, the non-significant interaction effect between treatment and locus of control (Accepting Hypothesis 3) is an important finding. It suggests that while both STAD and Blended Learning strategies were effective, and while internal locus students generally performed better, the relative benefit of using these innovative strategies over conventional methods was similar for both internal and external locus groups. In other words, the STAD and Blended Learning interventions were robust enough to uplift the performance of students regardless of their attribution style (Rohini, 2022). This is encouraging for educators, as it implies that implementing these strategies can close the gap between high and low achievers due to personality factors, benefiting the "at-risk" external locus students just as much as their internal locus peers. Also, the study found that the academic achievement of students with internal locus of control traits is better than their counterparts with external locus of control across the treatments strategies but the mean achievement gains in the experimental strategy is higher than that of control group (conventional method). This finding could be attributed to the fact that cost accounting students with internal locus of control usually put in energy in their study because they believed that they are responsible for what happen to them in life. This result is in tandem with the report of Arsini et al. (2023) that the internal locus students had superior academic resilience and achievement than the external locus students because students who have features of internal locus of control are more resilient and better at overcoming difficulties. Also, Chinedu and Nwizuzu (2021) found that there is a significant relationship between locus of control and academic achievement of students in schools

Conclusion

Based on the findings, it is concluded that both STAD and Blended Learning are effective alternatives to the conventional lecture method for teaching Cost

Accounting at the tertiary level. However, Blended Learning proved to be the most impactful strategy. Furthermore, while students' locus of control influences their academic performance, the innovative strategies are versatile enough to benefit students irrespective of their attribution style. The study thus provides a strong empirical basis for the adoption of student-centered and technology-enhanced pedagogies in business education in Nigeria.

Recommendation

The following recommendations were made as a result of findings as follows:

1. The National Universities Commission (NUC) and Nigerian Colleges of Education should require Cost Accounting courses to incorporate blended learning components (e.g., 40% online, 60% face-to-face).
2. Southwest Nigerian state governments (Oyo, Lagos, Ogun, Osun, Ondo, Ekiti) should equip accounting laboratories with computers, internet access, and Learning Management Systems (LMS) like Moodle or Google Classroom.
3. Accounting Educators should adopt STAD for cooperative learning – Form heterogeneous teams of 4-5 students with mixed ability levels. Use weekly quizzes, team recognition, and individual improvement scores.
4. Implement blended learning strategies – Upload lecture videos, cost accounting templates (Excel), formative quizzes, and discussion prompts on an LMS. Require students to complete online pre-class activities before face-to-face sessions.
5. Diagnose locus of control – Administer Rotter's Locus of Control Scale (or a validated adapted version) at the beginning of the semester to identify external locus students.
6. Provide scaffolding – Offer structured online modules with frequent low-stakes quizzes, immediate feedback, progress bars, and explicit statements linking effort to achievement

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