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Technology-based learning approach and the moderating influence of class size on the Basic Science performance of students

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Abstract
This study investigates technology-based learning approaches and the moderating influence of class size on the Basic Science performance of junior secondary school students in Etche Local Government Area, Rivers State. A total of 100 JSS 2 students participated in the study. Simple random sampling by balloting to select two UBE schools in Etche and a second round of simple random sampling was carried out to select 100 students from the two schools that partook in the study. There were two classes. One class comprises students in a small class (30 students) while the second class comprises students in a large class (70). The instruments used by the researchers were a well-structured Basic Science Achievement Test (BSAT) and a Student Motivation Questionnaire (SMQ). The instruments underwent content and face validation. Using the Kuder-Richardson (K-R20) method, the BSAT yielded a reliability coefficient of 0.88 whereas with Cronbach Alpha the SMQ yielded an index of 0.77. Both groups received instruction on concepts in Basic Science using mobile technology. Descriptive and inferential statistics, including ANCOVA, were employed for analysis. Results indicate that smaller class sizes significantly enhance student performance, although no significant difference was found between male and female students. While smaller class sizes exhibited slightly higher motivation levels, the difference was not statistically significant. Teachers should actively encourage participation from all students, regardless of the class size and gender, to foster an inclusive learning atmosphere.

Keywords: Technology-based learning, Digital Pedagogy, Classroom Technology Integration, Basic Science

Introduction

In the dynamic landscape of modern education, the integration of technology has revolutionized traditional learning paradigms, offering innovative avenues for knowledge acquisition and skill development. One prominent facet of this educational transformation is the adoption of technology-based learning approaches, which leverage digital tools and resources to enhance teaching and learning experiences. Amidst this evolution, understanding the intricate dynamics that shape the effectiveness of such approaches is crucial for optimizing educational outcomes. One significant moderating factor that warrants exploration is the influence of class size on students' performance, particularly in the realm of Basic Science education. As educational institutions strive to meet the diverse needs of learners, class size emerges as a pivotal variable that can significantly impact the efficacy of technology-based learning interventions. The interaction between technology and class size introduces nuanced complexities, as both factors independently influence student engagement, interaction, and learning outcomes. While technology offers opportunities for personalized learning experiences and facilitates access to vast repositories of information, the extent to which these benefits manifest may vary depending on the size of the learning cohort. The exploration of the moderating influence of class size on the Basic Science performance of students within the context of technology-based learning is multifaceted. It requires a comprehensive examination of various factors, including pedagogical strategies, instructional design, and socio-cultural dynamics inherent within different class sizes. Moreover, considering the diverse learning preferences and cognitive abilities among students, the interplay between technology and class size necessitates tailored approaches that accommodate individualized learning trajectories while fostering collaborative learning environments.

As the student population in schools rises, there is a corresponding increase in classroom sizes, raising concerns about the academic performance of students. It is imperative for collective global efforts to devise policies aimed at

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improving the quality of education from primary to tertiary levels. Additionally, there should be consistent and effective monitoring mechanisms in place to address various factors that could impede the global pursuit of enhanced education. As a result, communities frequently require youngsters to participate in educational institutions for a set duration or until they attain a particular age. The advantages of education manifest, in part, as students acquire new knowledge and skills, ultimately enhancing their abilities in communication, problem-solving, and decision-making.

The academic success of students, particularly at the JSS level, serves as a crucial indicator not only for assessing the effectiveness of schools but also as a significant determinant of the prospects of young individuals and the overall trajectory of the nation. The pathway to achieving both individual and national educational goals lies in the realm of learning. Consequently, there is a growing interest in understanding learning outcomes, prompting scholars to diligently investigate the factors that hinder optimal academic performance (Aremu & Sokan, 2013). This notion is commonly recognized in literary works as educational success or academic performance. The advancement in students' scholarly pursuits has garnered significant attention from academics, parents, decision-makers, and strategists alike. In the global effort to establish a robust education system, various factors have been implicated in contributing to the perceived decline in the standard of education. A subject currently under examination is the matter of "class size." As stated by Adeyemi (2018), class size denotes the average student count in a school classroom. The impact of classroom size on the diminishing educational standards, particularly at the basic or secondary level in Nigeria, has sparked considerable debate. While some argue that it plays a pivotal role, others perceive it as a mere coincidence, attributing the decline to other factors.

Few studies have delved into the impact of class size on outcomes in secondary schools. The educational landscape in secondary schools significantly differs from that of basic school settings. However, the traditional belief in the advantages of smaller class sizes remains entrenched in postsecondary education. Surprisingly, this persistent perception is evident in the U.S. News & World Report college rankings formula, where class size contributes to two out of fifteen inputs. This inclusion persists despite the absence of compelling evidence demonstrating a significant impact of class size on student outcomes. The size of a class is a significant factor when it comes to students' academic performance. Researchers and educational experts widely concur that there's a tendency for students' academic performance to decline with an increase in class size. The impact of class size on cognitive achievement remains a topic of continual scrutiny and exploration, with no definitive conclusions drawn thus far. Class size, denoting the average student count in a school class, is a term central to ongoing discussions about its significance in the teaching and learning dynamic. Emphasizing the importance of class size, the All Nigerian Conference of Principals of Secondary Schools (ANCOPSS) has recommended a maximum of forty students per class to ensure efficient and effective teaching. However, it has been observed by the researchers that most JSS in Etche L.G.A of Rivers State, Nigeria have more than forty students per class and this may have some implications on class interaction and student's academic performance. This study will, therefore, examine the impact of classroom size on students, performance in some selected JSS in Etche LGA, Rivers State.

Educators have long grappled with the complex connection between class size and performance. While numerous scholars have put forth various factors to explain students' subpar performance, limited research has been specifically devoted to exploring the link between class size and performance. This study aims to investigate this relationship by focusing on selected secondary schools in Etche L.G.A, Rivers State. Four null hypotheses were formulated and analyzed using a simple percentage statistical approach. The results revealed that an increased class size hurts students' academic performance. In light of these findings, the study suggests the implementation of a national policy addressing the teacher-student ratio. Furthermore, there is a recommendation for the recruitment of more qualified teachers, the construction of additional classrooms equipped with updated facilities, and a concerted effort to enhance the utilization of ICT to expedite the teaching and learning process.

Research indicates that students' achievement is influenced by various variables, including the physical classroom environment, overcrowding, and teaching methodologies (Molnar et al., 2000). Additionally, school population and class size are identified as factors that impact student achievement. The matter of poor academic performance among students in Nigeria is a matter of widespread concern. This issue has contributed significantly to the deterioration of the education standards in the country. Given that the academic success of students is closely tied to the school environment, it becomes crucial to investigate the influence of variables such as class size and school population on students' performances in secondary schools. The presence of large class sizes and overpopulated schools directly impacts the quality of teaching and instructional delivery. Overcrowded classrooms not only escalate the risk of

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widespread academic failure but also diminish students' interest in their studies. The challenge with large class sizes lies in the limited attention individual students receive from teachers, resulting in lower reading scores, increased frustration, and ultimately, subpar academic performance. To gain a comprehensive understanding of students' skill levels, it becomes essential to assess various factors, including school structure, organization, teacher quality, curriculum, and teaching philosophies. The concept that both school population and class size can impact student achievement aligns with the expanding body of literature exploring the connection between public sector arrangements and outcomes.

Statement of the Problem

Education serves various purposes, with higher levels of schooling linked to increased earnings, economic mobility, improved health, lower mortality rates, and greater performance in leadership roles within local and global communities. In the global effort to establish a robust education system, several factors have been implicated in contributing to the perceived decline in the standard of education. One such factor is the issue of class size. Fabunmi et al. (2007) highlighted that secondary schools in Nigeria commonly face challenges such as class size congestion and low utilization rates of classrooms. They adversely affect the productivity of secondary school teachers, the input of student learning, and consequently, the academic performance of secondary school students. Specifically, low scholastic achievement in schools can tarnish the school's reputation, as academic success is closely tied to the perceived quality of the institution. The distressing prevalence of failure in our secondary schools is a matter of significant concern. Considering the aforementioned aspects, the research centres on examining the link between class size and the academic performance of secondary school students in Nigeria.

Aim and Objective of the Study

The study aims to investigate the technology-based learning approach and the moderating influence of class size on the Basic Science performance of students. Specifically, the study seeks to:

1. Determine the difference in the performance of students in small class sizes and those in large class sizes taught Basic Science using a technology-based learning approach in junior secondary schools in Etche Local Government Area, Rivers State.
2. Examine the difference in the performance of male and female students taught Basic Science using a technology-based learning approach in junior secondary schools in Etche Local Government Area, Rivers State.
3. Ascertain the difference in the motivation of students in small class sizes and those in large class sizes taught Basic Science using a technology-based learning approach in junior secondary schools in Etche Local Government Area, Rivers State.

Research Questions

The following research questions guided the study:

1. What is the difference in the performance of students in small class sizes and those in large class sizes taught Basic Science using a technology-based learning approach in junior secondary schools in Etche Local Government Area, Rivers State?
2. What is the difference in the performance of male and female students taught Basic Science using a technology-based learning approach in junior secondary schools in Etche Local Government Area, Rivers State?
3. What is the difference in the motivation of students in small class sizes and those in large class sizes taught Basic Science using a technology-based learning approach in junior secondary schools in Etche Local Government Area, Rivers State?

Hypotheses

This study was guided by the following null hypotheses at a 0.05 level of significance:

1. **Ho_1:** There is no significant difference in the performance of students in small class sizes and those in large class sizes taught Basic Science using a technology-based learning approach in junior secondary schools in Etche Local Government Area, Rivers State.
2. **Ho_2:** There is no significant in the performance of male and female students taught Basic Science using a technology-based learning approach in junior secondary schools in Etche Local Government Area, Rivers State.

3. **Ho_3:** There is no significant difference in the motivation of students in small class sizes and those in large class sizes who taught Basic Science using a technology-based learning approach in junior secondary schools in Etche Local Government Area, Rivers State.

Methodology

This study adopted the quasi-experimental design. A total of 100 students participated in the study. Simple random sampling by balloting to select two UBE schools in Etche and a second round of simple random sampling was carried out to select 100 JSS 2 students from the two schools that partook in the study. There were two classes. One class comprises students in a small class (30 students) while the second class comprises students in a large class(70). The instruments used by the researchers were a well-structured Basic Science Achievement Test (BSAT) and a Student Motivation Questionnaire (SMQ). The instruments underwent content and face validation. Using the Kuder-Richardson (K-R20) method, the BSAT yielded a reliability coefficient of 0.88 whereas with Cronbach Alpha the SMQ yielded an index of 0.77. Both groups received instruction on concepts in Basic Science using mobile technology. The researchers gathered data from the participants following the distribution of the instruments before and after treatment. The data collected were analyzed with both descriptive and inferential statistics. Specifically, Mean and Standard Deviation were used to answer the research questions whereas the Analysis of Covariance (ANCOVA) was used to test the null hypotheses at a .05 level of significance.

Results

Research question 1: What is the difference in the performance of students in small class sizes and those in large class sizes taught Basic Science using a technology-based learning approach in junior secondary schools in Etche Local Government Area, Rivers State?

Table 1: Summary of descriptive statistics on the difference in the performance of students in small class sizes and those in large class sizes taught Basic Science using a technology-based learning approach in junior secondary schools in Etche Local Government Area, Rivers State.

		Pretest		Posttest		Gain	
Class Size	**N**	**Mean**	**SD**	**Mean**	**SD**	**Mean**	**SD**
Small Class Size	30	59.80	6.31	81.90	8.96	22.10	10.20
Large Class Size	70	63.36	9.06	69.21	12.30	5.86	8.50

The result from Table 1 shows the summary of descriptive statistics on the difference in the performance of students in small class sizes and those in large class sizes taught Basic Science using a technology-based learning approach in junior secondary schools in Etche Local Government Area, Rivers State. The result further shows that the pretest mean scores of students in small class size taught Basic Science using a technology-based learning approach was 59.80, SD=6.31 whereas their posttest mean scores were 81.90, SD=8.96, and then their mean learning gain was 22.10, SD=10.20. The result also shows that the pretest mean scores of students in large class size taught Basic Science using a technology-based learning approach was 63.36, SD=9.09, whereas their posttest mean scores were 69.21, SD=12.30 and their mean learning gain was 5.86, SD=8.50. The result indicates that the students in a small class size taught Basic Science using a technology-based learning approach performed and gained more than their counterparts in a large class size taught Basic Science using a technology-based learning approach.

Research question 2: What is the difference in the performance of male and female students taught Basic Science using a technology-based learning approach in junior secondary schools in Etche Local Government Area, Rivers State?

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Table 2: Summary of descriptive statistics on the difference in the performance of male and female students taught Basic Science using a technology-based learning approach in junior secondary schools in Etche Local Government Area, Rivers State.

		Pretest		Posttest		Performance	
Gender	**N**	**Mean**	**SD**	**Mean**	**SD**	**Mean**	**SD**
Male	13	61.54	14.66	76.31	12.08	14.77	10.79
Female	17	63.53	17.60	81.76	14.83	18.24	12.51

The result from Table 2 shows the summary of descriptive statistics on the difference in the performance of male and female students taught Basic Science using a technology-based learning approach in junior secondary schools in Etche Local Government Area, Rivers State. The result further shows that the pretest mean scores of the male students taught Basic Science using a technology-based learning approach was 61.54, SD=14.66 whereas their posttest mean scores were 76.31, SD=12.08 and their mean learning performance was gained 14.77, SD=10.79. The result also shows that the pretest mean scores of the female students taught Basic Science using a technology-based learning approach was 63.53, SD=17.60 whereas their posttest mean score was 81.76, and then their mean learning performance was 18.24. SD=12.51. This indicates that the female students taught Basic Science using a technology-based learning approach performed better than their male counterparts who were taught Basic Science using a technology-based learning approach.

Research question 3: What is the difference in the motivation of students in small class sizes and those in large class sizes taught Basic Science using a technology-based learning approach in junior secondary schools in Etche Local Government Area, Rivers State?

Table 3 Summary of descriptive statistics on the difference in the motivation of students in small class sizes and those in large class sizes taught Basic Science using technology-based learning approach in junior secondary schools in Etche Local Government Area, Rivers State.

		Pretest		Posttest		Motivation	
Class Size	**N**	**Mean**	**SD**	**Mean**	**SD**	**Mean**	**SD**
Small Class Size	30	25.00	5.23	58.33	11.62	33.33	10.78
Large Class Size	70	25.51	5.76	57.64	11.88	32.13	10.75

The result from Table 3 above shows the summary of descriptive statistics on the difference in the motivation of students in small class sizes and those in large class sizes taught Basic Science using a technology-based learning approach in junior secondary schools in Etche Local Government Area, Rivers State. The result further shows that the pretest mean scores of the students in small class size taught Basic Science using a technology-based learning approach was 25.00, SD=5.23, whereas their posttest mean scores were 58.33, SD=11.62, and then their mean motivation was 33.33, SD=10.78. The result also shows that the pretest mean scores of students in large class size taught Basic Science using a technology-based learning approach was 25.51, SD=5.76, whereas their posttest mean scores were 57.64, SD=11.88, and then their mean learning motivation was 32.13, SD=10.75. The result indicates that the students in small class sizes taught Basic Science using a technology-based learning approach have a higher motivation than their counterparts who were in large class sizes taught Basic Science using a technology-based learning approach.

Ho_1: There is no significant difference in the performance of students in small class sizes and those in large class sizes taught Basic Science using a technology-based learning approach in junior secondary schools in Etche Local Government Area, Rivers State.

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Table 4. Summary of Analysis of Covariance (ANCOVA) on the difference in the performance of students in small class sizes and those in large class sizes taught Basic Science using technology-based learning approach in junior secondary schools in Etche Local Government Area, Rivers State.

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Corrected Model	8298.548[a]	2	4149.274	51.262	.000
Intercept	949.450	1	949.450	11.730	.001
Class Size	4987.246	1	4987.246	61.615	.000
Pretest	4919.074	1	4919.074	60.773	.000
Error	7851.412	97	80.942		
Total	549342.000	100			
Corrected Total	16149.960	99			

a. R Squared = .514 (Adjusted R Squared = .504)

The result from Table 4 above shows the summary of the Analysis of Covariance (ANCOVA) on the difference in the performance of students in small class sizes and those in large class sizes taught Basic Science using a technology-based learning approach in junior secondary schools in Etche Local Government Area, Rivers State. The result further shows that there is a significant difference in the performance of students in small class sizes and those in large class sizes taught Basic Science using a technology-based learning approach in junior secondary schools in Etche Local Government Area, Rivers State (F1, 97=61.615, p-value=.000). The null hypothesis one was rejected at .05 level of significance.

Ho_2: There is no significant difference in the performance of male and female students taught Basic Science using a technology-based learning approach in junior secondary schools in Etche Local Government Area, Rivers State.

Table 5: Summary of Analysis of Covariance (ANCOVA) on the difference in the performance of male and female students taught Basic Science using a technology-based learning approach in junior secondary schools in Etche Local Government Area, Rivers State.

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	845.675[a]	2	422.837	3.718	.037
Intercept	1940.731	1	1940.731	17.063	.000
Gender	278.882	1	278.882	2.452	.129
Pretest	301.180	1	301.180	2.648	.115
Error	3070.992	27	113.740		
Total	106000.000	30			
Corrected Total	3916.667	29			

a. R Squared = .216 (Adjusted R Squared = .158)

The result from Table 5 above shows the summary of the Analysis of Covariance (ANCOVA) on the difference in the performance of male and female students taught Basic Science using a technology-based learning approach in junior secondary schools in Etche Local Government Area, Rivers State. The result further shows that There is no significant difference in the performance of male and female students taught Basic Science using a technology-based learning approach in junior secondary schools in Etche Local Government Area, Rivers State (F2, 27=2.452, p-value=.129). The null hypothesis two was retained at a .05 level of significance.

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H_{O3}: There is no significant difference in the motivation of students in small class sizes and those in large class sizes who taught Basic Science using a technology-based learning approach in junior secondary schools in Etche Local Government Area, Rivers State.

Table 6: Summary of Analysis of Covariance (ANCOVA) on the difference in the motivation of students in small class sizes and those in large class sizes taught Basic Science using a technology-based learning approach in junior secondary schools in Etche Local Government Area, Rivers State.

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	2368.281[a]	2	1184.140	10.170	.000
Intercept	5878.711	1	5878.711	50.488	.000
Class Size	27.268	1	27.268	.234	.630
Pretest	2358.269	1	2358.269	20.253	.000
Error	11294.469	97	116.438		
Total	348325.000	100			
Corrected Total	13662.750	99			

a. R Squared = .173 (Adjusted R Squared = .156)

The result from Table 6 above shows the summary of the Analysis of Covariance (ANCOVA) on the difference in the motivation of students in small class sizes and those in large class sizes taught Basic Science using a technology-based learning approach in junior secondary schools in Etche Local Government Area, Rivers State. The further shows that there is no significant difference in the motivation of students in small class sizes and those in large class sizes taught Basic Science using technology-based learning approach in junior secondary schools in Etche Local Government Area, Rivers State ($F_{3, 97}$=.234, p-value=.630). The null hypothesis three was retained at a .05 level of significance.

Discussion

The study investigated the impact of class size on student performance in Basic Science when taught using a technology-based learning approach in junior secondary schools in Etche Local Government Area, Rivers State. The findings, as presented in Table 1, provided a summary of descriptive statistics comparing the performance of students in small class sizes versus those in large class sizes. In small class sizes, students exhibited a significant improvement in performance from pretest to posttest. Specifically, the pretest mean score was 59.80 with a standard deviation of 6.31, while the posttest mean score increased to 81.90 with a standard deviation of 8.96. This resulted in a mean learning gain of 22.10, with a standard deviation of 10.20. Conversely, students in large class sizes showed a less pronounced improvement. The pretest mean score was 63.36 with a standard deviation of 9.09, and the posttest mean score increased slightly to 69.21 with a standard deviation of 12.30. The mean learning gain for this group was 5.86, with a standard deviation of 8.50. The comparison between the two groups indicates that students in small class sizes outperformed those in large class sizes when taught Basic Science using a technology-based learning approach. This suggests that smaller class sizes may facilitate more effective learning outcomes in this context. Furthermore, the results of the Analysis of Covariance (ANCOVA) presented in Table 4 confirmed a significant difference in the performance of students between small and large class sizes ($F_{1, 97}$=61.615, p-value=.000), thereby rejecting the null hypothesis. This finding underscores the importance of class size in influencing student achievement, particularly when integrating technology-based learning approaches. Overall, these findings emphasize the potential benefits of smaller class sizes, especially in the context of technology-enhanced learning environments, for enhancing student performance in Basic Science. This result is consistent with the findings of Yusuf et al. (2016), who discovered that there was a significant difference between the achievement scores of students taught in small and large classes. This difference can be attributed to the higher mean achievement of the small-class students, indicating a detrimental impact of large classes on student achievement. The finding is also in agreement with the finding of Abba et al. (2017) who discovered that the students taught in the large class and the small class differ significantly.

The study delved into examining the performance disparity between male and female students when taught Basic Science using a technology-based learning approach in junior secondary schools in Etche Local Government Area, Rivers State. The findings, detailed in Table 2, provided a descriptive analysis of the performance metrics for both male and female students. For male students, the pretest mean score was 61.54 with a standard deviation of 14.66,

while the posttest mean score increased to 76.31 with a standard deviation of 12.08. This resulted in a mean learning performance of 14.77, with a standard deviation of 10.79. Conversely, female students exhibited slightly higher performance metrics, with a pretest mean score of 63.53 and a standard deviation of 17.60. Their posttest mean score rose to 81.76, resulting in a mean learning performance of 18.24, with a standard deviation of 12.51. The comparison between male and female students suggests that female students performed marginally better than their male counterparts when taught Basic Science using a technology-based learning approach. However, the results of the Analysis of Covariance (ANCOVA) presented in Table 5 revealed that there was no significant difference in the performance between male and female students (F2, 27=2.452, p-value=.129), thereby retaining the null hypothesis. This indicates that despite the observed slight performance variation in favour of female students, this difference was not statistically significant at the .05 level of significance. Conversely, the results also contradict those of Abba et al. (2017) who discovered that the male and female Basic Science and Technology students in the small class do not differ significantly.

The study investigated the motivation levels of students in small and large class sizes when taught Basic Science using a technology-based learning approach in junior secondary schools in Etche Local Government Area, Rivers State. Table 3 presented descriptive statistics outlining the motivation scores for both groups. For students in small class sizes, the pretest mean motivation score was 25.00 with a standard deviation of 5.23, while the posttest mean motivation score increased to 58.33 with a standard deviation of 11.62. This resulted in a mean motivation of 33.33, with a standard deviation of 10.78. Similarly, students in large class sizes exhibited comparable motivation levels, with a pretest mean score of 25.51 and a standard deviation of 5.76. Their posttest mean motivation score increased to 57.64, with a standard deviation of 11.88, resulting in a mean motivation of 32.13, with a standard deviation of 10.75. The comparison between small and large class sizes suggests that students in small class sizes displayed slightly higher motivation levels than their counterparts in large class sizes when taught Basic Science using technology-based learning approaches. However, the results of the Analysis of Covariance (ANCOVA) presented in Table 4.6 indicated that there was no significant difference in motivation levels between students in small and large class sizes (F3, 97=.234, p-value=.630), thereby retaining the null hypothesis. This suggests that despite the observed variation in motivation levels, this difference was not statistically significant at the .05 level of significance. In summary, while students in small class sizes may have displayed slightly higher motivation levels compared to those in large class sizes, this discrepancy did not reach statistical significance in the context of this study. The study is in agreement with the findings of Dee and Schiller (2009) They found no significant differences in student motivation based on class size.

Conclusion

This study sheds light on the intricate dynamics of class size, gender, and motivation in the context of technology-based learning approaches in Basic Science education in junior secondary schools. The findings indicate that smaller class sizes significantly enhance student performance, as evidenced by a substantial learning gain compared to larger class sizes. Despite a marginal performance advantage for female students, the statistical analysis did not confirm a significant difference between male and female students' performance. Moreover, while students in smaller class sizes displayed slightly higher motivation levels, this disparity was not statistically significant. These results underscore the importance of class size in influencing student achievement, emphasizing the potential benefits of smaller class sizes, particularly in technology-enhanced learning environments, for improving student performance in Basic Science.

Recommendations

Based on the findings of the study, it was recommended that:

Schools and policymakers should consider strategies to reduce class sizes, particularly in subjects like Basic Science where technology-based learning approaches are utilized. Smaller class sizes appear to facilitate more significant learning gains, as evidenced by the higher mean learning performance observed in small class settings.

1. Teachers should actively encourage participation from all students, regardless of class size and gender, to foster an inclusive learning atmosphere.
2. Teachers should prioritize student-centred instructional practices that promote active engagement and autonomy in learning.

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