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Gender Differences on the Effects of Learning Environments on Academic Performance Among Tertiary Students

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ABSTRACT

This study investigates the gender difference in academic performance in Colleges of Education in the Central Region of Ghana. It examines whether male and female students perform differently in two key areas: integrated science and assessment courses. Data were collected from 290 tertiary students across three colleges of education, namely Ola, Komenda, and Fosu, using a questionnaire. The results revealed no statistically significant gender differences in the student's academic performance. Both male and female students achieved similar mean scores across the two courses. Despite minor variations, the effectiveness of gender-sensitive educational interventions in promoting equity was observed in assessment courses. Continuing inclusive teaching practices and curricula is recommended to maintain progress toward gender equity in education.

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INTRODUCTION

The relationship between students' learning environments and academic performance is a pivotal aspect of educational research. Learning environments encompass the physical, social, and psychological elements that collectively shape the educational experience, influencing the type of instruction delivered and the level of student engagement and academic outcomes (Bates, 2014). These environments are critical as they facilitate the development of essential skills, allowing students to realize their potential and prepare for future goals (Ryan, 2015). However, while the general impacts of learning environments on performance are well-documented, the interplay of these environments with gender differences remains underexplored.

Gender is a significant factor that can influence academic performance, with empirical studies suggesting that male and female students may respond differently to specific course contents and learning environments (El Haddioui & Khaldi, 2017; Shamaki, 2015). For instance, a study in Nepal highlighted that female students outperformed their male counterparts within a positive school environment, pointing towards a gendered response to educational settings (Parajuli & Thapa, 2017). Additionally, research in Ghana indicates that gender differences in performance may be linked to disparities in educational investments, particularly in science courses (Burkam et al., 1997). These findings suggest that gender affects learning outcomes and may interact with the learning environment in complex ways that are not yet fully understood.

Furthermore, while existing research provides insights into the effects of learning environments on academic achievement, it often overlooks the specific interactions between these environments and gender. For example, studies have typically concentrated on individual attributes or educator qualities without sufficiently examining their interplay with broader environmental factors (Amponsah et al., 2018; Costa & Costa, 2016). This gap is particularly notable in Ghana, where tangible and intangible variables, including the quality of the learning environment, significantly impact educational outcomes. The fact that students in Ghana, regardless of the quality of their learning conditions, are expected to achieve the same academic standards raises critical questions about equity and the efficacy of educational policies (Ajayi, 2001; Duruji et al., 2014). While the general importance of learning environments on academic performance is well recognized, significant research gaps remain in understanding how these environments interact with gender differences to affect educational outcomes. Addressing these gaps is crucial for developing targeted educational strategies that can accommodate the diverse needs of students and ensure equitable academic success. This study aims to fill these gaps by exploring how gender differences interact with learning environments in Ghana's Colleges of Education, focusing on the implications for policy and practice in a diverse educational landscape.

Aim of the study

This study examines the influence of learning environments on student performance at Ola, Komenda, and Fosu College of Education in Ghana. It aims to investigate statistically significant gender differences in performance within the learning environment in colleges of education in the Central Region of Ghana.

Hypothesis

H_0: There is no statistical gender difference in students' performance in assessment and integrated science courses among tertiary students.

H_1: There is a statistical gender difference in students' performance in assessment and integrated science courses among tertiary students.

THEORETICAL FOUNDATIONS OF THE STUDY

The theoretical underpinning of this study is deeply rooted in David Kolb's Experiential Learning Theory (ELT), which provides a vital lens for examining the interplay between learning environments and gender differences in academic performance. According to Kolb (1984), learning is a dynamic process that evolves through a four-stage cycle: concrete experience, reflective observation, abstract conceptualization, and active experimentation. This model emphasizes that effective learning stems from actively engaging with the material, reflecting on these experiences, theorizing, and then applying these theories to solve problems and explore new ideas. In the context of this study, Kolb's theory is particularly relevant as it allows for an exploration of how different learning styles influenced by gender can affect educational outcomes. Research indicates that learning preferences might vary significantly between genders, with men often excelling in more dynamic and experimental environments, whereas women may derive greater benefit from reflective and collaborative learning settings (Cen et al., 2014; Takeda & Homberg, 2014). This distinction is crucial for designing educational practices that cater to the diverse needs of male and female students, potentially enhancing their academic engagement and performance.

Furthermore, the application of Kolb's ELT in this study is not merely theoretical but serves as a foundation for empirical inquiry into how educational strategies can be optimized for different genders. Previous studies have employed Kolb's framework to explore variations in learning styles across disciplines and genders, revealing mixed results. For instance, while Ariz Naqvi and Naqvi (2016) reported no significant differences in learning styles between genders among management students, they did observe variations in academic performance by discipline. Similarly, Brew (2002) found that Kolb's Learning Style Inventory was sensitive to gender differences, fitting well with his theory for females but less so for males. This suggests that gender may influence how students engage with Kolb's learning cycle, which could affect their academic achievements (Jones et al., 2003; El Haddioui & Khaldi, 2017). By emphasizing these aspects of Kolb's theory, the study aims to examine how gender-specific learning preferences impact students' academic experiences and outcomes. This focus on tailored learning approaches based on experiential learning theory could provide critical insights into improving educational practices and policies, making them more inclusive and effective across different student demographics.

METHODOLOGY

This study employed an ex post facto research design, characterized by examining events that have already occurred without any manipulation by the researcher (Salkind, 2010). This design was specifically chosen for its suitability in exploring naturally occurring variables within educational settings. The focus was on comparing students' academic performance, which is treated as the dependent variable, within different learning environments, which inherently possess varied educational qualities. These environments are represented by the colleges of education in the Central Region of Ghana, including Ola College of Education, Komenda College of Education, and Fosu College of Education, which collectively enroll 1,151 students. The research was grounded in the quantitative approach as part of the positivist paradigm. This approach was deemed appropriate due to the descriptive nature of the study and the reliance on structured data collection methods, specifically through questionnaires. The Learning Environment Inventory (LEI), a close-ended instrument developed and validated through expert review, was utilized to gather data. It included items designed to measure student performance in two academic courses—Assessment Course and Integrated Science Course—each evaluated through 30 multiple-choice questions to capture a range of competencies expected within these disciplines.

For sample selection, the Krejcie and Morgan (1970) table was employed to determine an appropriate sample size of 290 students based on a 95% confidence level. This sample was stratified proportionally across the three colleges to ensure representativeness, employing proportionate-stratified sampling to accurately reflect the composition of the overall student population (Shahrokh & Dougherty, 2014). Further stratification was applied to categorize students by gender, facilitating a more nuanced analysis of performance differentials between male and female students. Systematic sampling was subsequently used within these strata, with students being selected based on a predetermined pattern in their seating arrangements. A random starting point was chosen for each class, and the selection process was conducted circularly to maintain randomness and fairness in participant selection. The analysis of the collected data was performed using the Statistical Package for the Social Sciences (SPSS) version 26. Descriptive statistics, including means and standard deviations, were computed to identify trends and variations in student performance across the assessed courses. A multivariate analysis of variance (MANOVA) was then conducted to test for gender-based differences in the mean scores for the courses studied. The results of this analysis, which were reported through measures such as Wilks' Lambda and Pillai's Trace, guided the decision-making process regarding the statistical significance of observed differences.

Ethical considerations were meticulously addressed throughout the research process to ensure adherence to ethical standards and enhance transparency. Prior to the commencement of data collection, ethical approval was obtained from the University of Cape Coast institutional review board, which rigorously assessed the study's adherence to ethical guidelines. Informed consent was secured from all participants through a detailed consent form that explained the study's purpose, the procedures involved, participants' rights, and the confidentiality measures in place. This form was distributed and explained to participants before they provided their written consent. All collected data were anonymized with unique identifiers replacing any personal information to maintain the participants' anonymity. Additionally, strategies were implemented to address potential ethical issues, such as offering participants the right to withdraw from the study without penalty and ensuring that all data were stored securely to prevent unauthorized access. These measures collectively safeguarded the participants' rights and privacy and upheld the integrity of the research process.

Table 1

Distribution of Sample

	Population	Male	Female	Total	Percentage
OLACOE	300	-	50	50	17.24
KOMENCOE	345	63	34	97	33.45
FOSCOE	506	95	48	143	49.31
Total	1151	158	132	290	100

Table 1 presents the breakdown of the total sample of 290 was selected from the overall population of 1,151 students. Each college's contribution to the sample was determined approximately proportionately to its share of the total population. For instance, FOSCOE, which has the largest population (506 students), contributes the most participants (143), or about 49.31% of the total sample. KOMENCOE and OLACOE similarly contribute 97 (33.45%) and 50 (17.24%) participants, respectively, reflecting their relative sizes. The final distribution of 158 males and 132 females was achieved by allocating participants within each

college based on these proportions using systematic sampling to select the respondents. All calculations are derived directly from the values presented in this table.

RESULTS

Demographic Information of Respondents

Table 2 presents the demographic information of the respondents and their affiliated colleges. It was revealed that male respondents dominated the sample with a frequency of 158 (54.5%), while female respondents had a frequency of 132 (45.5%). Therefore, there were more male than female respondents in the Central Region. The study also considered respondents' colleges of affiliation. It was revealed that respondents from Foso College of Education (FOSCOE) dominated the sample with 143 (49.3%), followed by KOMENCOE with a sample of 97 (33.4%) and OLACOE respondents with 50 (17.2%).

Table 2

Gender of Respondents and Colleges of Affiliation

Gender	Frequency	Percentage
Male	158	54.5
Female	132	45.5
Total	290	100
Colleges	Frequency	Percentage
OLACOE	50	17.2
KOMENCOE	97	33.5
FOSCOE	143	49.3

Gender and Performance in Assessment and Integrated Science Courses

Table 3 shows that descriptive results of the study variables indicated no significant differences in the mean scores of the gender of students based on their performances in assessment and integrated science courses. The results indicate no statistically significant differences in performance between male and female respondents in the assessment and integrated science courses at the .05 significance level. For the assessment course, the average scores were $\bar{x}$=14.70 (SD=4.81) for males and $\bar{x}$=14.51 (SD=4.69) for females, while in integrated science, the average scores were $\bar{x}$=14.66 (SD=4.77) for males and $\bar{x}$=14.46 (SD=4.67) for females. This suggests that male students outperform female students in assessment courses more than in integrated courses. Therefore, the null hypothesis was not rejected.

Tablo 3

Descriptive Statistics

Variable	Gender	Mean	SD	N
Assessment Course Performance	Male	14.70	4.81	158
	Female	14.51	4.69	132
	Total	14.61	4.75	290
Integrated Science Course Performance	Male	14.66	4.77	158
	Female	14.46	4.67	132
	Total	14.57	4.73	290

Multivariate Analysis

A multivariate Test was conducted to test if differences exist in the mean scores of male and female respondents concerning performances in assessment and integrated science courses. The Wilks' Lambda results showed no significant differences in the students' gender performances in assessment and integrated science courses, $F_{(2,\ 287)}$ =.086, p=.918 Wilks' Lambda=0.999, partial eta squared =.001. Therefore, the null hypothesis was not rejected.

Table 4

Multivariate Test

Effect		*Value*	*F*	*df*	df_{error}	α	η_p^2
Intercept	Pillai's Trace	.905	1363.058[b]	2.000	287.00	.000	.905
	Wilks' Lambda	.095	1363.058[b]	2.000	287.00	.000	.905
	Hotelling's Trace	9.499	1363.058[b]	2.000	287.00	.000	.905
	Roy's Largest Root	9.499	1363.058[b]	2.000	287.00	.000	.905
Gender	Pillai's Trace	.001	.086[b]	2.000	287.00	.918	.001
	Wilks' Lambda	.999	.086[b]	2.000	287.00	.918	.001
	Hotelling's Trace	.001	.086[b]	2.000	287.00	.918	.001
	Roy's Largest Root	.001	.086[b]	2.000	287.00	.918	.001

DISCUSSION

The results of this study indicate that there are no statistically significant gender differences in student performance in both assessment and integrated science courses (Tables 2 and 3). The mean scores for male and female respondents in assessment courses ($\bar{x}$ =14.70 and $\bar{x}$ =14.51) and integrated science courses ($\bar{x}$ =14.66 and $\bar{x}$ =14.46) were very similar. While this lack of difference is encouraging, it is important to note that gender had little to no meaningful impact on performance in assessment and integrated science courses (η_p^2= 0.001). This shows that male and female students perform on par at the classroom level, indicating that factors other than gender likely play more substantial roles in influencing student achievement. These findings support the assertion that gender does not inherently determine academic performance in these fields, aligning with research such as Sahranavard and Hassan (2013), who reported no gender-based differences in science performance among Iranian students, and Sekyi-Hagan and Hanson (2022), who found no gender gap in integrated science achievement among pre-service teachers in Ghana. They also resonate with the broader "gender similarities hypothesis" proposed by Hyde (2005), which argues that males and females are more alike than different in most areas, including cognitive abilities. At the same time, the current results differ from those of Reilly et al. (2017), who identified gender differences in science achievement in OECD and non-OECD nations, suggesting that local cultural contexts, access to resources, and educational policies may moderate the relationship between gender and academic performance. Studies by Buchmann et al. (2008) and Delaney and Devereux (2021) further highlight the complexity of gender differences, indicating that broader social, economic, and educational structures influence where and how gender gaps may emerge.

Despite the absence of significant disparities, a slight pattern emerged in assessment courses where male students had a marginally higher mean. Although this difference lacks statistical significance, it is worth considering how nuanced factors might influence performance. For instance, Gielen and Zwiers (2018) have found that prenatal hormone exposure or adherence to gender stereotypes can shape achievement patterns, though in subtle ways. Wu (2023) emphasized that the activation or deactivation of stereotypes can either hinder or enhance female performance, indicating that educational environments and societal expectations are

critical variables. The minimal impact observed here suggests that while such factors exist, their tangible influence on academic outcomes in this particular setting is minimal.

One possible explanation for the absence of pronounced gender differences is the increasing focus on gender-responsive and equitable teaching practices within colleges of education in Ghana's Central Region. Thabiti et al. (2024) found that both male and female students benefit when educators employ gender-sensitive pedagogy—such as incorporating examples of successful female scientists, providing equal opportunities for classroom leadership, and ensuring balanced group activities. Likewise, ensuring that teaching materials are free from gender bias and that inclusive classroom interactions can foster an environment where all students feel capable and supported. Implementing these strategies might involve holding teacher-training workshops on unconscious bias, creating lesson plans featuring diverse role models, or using mixed-gender cooperative learning groups to encourage equal participation. Such concrete actions can help translate policy ideals into practical, classroom-level changes that reduce subtle differences in student performance.

From a policy perspective, the findings emphasize the value of continuing and refining initiatives that promote gender equity in education. Rather than solely focusing on eliminating large-scale gender gaps, policymakers and educators can target more nuanced factors, such as ensuring that curriculum content appeals to various interests, offering mentorship programs for underrepresented groups, and providing financial incentives or scholarships to encourage female participation in STEM fields. Special education policies should also incorporate gender considerations, ensuring that learners with additional needs receive tailored support sensitive to their abilities and gender-related experiences. These approaches can be integrated into teacher professional development modules, school improvement plans, and national educational strategies. Subba and Gotamey (2022) highlight that interventions should emphasize equity over mere equality, acknowledging that some groups may require more targeted forms of support to level the playing field truly.

Promoting greater gender equality awareness within educational communities can also be accomplished through organized workshops, seminars, and community outreach programs. These efforts might include professional development sessions for teachers to recognize and address unconscious biases. These parental engagement programs challenge gendered expectations and extracurricular clubs or societies that expose students to male and female role models in diverse career fields. By providing these actionable steps, educators and policymakers can move beyond abstract policy statements, ensuring that gender equality is understood and actively supported across all levels of the educational system.

IMPLICATIONS FOR PRACTICE

These implications were drawn based on the study's results to guide counselling and special education practices.

Counseling Implications:

1. ***Promote Gender-Inclusive Support Systems***: The analyzed data showed no significant gender differences in academic performance between the genders. Therefore, counselors can focus on fostering a school environment where students of both genders are equally supported. This ensures equality and reduces the stereotype that one gender needs academic guidance in assessment or science courses.
2. ***Emphasize Performance-Related Counselling.*** Counselors should shift the focus from gender-specific interventions to student performance-related support, identifying

factors such as stress, time management, and study habits that may affect students' performance. This focus ensures that counseling targets each student's unique academic needs, regardless of gender.

Special Education Implications:

1. ***Gender-Neutral Instructional Strategies***: The evidence produced by the results is that the gender of a student does not influence their academic performance. Special educators should plan and implement programs for learning that treat students of both genders as equal learners. So, when implementing individualized educational plans (IEPs), educators must focus more on the actual learning needs of each student to ensure varying learning skills and abilities among students.
2. ***Assessment of Individual Learning Needs****:* Since there were no gender differences in students' learning abilities, special education must focus on assessing each student based on their needs. This will help to identify the needs of students and work to mitigate the identified deficiencies. This calls for a case-by-case assessment of what students need rather than relying on gender-specific assumptions about students' learning abilities.

CONCLUSION

The study shows no significant gender differences in academic performance among students enrolled in assessment and integrated science courses at the Colleges of Education in the Central Region of Ghana. Both male and female respondents provided similar mean ratings, indicating the effectiveness of initiatives promoting gender equality. This tendency indicates a positive trajectory for gender equality in academic settings. It underscores the necessity for continuous efforts to eradicate complex inequalities, particularly in areas related to evaluation where men showed a slight advantage. Policymakers and educational institutions must maintain and enhance gender-sensitive teaching strategies and curricula that address the diverse needs of all students. The current lack of notable gender gaps indicates that specific interventions may be producing favorable results; however, continuous assessment and modification of these techniques are crucial. Moreover, promoting inclusive educational settings that confront prejudices and ensure equitable access to resources would enhance the academic capacity of both male and female students.

Support And Agreement

"As an author, I have no support or appreciation for the process of conducting the research."

Conflict Statement

"The author declares no conflict of interest."

Publication Ethical Statement

All the rules stated in the framework of "Scientific Research in Universities and Publication Ethic Codes were followed throughout the process (planning, implementation, data collection, and analysis). None of the actions stated under the title "Actions that violate scientific research and Publication Ethics," which is the second part of the codes that must be considered. During the writing process of the manuscript, the rules of scientific ethics and citation were followed, no falsifications were made to the collected data, and this study was not sent to any other academic publication environment for evaluation.

REFERENCES

Ajayi, S. I. (2001). Features-globalisation and Africa-what Africa needs to do to benefit from globalization. *Finance and Development-English Edition*, 38(4), 6–9.

Amponsah, M. O., Milledzi, E. Y., Ampofo, E. T., & Gyambrah, M. (2018). Relationship between parental involvement and academic performance of senior high school students: The case of Ashanti Mampong Municipality of Ghana. *American Journal of Educational Research*, 6(1), 1–8. https://doi.org/10.12691/education-6-1-1

Bates, A. W. (2015). What is a learning environment. In *Teaching in a digital age: Guidelines for designing teaching and learning* (2nd ed.). BCcampus.

Brew, C. R. (2002). Kolb's learning style instrument: Sensitive to gender. *Educational and Psychological Measurement*, 62(2), 373–390.

https://doi.org/10.1177/0013164402062002011

Buchmann, C., DiPrete, T. A., & McDaniel, A. (2008). Gender inequalities in education. *Annual Review of Sociology*, 34, 319–337.

https://doi.org/10.1146/annurev.soc.34.040507.134719

Burkam, D. T., Lee, V. E., & Smerdon, B. A. (1997). Gender and science learning early in high school: Subject matter and laboratory experiences. *American Educational Research Journal*, 34(2), 297–331. https://doi.org/10.3102/00028312034002297

Cen, L., Ruta, D., Powell, L., & Ng, J. (2014, December). Does gender matter for collaborative learning? In *2014 IEEE International Conference on Teaching, Assessment and Learning for Engineering (TALE)* (pp. 433–440). IEEE.

https://doi.org/10.1109/TALE.2014.7062581

Costa, M., & Costa, L. (2016). Science and mathematics instructional strategies, teaching performance and academic achievement in selected secondary schools in Upland. *International Journal of Educational and Pedagogical Sciences*, 3, 38–45.

Delaney, J., & Devereux, P. J. (2021). Gender and educational achievement: Stylised facts and causal evidence (CEPR Discussion Paper No. DP15753). SSRN.

https://doi.org/10.2139/ssrn.3775979.

Duruji, M., Azuh, D., & Olarenwaju, F. (2014). Learning environment and academic performance of secondary school students in external examinations: A study of selected schools in Ota. In *EDULEARN14 Proceedings* (pp. 5042–5053). IATED.

El Haddioui, I., & Khaldi, M. (2017). Study of learner behaviour and learning styles on the adaptive learning management system Manhali: Results and analysis according to gender and academic performance. *Journal of Software*, 12(4), 212–227.

https://doi.org/10.17706/jsw.12.4.212-226.

Gielen, A. C., & Zwiers, E. (2018). Biology and the gender gap in educational performance: The role of prenatal testosterone in test scores (No. 11936). IZA Discussion Papers.

https://doi.org/10.2139/ssrn.3285836.

Jones, C., Reichard, C., & Mokhtari, K. (2003). Are students' learning styles discipline specific? *Community College Journal of Research and Practice*, 27(5), 363–375.

https://doi.org/10.1080/713838162.

Kolb, D. A. (1984). *Experiential learning: Experience as the source of learning and development*. Prentice-Hall.

Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and Psychological Measurement*, 30(3), 607–610.

https://doi.org/10.1177/001316447003000308.

Martinez, M. E. (1992). Interest enhancements to science experiments: Interactions with student gender. *Journal of Research in Science Teaching*, 29(2), 167–177.

https://doi.org/10.1002/tea.3660290206.

Naqvi, A., & Naqvi, F. (2017). A study on learning styles, gender and academic performance of postgraduate management students in India. *International Journal of Economics and Management Sciences*, 6(398), 2. https://doi.org/10.4172/2162-6359.1000398.

Parajuli, M., & Thapa, A. (2017). Gender differences in the academic performance of students. *Journal of Development and Social Engineering*, 3(1), 39–47.

Reilly, D., Neumann, D. L., & Andrews, G. (2017). Investigating gender differences in mathematics and science: Results from the 2011 Trends in Mathematics and Science Survey. *Research in Science Education*, 49(1), 25–50. https://doi.org/10.1007/s11165-017-9630-6.

Ryan, M. (2015). Introduction: Reflective and reflexive approaches in higher education: A warrant for lifelong learning? In *Teaching reflective learning in higher education* (pp. 1–13). Springer. https://doi.org/10.1007/978-3-319-09271-31.

Sahranavard, M., & Hassan, S. A. (2013). Comparison of science performance among male and female Iranian eighth-grade students. *Applied Science Reports*, 1(1), 11–13.

Shamaki, T. A. (2015). Influence of learning environment on students' academic achievement in mathematics: A case study of some selected secondary schools in Yobe State-Nigeria. *Journal of Education and Practice*, 6(34), 40–44.

Subba, S. B., & Gotamey, H. K. (2022). The effects of the intervention programme on low achiever students' learning achievement in classroom. *Journal of Education, Society and Behavioural Science*, 35(1), 58–68. https://doi.org/10.9734/jesbs/2022/v35i130399.

Suleman, Q., & Hussain, I. (2014). Effects of classroom physical environment on the academic achievement scores of secondary school students in Kohat Division, Pakistan. *International Journal of Learning and Development*, 4(1), 71–82.

https://doi.org/10.5296/ijld.v4i1.5174.

Takeda, S., & Homberg, F. (2014). The effects of gender on group work process and achievement: An analysis through self- and peer-assessment. *British Educational Research Journal*, 40(2), 373–396. https://doi.org/10.1002/berj.3088.

Thabiti, T. H., Mwandilawa, B., & Basela, J. (2024). Examining the influence of gender-responsive pedagogies on students' academic performance in secondary schools in Tanzania: The case of Mafia District. *Journal of Management and Policy Issues in Education*, 1(1), 71–85. https://doi.org/10.58548/2024.jmpie11.7185.

Turano, A. A. (2005). The impact of classroom environment on student learning (Master's thesis, Rowan University). Rowan Digital Works. https://rdw.rowan.edu/etd/1089

Wu, H. (2023). A study on gender stereotypes and their activation effects in academic performance. *Highlights in Science, Engineering and Technology*, 72, 460–467. https://doi.org/10.54097/7wvhys41.