**Abstract**  
This study investigates the effect of age and gender on academic performance among Junior High School students at Marakaz Islamic in the West Mamprusi District of Ghana. The research employs a quantitative approach using a cross-sectional descriptive and correlational design. A sample of 75 students was selected through stratified random sampling. Data was collected through structured questionnaires and student academic records from the 2024/2025 academic year. Statistical analyses, including descriptive statistics, Pearson correlation, independent samples t-tests, and multiple regression, were conducted using SPSS. Results indicated a moderate positive correlation between age and academic performance. Gender was not found to significantly influence performance, although female students showed slightly higher average scores. The findings suggest that maturity associated with age may play a role in academic success. Recommendations include implementing age-sensitive teaching strategies and gender-inclusive learning support. These findings have implications for educational planning and policy, particularly in Islamic junior high schools.

The academic performance of students is influenced by various factors, including age and gender. This study focuses on Junior High School students at Marakaz Islamic in the West Mamprusi District, aiming to understand how these two variables affect educational outcomes.

Using a quantitative research design, the study analyzed data from 75 students selected through stratified random sampling. Structured questionnaires and academic records from the 2024/2025 academic year provided the necessary data for analysis. The results revealed a moderate positive correlation between age and academic performance, suggesting that older students may benefit from increased maturity and cognitive development.

Interestingly, gender did not significantly impact academic performance. However, female students exhibited slightly higher average scores compared to their male counterparts. This finding aligns with previous research indicating that girls often outperform boys in academic settings (Miller & Hoffer, 2018).

The implications of these findings are significant for educational policy and practice. It is recommended that educators implement age-sensitive teaching strategies that cater to the developmental stages of students. Additionally, fostering a gender-inclusive learning environment can help support all students in achieving their academic potential.

In summary, understanding the effects of age and gender on academic performance can guide educators in creating effective learning environments that promote success for all students.

# **Introduction**

# **2.1 Background of the Study**

Academic performance is a vital indicator of the effectiveness of educational systems, particularly in Ghana, where the junior high school (JHS) stage serves as a crucial transition from basic education to secondary schooling. This period is essential for shaping students' future academic and occupational trajectories. Understanding the factors that influence academic performance is therefore imperative for educators and policymakers.

Among the various determinants of student performance, age and gender stand out as significant variables. Younger students may struggle with the maturity required to meet academic demands, potentially leading to lower performance levels. Conversely, older students might encounter social or emotional challenges that can hinder their academic success. Research indicates that age-related differences can affect cognitive development and learning styles, which in turn influence academic outcomes (Eccles & Roeser, 2011).

Gender also plays a critical role in academic performance, shaped by societal norms and expectations. Studies have shown that boys and girls may experience different levels of encouragement and support from teachers and peers, which can impact their academic achievements (Sadker & Sadker, 1994). At Marakaz Islamic school, a faith-based school in the West Mamprusi District, educators have expressed concerns regarding the diverse age range of students and its potential effects on learning. Additionally, gender-related performance issues have been noted, yet empirical evidence in this specific context remains scarce.

This case study aims to explore the interplay between age and gender in influencing academic performance among junior high school students at Marakaz Islamic school. By examining these factors, the study seeks to provide valuable insights that can inform targeted interventions to enhance educational outcomes in the West Mamprusi District.

# **The Statement of Research Problem**

The academic performance of students is influenced by various factors, among which age and gender are often highlighted. At Marakaz Islamic Junior High School (JHS) in the West Mamprusi District, anecdotal evidence from teachers and parents suggests that these variables may significantly impact student outcomes. However, a structured study has yet to be conducted to quantify these effects. This gap in research presents a critical opportunity to explore how age and gender differences manifest in academic performance.

Understanding the relationship between age and academic performance is essential. Research indicates that older students often exhibit better performance due to increased maturity and life experience (Eccles & Roeser, 2011). Conversely, younger students may struggle with the demands of the curriculum, potentially leading to lower academic achievement. This phenomenon raises questions about the appropriateness of the educational content and teaching methods employed at Marakaz Islamic JHS, particularly for younger students.

Gender differences in academic performance have also been widely documented. Studies show that boys and girls may excel in different subjects, with girls often outperforming boys in language arts and boys showing strengths in mathematics and science (Miller & Hoffer, 2015). At Marakaz Islamic JHS, it is crucial to investigate whether these trends hold true and how they might inform teaching strategies tailored to the needs of both genders.

By conducting a comprehensive study on the effects of age and gender on academic performance at Marakaz Islamic JHS, educators can gain valuable insights. These findings will not only enhance understanding but also guide the development of responsive teaching methods and support strategies that cater to the diverse needs of students. Ultimately, addressing these factors can lead to improved educational outcomes and a more equitable learning environment.

### **2.3 Objectives of the Study**

#### **General Objective:**

To examine the effect of age and gender on academic performance among Junior High School students at Marakaz Islamic.

#### **Specific Objectives:**

1. To determine the relationship between students’ age and academic performance.
2. To assess gender differences in academic performance.
3. To explore whether age moderates the relationship between gender and academic performance.

### **2.4 Research Questions**

1. What is the relationship between age and academic performance?
2. How does gender affect academic performance?
3. Does age moderate the relationship between gender and academic performance?

### **2.5 Hypotheses**

* **H₀₁**: There is no significant relationship between age and academic performance.
* **H₀₂**: There is no significant difference in academic performance between male and female students.
* **H₀₃**: Age does not significantly moderate the relationship between gender and academic performance.

**Significance of the Study**

The significance of this study extends to multiple stakeholders in the educational landscape. For teachers, the findings will provide essential insights that can guide the implementation of differentiated instruction. By recognizing the unique learning needs associated with different ages and genders, educators can tailor their teaching strategies to enhance student engagement and achievement.

School leaders will also benefit from this research. The data gathered will assist in promoting equity and inclusion within the school environment. By understanding the specific challenges faced by different demographic groups, school administrators can develop targeted interventions that support all students, ensuring that no group is left behind.

Policymakers stand to gain valuable information from this study as well. The insights derived from the research can inform gender-responsive and age-appropriate curriculum reforms. By aligning educational policies with the needs of diverse student populations, policymakers can create a more inclusive educational framework that addresses the unique challenges faced by junior high school students.

Finally, this study will serve as a foundation for future research in similar contexts. By documenting the relationship between age, gender, and academic performance, it opens avenues for further exploration into how these factors interact in different educational settings.

In summary, the investigation into the effects of age and gender on academic performance at Marakaz Islamic School is not only significant for immediate educational practices but also for long-term policy development and research initiatives.

### **Scope and Limitations**

#### **Scope**

* The study focuses on JHS students at Marakaz Islamic in the 2024/2025 academic year.
* Academic performance is measured using term examination scores.

#### **Limitations**

* Findings may not be generalizable beyond this school.
* Other influencing factors such as parental income, teacher quality, and study habits are not considered.

## **. Literature Review**

### **3.1 Theoretical Framework**

* **Jean Piaget’s Cognitive Development Theory**:

The academic performance of junior high school students is influenced by various factors, including age and gender. This essay explores these influences through the lens of Jean Piaget’s Cognitive Development Theory, which posits that children’s cognitive abilities develop in stages. According to Piaget, older children exhibit more advanced logical thinking skills, which can enhance their academic performance (Piaget, 1972).

In the context of Marakaz Islamic in the West Mamprusi District, age plays a crucial role in determining students' academic success. As students progress through their educational journey, they transition from concrete operational thinking to formal operational thinking, allowing them to engage in abstract reasoning and problem-solving. This cognitive advancement is particularly significant during the junior high school years, where subjects become more complex and require higher-order thinking skills. Research indicates that older students often outperform their younger peers due to these cognitive developments (Kuhn, 2000).

Gender also significantly impacts academic performance. Studies have shown that boys and girls may approach learning differently, influenced by societal expectations and educational practices. For instance, girls often excel in language arts and social studies, while boys may perform better in mathematics and science (Hyde, 2005). This divergence can be attributed to both biological factors and socialization processes that shape interests and learning styles.

The case study of Marakaz Islamic highlights the interplay between age and gender in academic performance. By examining these factors, educators can develop targeted strategies to support all students, ensuring that both age and gender differences are acknowledged and addressed. Understanding these dynamics is essential for fostering an inclusive and effective learning environment.

* **Gender Schema Theory (Bem, 1981)**:

The academic performance of junior high school students is influenced by various factors, including age and gender. This case study of Marakaz Islamic in the West Mamprusi District aims to explore these influences through the lens of Gender Schema Theory, proposed by Sandra Bem in 1981. This theory posits that individuals internalize societal beliefs about gender roles, which can significantly affect their academic engagement and self-perception, particularly in subjects such as mathematics and language.

Gender Schema Theory suggests that children develop cognitive frameworks that shape their understanding of gender roles. These frameworks influence how they perceive their abilities in different academic subjects. For instance, boys may feel more encouraged to excel in mathematics due to societal expectations, while girls might be steered towards language arts. This internalization can lead to a self-fulfilling prophecy, where students perform according to the expectations set by their gender schemas (Bem, 1981).

In the context of Marakaz Islamic, the interplay between age and gender becomes particularly relevant. As students progress through junior high, they undergo significant cognitive and emotional development. This maturation can either reinforce or challenge existing gender schemas. For example, older students may begin to question traditional gender roles, leading to shifts in their academic performance. Research indicates that as students age, their academic interests may diversify, allowing for a more equitable distribution of performance across genders (Eccles et al., 1993).

Understanding the effects of age and gender on academic performance is crucial for educators and policymakers. By recognizing the influence of societal beliefs and developmental changes, interventions can be designed to promote a more inclusive academic environment. This case study highlights the importance of addressing these factors to enhance educational outcomes for all students at Marakaz Islamic.

# **Empirical Review**

# **Age and Academic Performance**

Research has consistently shown that age plays a crucial role in academic performance. Mlambo (2011) found that older students often outperform their younger counterparts in academic assessments. This trend can be attributed to the higher maturity levels and cognitive development that typically accompany age. Older students are generally better equipped to handle the complexities of academic tasks, leading to improved performance in examinations and classwork.

However, it is essential to consider the potential drawbacks of being an older student. Yeboah (2020) notes that excessively older students may experience social stigma and feelings of disengagement from their peers. This social dynamic can negatively impact their motivation and overall academic performance. Therefore, while age can be an advantage, it can also present challenges that must be addressed to foster a supportive learning environment.

Gender also plays a significant role in academic performance. Studies have shown that boys and girls may exhibit different strengths in various subjects, influenced by societal expectations and educational practices. Understanding these differences is vital for educators aiming to create equitable learning opportunities for all students.

In the context of Marakaz Islamic, it is crucial to analyze how age and gender interact to shape academic outcomes. By recognizing the unique challenges and advantages presented by these factors, educators can implement targeted strategies to enhance student performance and engagement.

Overall, the interplay of age and gender in academic performance among junior high school students is a complex issue that warrants further investigation. Addressing these factors can lead to improved educational practices and outcomes in the West Mamprusi District

**Gender and Academic Performance**

Research indicates that gender plays a significant role in academic achievement. In Ghana, studies have shown that girls often excel in language subjects, while boys tend to perform better in mathematics and science. Mensah and Atta (2019) highlight that these trends are not uniform and can vary based on cultural and social contexts. For instance, in some communities, traditional gender roles may discourage girls from pursuing subjects perceived as masculine, such as science and technology. This cultural backdrop can lead to disparities in academic performance between genders.

Moreover, age is another critical factor affecting academic outcomes. As students progress through junior high school, their cognitive abilities and emotional maturity evolve. Younger students may struggle with the increased academic demands compared to their older peers, who often exhibit better time management and study skills. This developmental aspect is crucial in understanding the performance variations among students of different ages.

The interplay between age and gender further complicates the academic landscape. For example, older boys may have an advantage in subjects like mathematics due to increased confidence and experience, while older girls may excel in languages, benefiting from their advanced communication skills.

In summary, the academic performance of junior high school students at Marakaz Islamic is shaped by both age and gender. Understanding these dynamics is essential for educators and policymakers to create supportive learning environments that cater to the diverse needs of all students.

# **3 Literature Gaps**

The academic performance of students is influenced by various factors, including age and gender. However, there is a notable lack of research focusing on Islamic schools in rural Ghana, particularly in the West Mamprusi District. This study aims to fill this gap by examining the specific cultural and religious context of Marakaz Islamic School, providing insights into how these factors affect student performance.

Previous studies have highlighted the importance of age in academic achievement, suggesting that older students often perform better due to increased maturity and experience (Miller, 2020). However, the intersection of age and gender has not been thoroughly explored in the context of Islamic education in rural settings. Research by Adamu (2021) indicates that gender disparities in education persist in many parts of Ghana, with boys often outperforming girls. This study seeks to investigate whether these trends hold true in the unique environment of Marakaz Islamic School.

Furthermore, the cultural and religious values inherent in Islamic education may play a significant role in shaping academic outcomes. The emphasis on discipline, respect, and community support within Islamic teachings could potentially mitigate the negative effects of age and gender disparities. By focusing on Marakaz Islamic, this research will provide a nuanced understanding of how these factors interact within a specific cultural framework.

In summary, this study addresses critical literature gaps by focusing on the academic performance of junior high school students in an Islamic school setting in rural Ghana. By examining the effects of age and gender within the context of Marakaz Islamic, the research aims to contribute valuable insights to the field of educational studies, particularly in underrepresented areas.