Investigating Final-Year Senior High School Students' Academic Performance Dynamics across Demographics: The Case of Students in Cape Coast, Ghana

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ABSTRACT

The academic performance of senior high school (SHS) students has garnered significant attention, particularly in understanding the various factors influencing it across diverse demographics. This study investigated the academic performance dynamics of final-year SHS students in Ghana, focusing on academic self-efficacy (ASE), examination anxiety (EA), and academic cheating behaviours (ACB). The Theory of Performance by Elger guided the study. A cross-sectional survey design used a structured questionnaire to collect data from 370 students sampled out of 8,656 across 10 SHSs in the Cape Coast Metropolis. Descriptive statistics (frequency, percentage, mean and standard deviation) and inferential techniques (independent sample t-tests and one-way ANOVA) were employed to analyse the data. Results indicated that students generally exhibited high ASE, showing confidence in their academic abilities, though time management was a challenge. While moderate levels of EA were reported, significant variability highlighted the importance of emotional intelligence in academic performance. Regarding ACB, students largely disapproved of serious academic dishonesty but were more inclined to engage in less severe behaviours like sharing notes. Gender differences were notable, with female students reporting higher ASE and lower EA than males, while male students were more likely to engage in ACB. Age differences showed that the 16-20 age group had higher ASE and lower ACB compared to older students, although EA did not significantly vary across age groups. It is concluded that students' ASE correlates positively with their academic capabilities, and their emotional intelligence plays a significant role in academic performance. It is recommended that targeted interventions be put in place to enhance students'ASE, manage EA, and promote academic integrity, particularly among male students, to improve overall academic outcomes.

Keywords: Age, Academic Performance Dynamics, Academic Self-Efficacy, Academic Cheating Behaviours, Examination Anxiety, Gender

I. INTRODUCTION

The education sector has been buzzing with debates about performance levels, as shown by a plethora of research and scholarly articles (Kohn, 2000; Popham, 2001; Darling-Hammond, 2010; Reardon, 2018; Nahar, 2023; Paramole & Adeoye, 2024). These conversations touch on many aspects of the educational system, from policy decisions to classroom practices, and they carry important implications for students, teachers, and society as a whole. One of the most controversial topics in educational performance is standardized testing. Supporters believe these tests offer objective measures of student achievement, enabling comparisons across diverse groups (Popham, 2001; Paramole & Adeoye, 2024).

On the other hand, critics argue that standardized tests can narrow the curriculum, heighten student anxiety, and overlook the full range of students' abilities (Kohn, 2000; Nahar, 2023). Another significant debate focuses on how socioeconomic factors influence educational outcomes. Many studies have pointed out persistent achievement gaps between students from different socioeconomic backgrounds (Reardon, 2018). This reality has sparked discussions about the effectiveness of various interventions, like school funding reforms and early childhood education programmes, aimed at addressing these disparities (Darling-Hammond, 2010). Despite the numerous debates made concerning performance levels in education, it is quite important to note that major advancements have been recorded over the years

on the levels of academic performance across educational levels. One of such educational levels that have gained interest in the sight of some researchers is the secondary level of education.

Ghana's secondary level education, known as Senior High School (SHS), typically spans three years and serves students between the ages of 15 and 18. It follows the completion of basic education and is designed to prepare students for higher education or vocational training. The SHS curriculum offers a broad range of subjects, including core areas such as Mathematics, English, Science, and Social Studies, along with elective courses in areas like business, arts, sciences, and technical studies. Admission to SHS is based on performance in the Basic Education Certificate Examination (BECE), and completion of SHS culminates in the West African Senior School Certificate Examination (WASSCE), which determines eligibility for tertiary education (Takyi et al., 2021). Due to WASSCE being an entry requirement for tertiary education, factors influencing the academic performance of final-year SHS students have been an area of interest to researchers.

One of the factors seen as a strong influence on the academic performance of final-year SHS students is Academic Self-efficacy (ASE). Nasa (2014) defined ASE as the belief in one's capacity to plan, carry out, and control performance to achieve certain performance goals. This implies that a high ASE enhances students' academic performance and a low ASE will result in poorer students' academic performance. A study by Alzabidi et al. (2024) found that the majority of students reported high levels of academic self-efficacy and established a strong positive relationship between self-efficacy and academic performance. However, no statistically significant gender differences were observed in academic self-efficacy, although academic performance was significantly influenced by self-efficacy. Also, a study by Hayat et al. (2020), using structural equation modelling, revealed that students' self-efficacy influences their learning-related emotions and metacognitive learning strategies, which in turn affect their academic performance.

Additionally, researchers have also indicated that Examination Anxiety (EA) influences the ASE of final-year SHS students. EA, also known as test anxiety, is defined as the negative emotions, worry, physiological arousal, and behavioural responses associated with fears of failure or perceived lack of competence in an exam or similar evaluative situation (Matthews et al., 2006). It can deduced from the definition that a high EA leads to lower academic performance, while a low EA is associated with higher academic performance. This was corroborated by Khalid's (2024) study, which found a substantial inverse relationship between secondary school students' academic success and test anxiety (including physical, emotional, behavioural, and cognitive anxiety). Ray and Negi (2024) found that girls experienced higher levels of EA compared to their male counterparts, highlighting that EA is a significant issue affecting many students preparing for board exams. Javed and Abiodullah (2021) also found a negative relationship between test anxiety and academic performance, with female students experiencing higher levels of test anxiety compared to males. Additionally, their study showed no statistically significant difference in test anxiety across different age groups.

Aside from ASE and EA, Academic Cheating Behaviour (ACB) is also seen as a factor that influences final-year students' academic performance. ACB, also known as Academic dishonesty, is intentionally carrying out forbidden behaviours to gain an unfair advantage in an academic context (Zhao et al, 2021). This suggests that when ACB) go unchecked; students may experience temporary improvements in their academic performance, while a lack of such behaviours could result in comparatively lower performance. Lacanlale et al. (2022) demonstrated a positive association between students' academic performance and academic cheating. In a related study, Ossai et al. (2023) identified a significant predictive relationship between age and academic integrity during exams, as well as differences between male and female students. The results indicated that female students had marginally higher academic integrity scores compared to males.

Ideally, it is assumed that their ASE, EA, and ACB likely influence final-year SHS students' academic performance dynamics. Students with high academic self-efficacy are expected to exhibit better academic performance, as they are confident in their ability to succeed without resorting to unethical practices. In contrast, those with low academic self-efficacy may be more prone to academic cheating, as they doubt their capabilities. Similarly, students with lower examination anxiety would likely perform better, as they are more composed during exams and less inclined to cheat. Regarding demographics, it is expected that gender may influence these dynamics, with potential differences in how male and female students experience ASE, EA, and ACB. Age is also anticipated to play a role, with older students possibly demonstrating higher academic self-efficacy and lower examination anxiety, thereby reducing their likelihood of engaging in academic cheating.

1.1 Statement of the Problem

Ghana's final-year Senior High School (SHS) students saw notable increases in their academic performance in the West African Senior School Certificate Examination (WASSCE) in 2023, which was the best performance in four years. A notable proportion of students obtained grades ranging from A1 to C6 in all major subjects. In English Language, 73.11% of applicants received grades between A1 and C6, which is a significant increase from prior years. In Core Mathematics, 62.23% of candidates received the same grades. Similar to this, a consistent upward trend in performance

was shown by the grades that 66.82% of applicants received in Integrated Science and 76.76% in Social Studies (Bonney, 2023; Frimpong, 2023). Despite these achievements, the examination results were not without challenges, as 235 schools had their results withheld due to the alleged use of artificial intelligence-generated answers, and the results of some students were cancelled for possessing unauthorized materials and mobile phones in examination halls (Bonney, 2023; Osei, 2023).

These patterns offer a crucial background for comprehending the dynamics of academic success for senior high school students, particularly when considering ASE, EA, and ACB. The overall improvements in WASSCE performance suggest that students' confidence in their abilities, reflected in higher ASE, and may have contributed to their academic success. However, concerns over the prevalence of ACB among students are raised by the persistent problem of academic misconduct, which includes the ownership of foreign resources and the use of AI-generated responses (Bonney, 2023; Osei, 2023). Since cheating is correlated with exam anxiety, it may also be explained by the academic pressure to perform well, which is increased by the examination atmosphere. Are ASE, EA, and ACB of final-year SHS students' factors that affect their overall academic dynamics? Do gender and age differences provide further insights into these academic performance dynamics?

Studies done on academic performance dynamics (ASE and ACB) have revealed conflicting results. For instance, Alzabidi et al. (2024) revealed no statistically significant gender differences were observed in academic self-efficacy, although academic performance was significantly influenced by self-efficacy. However, Huang's (2013) meta-analysis, which reviewed 187 studies with a total of 247 independent samples (N = 68,429), identified a small effect size of 0.08 in gender differences in academic self-efficacy, with a slight advantage for males. In addition, Webb-Williams (2017) found significant gender differences in self-efficacy among primary school pupils in England, with boys exhibiting lower self-efficacy and poorer performance compared to girls.

Also for ACB, gender and age were not found to be major predictors of academic cheating behaviours, according to a study by Sarkar (2022). However, a study by Isakov and Tripathy (2017) indicated that there was a gender difference in ACB with males exhibiting high levels compared to females. The contrast between these studies highlights the need for further research to clarify the role of gender in ACB. Apart from contradictory findings, the study will address a geographical and population gap as no research in Ghana has collectively examined academic performance dynamics (ASE, EA, and ACB) across demographics. This clearly suggests that research on academic performance dynamics across demographics in Ghana is still in its early stages.

1.2 Research Objectives

The study was guided by the following objectives:

i. To determine the level of Academic Performance Dynamics (ASE, EA, and ACB) of final year SHS students in Cape Coast.
ii. To examine the difference in Academic Performance Dynamics among final-year SHS students in Cape Coast based on gender.
iii. To examine the difference in Academic Performance Dynamics among final-year SHS students in Cape Coast based on age.

II. LITERATURE REVIEW

2.1 Theoretical Review

2.1.1 Theory of Performance

Elger (2007) propounded the Theory of Performance. The theory offers a thorough framework for comprehending and enhancing both individual and team performance in a variety of fields. For educators, managers, and other professionals looking to improve their own or others' performance, this theory has important ramifications. Elger's theory is fundamentally based on several important elements. First, it makes the assumption that performance can be divided into discrete levels, from poor to high, which are not fixed but may be raised with practice and intentional effort. The theory also specifies six fundamental components that contribute to total performance: knowledge, skills, identity, personal variables, fixed elements, and emotional aspects. The theory also stresses the significance of performance conditions or the setting and circumstances in which a performance takes place (Elger, 2007).

The theory describes tactics for raising performance, such as practice, immersion, and introspection. Elger's theory is applicable in a wide range of fields. Educators may use this approach to create curriculum and instructional strategies that cover every aspect of performance, perhaps improving student results. Organisations can use this idea in the field of professional development to design training initiatives and performance improvement plans that are more successful. Individuals may evaluate themselves using Elger's framework and make focused goals to enhance their performance on a personal level (Elger, 2007). This study, which focuses on academic performance dynamics (ASE,

EA, and ACB), may be successfully related to Elger's Theory of Performance. This link emphasises how applicable the idea is to educational settings. Elger's emphasis on different aspects of performance, especially emotional and personal elements, is in line with the study's analysis of ASE and EA. The conviction a student has in their capacity to complete academic tasks, or ASE, is correlated with Elger's concept of identity and personal aspects in performance.

Likewise, Elger's identification of emotional elements affecting performance is connected to EA, as investigated in this study. Elger's performance criteria, which highlight how environmental influences and outside pressures may affect a student's decision to participate in academic dishonesty, can be used to analyse this study's focus on ACB. Age and gender can play crucial roles in how individuals interact with and respond to Elger's (2007) Theory of Performance. From a developmental perspective, age influences the accumulation of knowledge and skills, two of the core components outlined in the theory. Younger individuals may have less experience but greater adaptability, while older individuals often bring more depth in knowledge but may face challenges in adapting to new performance conditions. Gender, on the other hand, can shape how emotional aspects and personal variables such as identity and confidence are expressed and developed. Elger's theory used in this study will help educators and researchers have a better understanding of the complex dynamics influencing students' academic achievement. This understanding might result in more effective interventions and support techniques.

2.2 Empirical Review

2.2.1 Perceived Level of Academic Performance Dynamics

Mata (2020) examined grit and ASE as predictors of the academic performance of SHS students. The study used a descriptive-correlational design with 303 SHS students at Carmen and Cantumog National High Schools. The results showed that students demonstrated an above-average level of Academic Self-Efficacy (ASE), with a mean score of 4.00 and a standard deviation of .46. Also, Villas (2019) assessed the self-efficacy of Filipino senior high school students using a ten-point self-efficacy scale ($\alpha = .77$). Administered to a sample of 150 students from three public and three private schools in Quezon City, Metro Manila, the study found that students demonstrated a moderate level of self-efficacy, with a mean score of 7.88. Alzabidi et al. (2024) examined the relationship between academic performance and self-efficacy among Malaysian pre-university students using cross-sectional survey data. The sample included 171 students, aged 18 to 20, in Kuala Lumpur. Findings indicated that most students reported high levels of academic self-efficacy ($M = 1.7$, $SD = 0.44$).

Khalid's (2024) study employed a quantitative research design to explore the relationship between EA and academic achievement among secondary school students in Pakistan. Using a stratified sampling technique to ensure demographic representation, the sample included 210 students. The findings revealed that many students experienced elevated levels of EA ($n = 122$, 58.08%). In addition, Koramoah and Danyoh (2022) conducted a study to assess examination anxiety among final-year students in public Junior high schools in Ghana. Utilizing a descriptive survey design and a multistage sampling technique, the study sampled 261 final-year JHS students. Data were collected through a questionnaire with a Cronbach's alpha reliability of 0.84. Results indicated that students reported moderate examination anxiety ($M = 31.57$, $SD = 7.83$) concerning the 2020 Basic Education Certificate Examination.

Lacanlale et al. (2022) examined the effects of ACB on the academic performance of grade 12 students. Employing a descriptive-correlational approach, the researchers used standardized and self-designed questionnaires for data collection. Findings indicated that students engaged in academic cheating to a moderate extent ($M = 2.69$). In addition, Amua-Sekyi and Mensah (2016) investigated student-teachers' perspectives on cheating during examinations using a mixed-methods approach, incorporating surveys and focus group interviews. The study surveyed 900 undergraduate education students from a public university and three colleges of education in Ghana, with focus group interviews conducted with six students from each institution. A total of 942 students participated. Findings indicated that the majority of respondents ($n = 766$, $M = 1.9$, $SD = 1.4$) disagreed with engaging in cheating during exams.

2.2.2 Difference in Academic Performance Dynamics Based on Gender

Alzabidi et al. (2024) investigated the relationship between academic performance and self-efficacy among pre-university students through a cross-sectional survey. The sample consisted of 171 undergraduates, aged 18 to 20 in Kuala Lumpur. The findings revealed no statistically significant gender differences (p=.18) in ASE. Huang's (2013) meta-analysis investigated gender differences in ASE by reviewing 187 studies comprising 247 independent samples ($N = 68,429$). The analysis identified a small effect size of 0.08, indicating a slight advantage in ASE for males. Webb-Williams (2017) explored children's self-efficacy beliefs in science through a mixed-methods study involving 182 children aged 10 to 12. Data were collected in the classroom using focus groups, individual interviews, and surveys. The findings revealed significant gender differences in self-efficacy among primary school pupils in England, with boys demonstrating lower self-efficacy and performance compared to girls.

Ray and Negi (2024) assessed gender differences in test anxiety among Indian students preparing for board exams. 105 students participated in the study, including 40 males and 65 females. The findings revealed that male students exhibited higher levels of exam anxiety compared to female students, aligning with the results suggesting that boys are more prone to stress related to exams. Javed and Abiodullah (2021) investigated the effects of test anxiety on students' academic achievement at the secondary school level in Lahore. Using a causal-comparative research design, the study aimed to determine the underlying causes of existing differences within the population. The sample comprised 840 students from 30 schools in the Lahore district, representing all secondary school students enrolled in the area. The findings indicated that female students experienced higher levels of test anxiety than their male counterparts did.

In Nigeria, Ossai et al. (2023) identified a significant predictive relationship between age and academic integrity during exams, along with differences between male and female students. The study utilized a survey research design focused on final-year high school students nationwide. A sample of 3,214 students was selected from six geopolitical zones and the Federal Capital Territory using a multistage proportionate random sampling technique, resulting in 1,274 males and 1,940 females. The findings indicated that female students had slightly higher academic integrity scores compared to their male counterparts. It is evident from the literature that, no study has been conducted in Ghana, looking at the differences in students' performance dynamics from the perspective of their gender.

2.2.3 Difference in Academic Performance Dynamics Based on Age

Villas (2019) assessed the self-efficacy of Filipino senior high school students using a ten-point self-efficacy scale ($\alpha = .77$). Administered to 150 students from three public and three private schools in Quezon City, Metro Manila, the study found no statistically significant difference ($p=.177$) between age and ASE. In addition, Abusalehi et al. (2019) investigated ASE and related factors among students at the Tehran University of Medical Sciences. The cross-sectional study sampled 385 students using a stratified sampling method. Pearson correlation results indicated a statistically significant relationship between age and academic self-efficacy ($P= 0.001$, $r =.17$). In addition, Javed and Abiodullah (2021) investigated the effects of test anxiety on students' academic achievement at the secondary school level in Lahore. Using a causal-comparative research design, the study aimed to identify the causes of existing differences within the population. The sample included 840 students from 30 schools in the Lahore district. Findings indicated no statistically significant difference in test anxiety across age groups.

In Nigeria, Ossai et al. (2023) identified a significant predictive relationship between age and academic integrity during exams, alongside differences between male and female students. The survey involved 3,214 final-year high school students selected from six geopolitical zones and the Federal Capital Territory, revealing notable findings regarding age's impact on academic integrity during examinations. In India, Sarkar (2022) investigated an incident of collaborative cheating among postgraduate management students during an online quiz. Using a mixed-methods design, data were collected from 184 postgraduate management students (52.72% women; average age 24.03 years). The findings indicated that gender and age were not significant predictors of ACB. The available literature suggests that no study has been conducted in Ghana on the differences age brings about in students' performance dynamics.

2.3 Conceptual Framework

The conceptual framework in Figure 1 illustrates the hypothesized effect of demographic characteristics (gender and age) on the academic performance dynamics of final-year SHS students. The framework suggests that gender difference (H1) is expected to have a direct impact on student's academic performance dynamics, implying that variations in performance dynamics could be attributed to differences in gender-based experiences, expectations, and opportunities. Additionally, age difference (H2) is hypothesized to influence academic performance dynamics, with the assumption that developmental stages and maturity levels play a role in shaping how students engage with academic tasks. This model aims to explore how these demographic variables contribute to the broader understanding of academic performance dynamics in final-year SHS students.

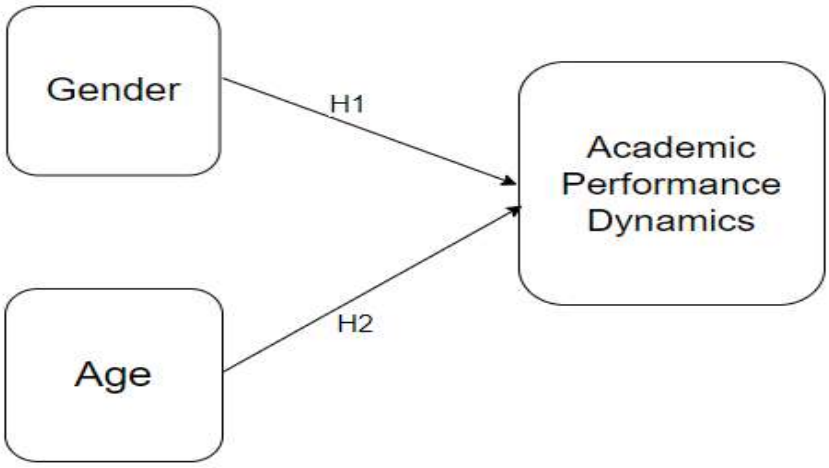

Figure 1
Conceptual Framework Depicting Gender and Age Difference in Academic Performance Dynamics

III. METHODOLOGY

3.1 Procedures

This study utilized a cross-sectional survey design to gather data from final-year senior high school students, aiming to assess the academic performance dynamics across demographics and to determine the differences influenced by these demographic factors. The study population consisted of all final-year students across ten senior high schools in the Cape Coast Metropolis, totalling 8,656 students. These students were chosen as the unit of analysis because they had completed the senior high school curriculum and were preparing to take their final certificate examinations (WASSCE). Their status as imminent exam candidates made them particularly suitable for investigating their academic performance dynamics across demographics.

The study utilized a proportionate simple random sampling technique to select 370 students from the 10 senior high schools in the Metropolis. Table 1 provides a breakdown of the population from each school along with the number of students chosen to participate in the study. Questionnaires were distributed to all selected students, resulting in a 100% return rate for the responses.

Table 1

School	Population	Sample
University Practice SHS	765	33
Wesley Girls SHS	967	41
Mfanstipim SHS	1058	45
St. Augustine's College	750	32
Academy of Christ the King SHS	188	8
Adisadel College	1,400	60
Oguaa Sec. Tech School	464	20
Ghana National College	914	40
Holy Child College	750	32
Aggrey Memorial School	1400	60
Total	**8656**	**370**

To ensure ethical standards were upheld, ethical clearance was obtained from the Institutional Review Board of the University of Cape Coast. Following approval, an introductory letter was presented to the respective schools to request permission from school authorities for data collection. With the consent of the Headmasters from all ten schools, access was granted to the final-year students' classes. The purpose of the study was clearly explained to the students, and sampling was conducted within each school to select participants. Before distributing the questionnaires, students received instructions on how to respond to the items, and they were assured of anonymity and confidentiality. Participation was voluntary.

3.2 Instrumentation and Data Collection

The study employed an adopted scale developed by Gafoor and Ashraf (2006) to measure ASE and an adapted scale by Cassady and Johnson (2002) to assess EA. ACB was measured using a scale sourced from Greene and Saxe (1992). The reliability of the data collected was evaluated, with the results presented in Table 2. Following Nunnally and Bernstein's (2008) guideline, all variables demonstrated strong reliability, with coefficients exceeding the threshold of .7. Specifically, ASE (.914) and ACB (.902) exhibited excellent reliability, while EA (.828) showed good reliability. This indicates a high level of internal consistency across all scales, ensuring the reliability of the entire questionnaire.

Table 2

Reliability Test

Scale	Respondents	N of Items	Cronbach's Alpha
Academic Self-efficacy (ASE)	359	40	.914
Examination Anxiety (EA)	353	27	.828
Academic Cheating Behaviour (ACB)	366	13	.902

3.3 Data Analysis

The data collected was analysed using both descriptive and inferential statistics. Descriptive statistics included frequency counts, percentages, means, and standard deviations. For inferential analysis, independent sample t-tests and one-way ANOVA were utilized. A normality test was conducted to ensure that the assumptions for performing the t-tests and ANOVA were met, with a significance threshold set at .05.

3.4 Test for Normality

The normality diagnostic for the study was assessed by examining the skewness of the data distribution. According to Field (2009), normality values for skewness should not exceed ±1.96 for small samples ($N < 200$) and ±2.58 for larger samples ($N \geq 200$). Table 3 presents the results of the normality test. For Academic Self-Efficacy (ASE), the mean score was 3.93 with a median of 3.93. The skewness value of -0.17 indicates a minor negative skewness, suggesting a slight elongation on the left side of the distribution. Similarly, Examination Anxiety (EA) had a mean of 3.19 and a median of 3.15, with a skewness value of -0.11, denoting an almost symmetrical distribution. For Academic Cheating Behaviours (ACB), the mean was 2.48, the median was 2.38, and the skewness value of 0.67 suggests a moderate positive skewness, indicating a slight elongation on the right side of the distribution. Since all skewness values fall within the acceptable range, the data was considered normally distributed, supporting the use of parametric statistics for further analysis.

Table 3

Test for Normality

Variable		Statistic	Std. Error
ASE	Mean	3.9289	.02615
	Median	3.925	
	Skewness	-.166	.127
EA	Mean	3.1899	.02933
	Median	3.1481	
	Skewness	-.108	.127
ACB	Mean	2.4772	.04605
	Median	2.3846	
	Skewness	.674	.127

IV. FINDINGS & DISCUSSIONS

4.1 Demographics of Students

The results on the background characteristics of the respondents are shown in Table 4.

Table 4

Background Characteristics of the Respondents

Demography	Subscale	Frequency	Percentages (%)
Gender	Male	188	50.8
	Female	182	49.2
Age	Below 15 years	10	2.7
	16 - 20 years	352	95.1
	21 and above	8	2.2

From Table 4, male respondents (188; 50.8%) slightly outnumbered female respondents (182; 49.2%), indicating a balanced gender representation in the study. In terms of age, the vast majority of the participants (95.1%) were between 16 and 20 years, with only a small proportion (2.7%) being below 15 years and 2.2% aged 21 and above. This suggests that the study was predominantly composed of respondents aged 16-20, reflecting the typical age range of final-year senior high school students.

4.2 Determine the level of Academic Performance Dynamics

Research objective 1 aimed to determine the level of academic performance dynamics (ASE, EA, and ACB). Tables 5, 6 and 7 present the results.

4.2.1 Level of Academic Self-efficacy

Table 5 displays the findings regarding the level of ASE among final-year SHS students.

Table 5

Academic Self-efficacy (ASE)

Statements	Mean	SD
Irrespective of the subject, I am competent in learning.	4.10	.92
I sense that I am quick to pick the points from what I read	4.09	.87
I can do my projects well.	4.11	.82
I can arrange the help of my teachers in learning.	3.94	.97
I can arrange help of my peers for my learning whenever I need it.	4.04	.93
I can usually find out quite a few solutions when I confront with problems in my study.	4.02	.95
During examinations, I can recollect what I have learnt.	4.14	.81
If taught, I can prepare my class notes neatly.	4.17	.79
I am assured that I have a few friends who would be helpful in my study.	4.25	.78
I can accomplish my aims in learning.	4.31	.86
I can develop the reading skills required to learn school subjects.	4.26	.84
I can utilize the available library facility for my study.	3.97	1.03
If I miss some classes for some reason, I can compensate the loss fairly well.	3.92	1.03
I am confident that I can perform well in competitive examinations.	4.05	1.06
I can be calm at the time of the exam as I am conscious of my ability to learn.	4.08	.94
I can usually handle the disturbing situations in the study.	3.74	1.11
If a sudden test is conducted for us without prior notice, I can answer it well.	3.75	1.03
If I try, I can become one of the good grade holders.	4.18	1.01
I can score well in the short answer type questions.	4.10	1.00
However, twisted the question is I can answer them.	3.84	1.02
I cannot read and understand my textbooks well.	3.81	1.15
I feel that I have no ability to keep things unforgotten.	3.68	1.10
I can’t manage time efficiently for learning.	3.58	1.09
I fail to find out the necessary sources for my study.	3.62	1.12
I fail to set higher goals in my studies.	3.88	1.00
I can’t express ideas well while attending examinations.	3.96	1.01
It is difficult for me to read and understand the textbooks in the English language.	4.03	1.04
Often, I fail to comprehend the actual meaning of what I study.	3.91	1.06
I fail to find time for learning amid sundry chores.	3.66	1.10
I can’t arrange the resources for my study from my relatives, neighbours,	3.68	1.12
I may not clarify doubts from my teachers while in class, even if I reach higher classes.	3.77	1.06
I can’t answer the essay-type questions well.	3.91	1.01

I experience that I am weak in understanding the classes of my teachers.	3.96	1.42
When I study a new concept, I can't recall the related knowledge from the earlier classes.	3.87	1.06
I observe that I fail to prepare my seminars and assignments in time.	3.79	1.02
I consider that I failed to develop a healthy relationship with my teachers.	3.75	1.08
I can't deal efficiently with the unexpected problems in my study.	3.73	1.08
I can't complete the homework myself without any help from guidebooks, previous notes etc.	3.71	1.09
I can't answer the questions which teachers ask me.	3.89	1.03
I can't accomplish challenging tasks and problems in my study.	3.90	1.85
Overall Mean/ SD	**3.93**	**.50**

Key: *A mean score above 3 denotes that the respondents agreed with the assertion made while a mean score below 3 indicated that the respondents disagreed with the assertion made. This was determined by finding the average of the scale used in the questionnaire [(1+2+3+4+5)/5 = 3].*

From Table 5, the findings indicate that the mean values for all items measuring Academic Self-efficacy (ASE) were above 3.0, suggesting that the respondents generally agreed with the statements about their self-efficacy. The highest mean score was recorded for "I can accomplish my aims in learning" (M = 4.31, SD = .86), indicating strong confidence in achieving academic goals. Similarly, items like "I can develop the reading skill required to learn school subjects" (M = 4.26, SD = .84) and "I am assured that I have a few friends who would be helpful in my study" (M = 4.25, SD = .78) also had high mean scores, reflecting positive self-efficacy perceptions among students in terms of both academic ability and social support.

Conversely, the item "I can't manage time efficiently for learning" had the lowest mean (M = 3.58, SD = 1.09), indicating some challenges with time management. The overall mean score of 3.93 (SD = .50) suggests that the students exhibited a high level of academic self-efficacy across the various dimensions measured. The relatively small standard deviation values imply that the responses were moderately homogeneous, with most students sharing similar levels of confidence in their academic abilities.

4.3 Level of Examination Anxiety

Table 6 presents the results on the level of EA among final-year SHS students.

Table 6

Examination Anxiety (EA)

Statements	Mean	SD
I lose sleep over worrying about examinations.	3.31	1.28
While taking an important examination, I find myself wondering whether the other students are doing better than I am.	3.43	1.24
I have less difficulty than the average college student does in getting test instructions straight.	3.44	1.13
I tend to freeze up on things like intelligence tests and final exams.	3.07	1.27
I am less nervous about tests than the average college student.	3.33	1.22
During tests, I find myself thinking of the consequences of failing.	3.18	1.67
At the beginning of a test, I am so nervous that I often can't think straight.	2.86	1.29
The prospect of taking a test in one of my courses would not cause me to worry.	3.25	1.26
I am more calm in test situations than the average college student.	3.50	1.18
I have less difficulty than the average college student in learning assigned chapters in textbooks.	3.56	2.31
My mind goes blank when I am pressured for an answer on a test.	3.10	1.27
During tests, the thought frequently occurs to me that I may not be too bright.	3.04	1.24
I do well in speed tests in which there are time limits.	3.22	1.10
During a course examination, I get so nervous that I forget facts I know.	3.09	1.20
After taking a test, I feel I could have done better than I did.	3.63	1.20
I worry more about doing well on tests than I should.	3.59	1.17
Before taking a test, I feel confident and relaxed.	3.53	1.18
While taking a test, I feel confident and relaxed.	3.47	1.13
During tests, I have the feeling that I am not doing well.	2.95	1.23
When I take a difficult test, I feel defeated before I even start.	2.92	1.24
Finding unexpected questions on a test causes me to feel challenged rather than panicky.	3.23	1.27

I am a poor test taker in the sense that my performance on a test does not show how much I know about a topic.	2.75	1.25
I am not good at taking tests.	2.65	1.28
When I first get my copy of a test, it takes me a while to calm down to the point where I can begin to think straight.	3.08	1.28
I feel under a lot of pressure to get good grades on tests.	3.12	1.45
I do not perform well on tests.	2.71	1.19
When I take a test, my nervousness causes me to make careless errors.	3.02	1.29
Overall Mean/ SD	**3.19**	**.56**

Key: *A mean score above 3 denotes that the respondents agreed with the assertion made while a mean score below 3 indicated that the respondents disagreed with the assertion made. This was determined by finding the average of the scale used in the questionnaire [(1+2+3+4+5)/5 = 3].*

From Table 6, the findings reveal that the mean values for most items measuring Examination Anxiety (EA) were above 3.0, suggesting that the respondents generally agreed with the statements related to experiencing examination anxiety. The highest mean was recorded for the item "After taking a test, I feel I could have done better than I did" (M = 3.63, SD = 1.20), indicating that a significant number of students tend to experience regret or self-criticism after exams. Similarly, items like "I worry more about doing well on tests than I should" (M = 3.59, SD = 1.17) and "Before taking a test, I feel confident and relaxed" (M = 3.53, SD = 1.18) also scored high, reflecting a mix of pre-exam confidence and post-exam anxiety.

On the other hand, the item "I am not good at taking tests" had the lowest mean (M = 2.65, SD = 1.28), indicating that fewer students perceived themselves as generally poor test-takers. Likewise, the item "I do not perform well on tests" (M = 2.71, SD = 1.19) also had a mean score below 3, suggesting that most students disagreed with this negative self-assessment. Overall, the mean score for examination anxiety (M = 3.19, SD = .56) implies that students experience a moderate level of anxiety during exams. The standard deviation values indicate some variability in the responses, particularly for items related to self-assessment and test performance, but the data generally show a moderate level of examination-related stress among respondents.

4.4 Level of Academic Cheating Behaviours

Table 7 presents results on the level of ACB of final-year SHS students.

Table 7

Academic Cheating Behaviours

Statements	**Mean**	**SD**
Getting notes from people who have previously taken the course.	3.07	1.29
Getting exams from people who have previously taken the course.	3.06	1.31
Getting papers from people who have previously taken the course.	3.02	1.23
Turning a paper, that someone else who took the class in a previous year wrote.	2.65	1.36
Purchasing a paper someone else wrote and turning it in.	2.33	1.40
Making up a story to tell a lecturer to get more time to complete the assignment.	2.48	1.34
Bringing cheat sheets to an exam.	2.07	1.36
Copying answers from another student while taking an exam.	2.27	1.24
Studying from an exam someone else stole.	2.31	1.33
Working on individual assignments with classmates.	2.83	1.30
Saying a paper/test was turned in when it wasn't.	2.21	1.25
Bringing completed blue books to a test.	2.02	1.31
Have a friend sign your name on an attendance sheet when you did not attend the class.	1.93	1.26
Overall Mean/ SD	**2.48**	**.88587**

Key: *A mean score above 3 denotes that the respondents agreed with the assertion made while a mean score below 3 indicated that the respondents disagreed with the assertion made. This was determined by finding the average of the scale used in the questionnaire [(1+2+3+4+5)/5 = 3].*

From Table 7, the results indicate that the majority of the respondents disagreed with the various Academic Cheating Behaviours (ACB) listed, as evidenced by the overall mean score of 2.48 (SD = .89), which is below the threshold of 3.0. This suggests that, on average, students reported relatively low engagement in cheating behaviours.

The highest mean scores were observed for items such as "Getting notes from people who have previously taken the course" (M = 3.07, SD = 1.29) and "Getting exams from people who have previously taken the course" (M = 3.06, SD = 1.31). These suggest that students were more likely to agree with engaging in these behaviours, which might be seen as less severe forms of academic misconduct.

In contrast, items like "Having a friend sign your name on an attendance sheet when you didn't attend the class" (M = 1.93, SD = 1.26) and "Bringing completed blue books to a test" (M = 2.02, SD = 1.31) had the lowest mean scores, indicating strong disagreement with these cheating behaviours, which may be perceived as more serious violations of academic integrity. Overall, the findings suggest that while some students may engage in minor forms of academic dishonesty, such as sharing notes or exams, more overt and serious cheating behaviours like fabricating attendance or using cheat sheets during exams are less common among respondents. The variability in standard deviations highlights that students' engagement in these behaviours varies across the sample, though the general trend points to low levels of cheating.

4.4.1 Mean Difference Testing

Testing Homogeneity of Variances and Mean Equality

Tables 8 and 9 present the results of statistical tests used to assess the assumptions of homogeneity of variances and the equality of means across groups.

Table 8

Levene's Test for Equality of Variances

Dependent Variable	Independent Variable	F	Sig.
ASE	Gender	.633	.427
EA	Gender	.107	.744
ACB	Gender	6.77	.010

Table 9

Robust Test for Equality of Means (Welch)

Dependent Variable	Independent Variable	Statistic	df1	df2	Sig.
ASE	Age	37.3	2	11.952	.000
EA	Age	.892	2	10.941	.438
ACB	Age	2.239	2	11.462	.151

Before conducting an independent sample t-test or one-way ANOVA, it is crucial to verify the assumption of homogeneity of variance, which requires that the variances of the dependent variables are equal across the levels of the independent variables. From Table 8, Levene's test results show that for Academic Self-Efficacy (ASE) and Examination Anxiety (EA), the assumption of homogeneity of variance is met, with non-significant values for gender (p = .427 and p = .744, respectively). However, for Academic Cheating Behaviour (ACB), the test yielded a significant result (p = .010), indicating unequal variances across genders.

In Table 9, the Welch test was conducted for age as an independent variable. The results show a significant difference in ASE across age groups (p = .000), while no significant differences were found for EA (p = .438) and ACB (p = .151). Thus, the assumption of homogeneity of variance was violated for ACB in the gender comparison but met for the other variables, allowing further analyses using t-tests and ANOVA where applicable.

4.5 Difference in Academic Performance Dynamics among Final-Year SHS Students Based on Gender

Research objective 2 examined the difference in Academic Performance Dynamics among final-year SHS students based on gender. The dependent variables include ASE, EA, and ACB, while the independent variable is gender, consisting of male and female students. An independent sample t-test, at a significance level of .05, was employed to test whether there are significant differences between male and female final-year SHS students in terms of ASE, EA, and ACB. This statistical tool was chosen because the independent variable (i.e., gender) consists of two categories, and the dependent variables (i.e., ASE, EA, and ACB) were normally distributed. The results are presented in Table 10.

Table 10

Difference in Academic Performance Dynamics among Final-Year SHS Students Based on Gender

Variable	Gender	N	Mean	SD	T	df	Sig.
ASE	Male	188	3.85	.49	-2.966	368	.003
	Female	182	4.01	.51			
EA	Male	188	3.26	.56	2.424	368	.016
	Female	182	3.12	.56			
ACB	Male	188	2.69	.94	4.854	358.591	.000
	Female	182	2.26	.77			

The results in Table 10 indicate statistically significant differences in the academic performance dynamics of final-year SHS students based on gender for all three variables: Academic Self-efficacy (ASE), Examination Anxiety (EA), and Academic Cheating Behaviours (ACB). For ASE, female students (M = 4.01, SD = .51) reported significantly higher self-efficacy than male students [M = 3.85, SD = .49; t (368) = -2.966, p = .003]. This suggests that female students have a higher sense of confidence in their academic abilities compared to their male counterparts.

For EA, male students (M = 3.26, SD = .56) experienced significantly higher levels of anxiety compared to female students [M = 3.12, SD = .56; t (368) = 2.424, p = .016]. This indicates that male students are more prone to examination-related anxiety. Regarding ACB, male students (M = 2.69, SD = .94) reported significantly higher engagement in academic cheating behaviours than female students [M = 2.26, SD = .77; t (368) = 4.854, p = .000]. This implies that male students are more likely to engage in academic dishonesty compared to female students.

4.6 Difference in Academic Performance Dynamics among Final-Year SHS Students Based on Age

The aim of objective 3 was to examine the difference in Academic Performance Dynamics among final-year SHS students based on age. One-way ANOVA, at a significance level of .05, was used to test whether there is a significant difference among the age groups of final-year SHS students in terms of ASE, EA, and ACB. This statistical tool was employed because the independent variable (i.e., age) consists of three groups (Below 15 years; 16-20 years; and 21 and above), while the dependent variables (i.e., ASE, EA, and ACB) are normally distributed. The results are presented in Table 11.

Table 11

Difference in Academic Performance Dynamics among Final-Year SHS Students Based on Age

Variable	Age Group	N	Mean	SD	ANOVA					
						Sum of Squares	df	Mean Square	F	Sig.
ASE	Below 15	10	3.27	.48	Between Groups	7.890	2	3.945	16.934	.000
	16-20	352	3.96	.49	Within Groups	85.493	367	.233		
	Above 21	8	3.30	.23	Total	93.383	369			
EA	Below 15	10	3.15	.57	Between Groups	.820	2	.410	1.291	.276
	16 -20	352	3.18	.56	Within Groups	116.596	367	.318		
	Above 21	8	3.50	.66	Total	289.576	369			
ACB	Below 15	10	2.42	.50	Between Groups	4.898	2	2.449	3.157	.044
	16 - 20	352	3.25	.89	Within Groups	284.678	367	.776		
	Above 21	8	2.48	1.03	Total	289.576	369			

The results in Table 11 showed statistically significant differences in ASE among the age groups [F (2, 367) = 16.934, p = .000], indicating that final-year SHS students' ASE levels vary significantly based on age. For EA, however, no statistically significant differences were found among the age groups [F (2, 367) = 1.291, p = .276], indicating that the level of anxiety experienced during examinations is relatively uniform across age groups. Regarding ACB, there was a statistically significant difference among the age groups [F (2, 367) = 3.157, p = .044], suggesting that ACB tendencies differ somewhat across age demographics.

Post-hoc comparisons were conducted to determine where the specific differences lie for ASE and ACB. Since ASE did not meet the homogeneity assumption, Dunnett's T3 test was employed. In contrast, Tukey HSD was run for ACB, as it met the homogeneity assumption. Results are shown in Table 12.

Table 12

Post-hoc Comparisons

Variable	Age (I)	Age (J)	Mean Diff (I - J)	Sig	95% CI
ASE	Below 15 years	16 - 20	-.69	.004	(-1.13, -.25)
		Above 21	-.03	.997	(-.49, .43)
	16 - 20 years	Below 15	.69	.004	(.25, 1.13)
		Above 21	.66	.000	(.42, .91)
	Above 21 years	Below 15	.03	.997	(-.43, .49)
		16 - 20	-.66	.000	(-.91, -.42)
ACB	Below 15 years	16 - 20	-.04	.990	(-.70, .63)
		Above 21	-.83	.119	(-1.81, .16)
	16 - 20 years	Below 15	.04	.990	(-.63, .70)
		Above 21	-.79	.034	(-1.53, -.05)
	Above 21 years	Below 15	.83	.119	(-.16, 1.81)
		16 - 20	.79	.034	(.05, 1.53)

The results in Table 12 show the post-hoc comparisons for ASE and ACB among different age groups. For ASE, significant differences were found between the Below 15 years and 16-20 years groups, with a mean difference of -0.69 ($p = .004$), indicating that students aged 16-20 had higher ASE than those below 15. Additionally, the 16-20 years group also exhibited significantly higher ASE compared to the Above 21 years group (mean difference = .66, $p = .000$). In contrast, there were no significant differences between the Below 15 years and Above 21 years groups (mean difference = -0.03, $p = .997$).

For ACB, no significant differences were found between the Below 15 years and 16-20 years groups (mean difference = -.04, $p = .990$). However, a significant difference was observed between the 16-20 years and Above 21 years groups (mean difference = -.79, $p = .034$), indicating that students aged 16-20 exhibited lower ACB than those above 21. The comparison between Below 15 years and Above 21 years did not yield significant results (mean difference = -.83, $p = .119$). Overall, these findings suggest that age significantly affects ASE, particularly showing an advantage for the 16-20 year-old group, while ACB differences are less pronounced, with only one significant comparison noted between the younger and older groups.

4.7 Discussion

With an emphasis on ASE, EA, and ACB, the study sought to understand the dynamics of academic performance among SHS students in their final year. The findings revealed that students generally exhibit high levels of ASE, indicating a strong belief in their academic capabilities. This aligns with Nasa (2014), who emphasized that a high ASE enhances students' academic performance, as students expressed particular confidence in accomplishing learning objectives and developing necessary skills. However, challenges with time management were noted, suggesting that while students feel capable, they may struggle to manage their study time effectively. Students to a modest extent, according to the results, experience EA and there is a notable degree of response variability. As a negative emotional reaction that hinders evaluative performance, high levels of emotional intelligence (EA) can hurt performance (Matthews et al., 2006). Students' propensity to critically analyse their performance following tests is consistent with research by Khalid (2024), which found a negative correlation between test anxiety and academic achievement. This study emphasizes the emotional upheaval that students experience throughout examinations. In terms of ACB, the study's findings indicated that students largely disapprove of engaging in cheating behaviours.

While some responses indicate a willingness to participate in less severe forms of academic dishonesty, such as sharing notes, more infractions that are serious were generally rejected. This finding supports Zhao et al. (2021), who defined ACB as actions taken to gain unfair academic advantages. Moreover, Lacanlale et al. (2022) demonstrated a positive association between academic performance and lower levels of cheating, emphasizing that fostering a culture of integrity is essential for academic success. The findings of this study also revealed significant gender differences in the academic performance dynamics of final-year SHS students, particularly in ASE, EA, and ACB. Female students reported higher levels of ASE compared to their male counterparts, suggesting greater confidence in their academic abilities. This aligns with Nasa's (2014) assertion that high ASE enhances academic performance, supporting Alzabidi et al. (2024), who established a positive relationship between self-efficacy and academic outcomes. In contrast, male

students showed greater levels of exam anxiety than female students, which is in line with the results of Ray and Negi (2024) that boys are more prone to stress connected to exams. Khalid (2024) also draws attention to the detrimental effects of high EA on scholastic achievement. These findings contradict previous research since Javed and Abiodullah (2021) found that women are more likely than men to feel test anxiety. This highlights the complexity of the problem and the requirement for specialised support approaches.

According to ACB, male students were more likely than female students to participate in academic dishonesty were. This finding is consistent with the findings of Zhao et al. (2021) and Isakov and Tripathy (2017), who reported that men are more likely than women to engage in cheating activities, are. This result emphasises how important it is to provide interventions that support academic integrity, particularly for male students. That is in contrast to Sarkar's research from 2022, which found no gender variations in ACB that were statistically significant. The study also revealed significant age-related differences in ASE among final-year SHS students, with those aged 16-20 demonstrating higher self-efficacy compared to their younger and older peers. This finding aligns with Nasa's (2014) definition of ASE as a crucial factor influencing academic performance, reinforcing the notion that greater self-efficacy correlates with improved outcomes. Studies by Alzabidi et al. (2024) further support this, highlighting the strong positive relationship between self-efficacy and academic success, particularly among students in this age group.

On the other hand, EA did not exhibit statistically significant variations among age groups, suggesting that students generally experienced test-related stress. This is in line with other studies by Khalid (2024), Javed, and Abiodullah (2021), who did not discover any appreciable differences in anxiety levels among age groups. There were notable variations in ACB, with students between the ages of 16 and 20 showing less cheating than those above the age of 21. The present study bolsters the conclusions drawn by Zhao et al. (2021) and Ossai et al. (2023) about the significance of cultivating academic integrity in senior high school students. When taken as a whole, these findings demonstrate the intricate interaction between demographic variables and the dynamics of academic achievement among SHS students in Ghana.

V. CONCLUSIONS & RECOMMENDATIONS

5.1 Conclusions

In conclusion, this study highlights the critical role of ASE, EA, and ACB in shaping the academic performance of final-year SHS students. The findings indicated that students possess high levels of ASE, which correlates positively with their academic capabilities, yet they face challenges in time management. Although students experience modest levels of EA, the variability in responses suggests that emotional intelligence plays a significant role in academic performance. The study also found that while students largely reject serious forms of academic dishonesty, gender differences reveal that female students exhibit higher self-efficacy and lower exam anxiety compared to their male counterparts.

5.2 Recommendations

In light of these findings, it is recommended that educational stakeholders, such as the Ministry of Education and school officials, put programmes in place targeted at improving ASE and controlling EA in students, with a special emphasis on male students who exhibit greater levels of exam anxiety. Students can learn efficient time management techniques and emotional control techniques through workshops and counselling sessions. In addition, it will be crucial to promote an academic integrity culture through integrity seminars and awareness campaigns, especially for male students who are more likely to commit academic dishonesty. By encouraging moral academic behaviour across Ghana's educational system, this all-encompassing strategy can enable students to achieve better academic results.

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