Learner autonomy as a predictor of critical thinking in religious and moral education: Evidence from junior high schools in Cape Coast, Ghana

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ABSTRACT

Developing learners who can think independently, evaluate evidence, and make reasoned moral decisions is a central concern of contemporary education. In Religious and Moral Education (RME), these competencies are particularly significant because learners encounter diverse religious beliefs, moral positions, and competing interpretations that require reflective judgement rather than passive acceptance. Drawing on the proposition that autonomy provides learners with opportunities to exercise agency, self-direction, and independent judgement, this study examined the relationship between learner autonomy and critical thinking among Junior High School (JHS) RME students in the Cape Coast Metropolis of Ghana. Premised on Piaget's Theory of Cognitive Development, the study assessed students' levels of autonomy and critical thinking and determined the extent to which autonomy predicted critical-thinking ability. A quantitative cross-sectional survey design was employed. Data were collected from 225 JHS students using a structured questionnaire comprising measures of autonomy adapted from the Arc's Self-Determination Scale and critical thinking adapted from the Critical Thinking Questionnaire. The instruments demonstrated acceptable internal consistency, with an overall Cronbach's alpha of .806. Descriptive statistics and simple linear regression were used to analyse the data. The findings indicated that students demonstrated a moderate level of autonomy, while their overall level of critical thinking was high. Students showed relative strengths in recalling, interpreting, discussing, justifying, and connecting RME ideas, but were comparatively less proficient in evaluating information, verifying sources, and identifying relevant evidence. Regression analysis revealed that learner autonomy was a statistically significant positive predictor of critical thinking, $\beta = .326$, $t(223) = 5.150$, $p < .001$, explaining 10.6% of the variance in critical-thinking scores. The findings suggest that learner autonomy constitutes an important, though not sufficient, condition associated with the development of critical thinking in RME. The study therefore advocates learner-centred, inquiry-oriented, dialogical, reflective, and problem-based pedagogies that strengthen students' agency and provide opportunities to evaluate evidence, interrogate alternative perspectives, justify conclusions, and make independent moral and religious judgements. The study contributes empirical evidence from Ghana to ongoing scholarship on autonomy and higher-order thinking within religious and moral education.

Keywords: Autonomy, Critical thinking, Learner-Centred Pedagogy, Religious and Moral Education, Students

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I. INTRODUCTION

Autonomy is the ability to think, feel and act independently thus making appropriate decisions consistent with one's own beliefs and values. Autonomy can also be explained as a state of independence and self-regulation, with the ability to make choices that promote development and personal happiness. Critical thinking on the other hand involves a systematic and objective evaluation of information, ideas, and arguments, using analysis, reasoning, and evidence to develop well-supported conclusions and make informed decisions. Kantor (2017) emphasise that autonomy is an essential element in promoting intrinsic motivation, which is characterised by genuine interest and enjoyment in activities. Lipman's (2020) work promotes critical thinking and autonomy in education, which aligns with the objectives of Religious and Moral Education (RME) for junior high school students. His research encourages students to think independently, question assumptions, and explore ideas critically, fostering autonomy and critical thinking in RME. When individuals experience, they feel autonomous and in control of their actions and decisions leading to higher levels of engagement and motivation, Patall and Zambrano (2019) has highlighted the importance of learner autonomy and its potential to promote development and improve learning outcomes. She said current teaching systems in many African contexts do not fully support student autonomy by often prioritising rote learning over critical thinking and creativity. Nneji suggested that education should promote the independence of students by allowing them to explore their curiosity and creativity.

In the context of RME among Junior High School students, Wahab (2018) highlights the importance of autonomy and critical thinking skills. By adopting a student-centred approach, teachers can foster autonomy and critical thinking in learners, promoting independence, and self-motivation. Additionally, the development of critical thinking and autonomy enables the students to analyse complex issues, evaluate evidence, and form informed opinions. Mwansa (2021) further highlights the importance of autonomy and critical thinking in promoting independent learning and informed decision-making among JHS Students. While Wahab's work stressed the need for contextualizing RME content, Mwansa's research underscores the significance of creating a supportive learning environment that fosters critical thinking and autonomy among JHS Students. Siege's (2004) work on critical thinking and autonomy in education aligns with the findings of Wahab (2018) and Mwansa (2021) in the context of RME. Siege's research emphasizes the importance of encouraging students to question and challenge assumptions, fostering critical thinking and autonomy.

Lipman (2020) also promotes critical thinking and autonomy in education, which aligns with the objectives of RME for junior high school students. His research encourages students to think independently, question assumptions, and explore ideas critically, fostering autonomy and critical thinking in RME. Teachers can create a supportive learning environment that encourages critical thinking, creativity, and informed decision-making among Junior High School students, building on the findings of Wahab (2018) and Mwansa (2021). This empowers students to become self-directed learners and thinkers, prepared for academic success and lifelong learning.

Moreover, Ugwuanyi's (2021) study also promotes autonomy and critical thinking in RME among Junior High School students by advocating for student-centred learning and problem-solving activities that encourage reflective thinking and critical inquiry. His research empowers JHS students to think independently, make informed decisions, and develop moral and ethical reasoning, aligning with the objectives of RME. Through Ugwuanyi's research, teachers can foster a supportive learning environment that promotes critical thinking, creativity, and student autonomy. Furthermore, in Ghana, Oku and Xenyo (2025) study highlights the importance of autonomy and critical thinking in RME among Junior High School (JHS) students. His work emphasizes the need for student-centred approaches, encouraging students to think critically and make informed decisions. He also believes that independence is salient for students' motivation and learning outcomes. In addition, Oku and Xenyo (2025) study on autonomy and critical thinking in Ghana makes a significant contribution of critical thinking in Education. Their work focuses on the importance of cultivating critical thinking skills in school to improve student outcomes and prepare them for success in the complex world. In addition, Fatmawati et al, (2019) conducted a study on the impact of students' critical thinking on learning outcomes. Their results showed that students who received critical thinking instruction performed better than their peers did. Mensah (2018) investigated the relationship between critical thinking and autonomy in the context of RME in Junior High School in Ghana.

The research shows that students who receive critical thinking instruction in RME classes show higher levels of autonomy and critical thinking skills than students who do not receive such instruction. A vital question that all educators working in different curriculum areas (including Religious Education) should constantly ask is that does critical thinking and autonomy seen in the curriculum.

This research examined the notions of critical thinking and autonomy, differentiating between autonomy as a concept in students and critical thinking as a liberal aim of education. In Ghana, Konadu et al. (2026) identifies challenges to developing critical thinking and autonomy in RME. These include the lack of technology integration on RME's effectiveness in promoting autonomy and critical thinking, untrained teachers, limited resources, and a focus on memorisation. The study recommended that the Ministry of Education and Ghana Education Service should ensure that

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technology is integrated into teaching RME, also, RME as a subject should be taught by professional teachers with an education background and should organise in-service training for teachers, curriculum reform, real-life example, students- led discussion and reflection opportunities. These strategies can foster critical thinking and autonomy in RME, promoting intellectual and personal growth. Considering this discovery, the current study wished to investigate how autonomy and critical thinking through Religious and Moral Education among junior high school students in the Cape Coast Metropolis.

1.1 Statement of the Problem

Today's education system faces the discouraging task of not only imparting knowledge but also empowering students with the skills of critical thinking, autonomy, and ethical decision-making. In the context of RME, the question arises as to whether current pedagogical approaches effectively contribute to the development of autonomy and critical thinking skills in students (Jawoniyi, 2015). Despite the significance of RME in fostering autonomy and critical thinking among Junior High School (JHS) students, research has revealed several concerns. Konadu et al. (2026) has shown that JHS students in Ghana lack critical thinking skills, which are lifelong Secondly, RME teaching methods in Ghanaian schools tend to be traditional and teacher-centred, limiting students' autonomy and critical thinking development Wahab (2018). Limited technology integration, there is a lack of research on the effectiveness of technology integration in RME to promote autonomy and critical thinking among JHS students in the Cape Coast Metropolis (Mensah, 2018; Mensah, 2017; Mensah et al, 2025). Again, there is a dearth of research on the promotion of autonomy and critical thinking through RME in the Cape Coast Metropolis, making it challenging to understand the specific needs and contexts of JHS students in this region. Lastly, there are different opinions and ways of teaching autonomy and critical thinking in RME. Teachers and educators have varying beliefs about how important these skills are in the RME curriculum, which leads to different teaching methods and inconsistent approaches across schools.

There is a disconnection between talking about the benefits of RME for autonomy and critical thinking and teaching these skills in the classroom. To make RME more effective, we need to move from just discussing ideas to developing practical strategies for teaching. The research aimed to bridge these gaps providing valuable insights to improve the RME Curriculum and teaching methods so that students receive not only moral and religious knowledge but also the critical thinking and ethical skills necessary to succeed in a complex and changing world. The purpose of the study was to examine how the teaching of RME promotes autonomy and critical thinking of JHS students in the Cape Coast Metropolis.

1.2 Research questions

i. What is JHS RME students' level of autonomy?
ii. What is JHS RME students' level of critical thinking?

II. LITERATURE REVIEW

2.1 Theoretical Review

2.1.1 Piaget's Theory of Cognitive Development

Piaget's Theory of Cognitive Development proposes that individuals progress through four stages of cognitive development: Sensorimotor, Preoperational, Concrete Operational, and Formal Operational. Each stage represents a unique way of thinking and understanding the world. The theory helps in understanding cognitive development. Piaget's theory provides a framework for understanding how individuals construct knowledge and develop critical thinking skills. In addition, this theory informs age-appropriate education. Piaget's stages guide educators in designing age-appropriate lessons that align with students' cognitive abilities. It encourages critical thinking; Piaget's theory emphasizes the importance of active learning, exploration, and discovery, promoting critical thinking and problem-solving skills. Piaget's theory encourages students to take ownership of their learning, fostering autonomy and self-directed learning. In contrast, Piaget's theory has its limitations. These include stage-based limitations. His theory suggests that students progress through stages in a linear fashion, which may not accurately represent individual differences and variations in cognitive development. The stages are not rigidly defined, and students may progress at different rates, making it challenging to determine exact stage transitions. His theory focuses primarily on cognitive development, overlooking the impact of social and emotional factors on learning. The relevance of this theory to the research can be seen in the points below:

Piaget's theory promotes critical thinking skills, essential for exploring complex religious and moral concepts. Secondly, it encourages students to take ownership of their learning to promote autonomy in RME. Moreover, Piaget's stages guide educators in designing age-appropriate RME lessons that cater to students' cognitive abilities. Lastly, considering the cultural and contextual limitations of Piaget's theory, educators can adapt RME to diverse cultural settings, ensuring relevance and effectiveness. A pedagogy that emphasizes inquiry, dialogue, and critical reflection is

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more likely to promote autonomy and critical thinking than one that focuses on rote memorization and dogmatic instruction (Yifiey, 2018). The literature suggested that RME has the potential to promote autonomy and critical thinking among students.

2,.2 Empirical Review

2.2.1 JHS RME Students' Level of Autonomy

Concept of learner autonomy has been defined in diverse ways. Holec (1981) initially defined it as the ability to take charge of one's learning. Littlewood (1996) expanded this notion by introducing two key components: learners' ability and willingness to make independent choices. Similarly, Benson (2008) emphasized autonomy as the capacity to take control of one's learning, driven by a combination of desire, ability, and freedom. In the context of today's technology-driven era, learner autonomy has evolved to encompass the ability to manage one's learning within socially mediated and technology-enhanced environments (Chakim et al., 2026). Learner autonomy has been a significant focus in the field of foreign language learning and teaching for over four decades. It has garnered increasing attention from educators, teachers, Practitioners, and policymakers, as autonomous learning is considered a crucial component of lifelong learning. Facilitating the development of learner autonomy is a fundamental responsibility of English teachers, prompting the creation of policies and curricula in various countries to promote autonomy at the classroom level (e.g., Benson, 2013; Little et al., 2002; Boyadzhieva, 2016). The promotion of students' autonomous motivation is increasingly regarded as a distinct aim of classroom instruction (Ushioda, 2011) and education in general (Ryan & Powelson, 1991). It positively affects not only academic achievement but also learning quality and students' well-being by fostering their natural curiosity, the development of personal interests, and inherent growth tendencies (Bhardwaj et al., 2025). First, educational research has examined how students' perceptions of instructional characteristics (e.g., autonomy) affect outcomes such as motivation and achievement, primarily at the interindividual level. Regarding perceived autonomy support, research has largely focused on whether students who perceive more autonomy support than their peers are also more motivated and achieve higher performance. An understanding of motivational processes can be seen as particularly relevant for (visual) art education, due to the important role of autonomous motivation in creative and artistic contexts. (Jaquith, 2011; Rostan, 2010). It not only promotes students' engagement in artistic practices in the classroom but also increases the likelihood that adolescents participate in extracurricular cultural activities (Bundick, 2011). It can therefore be assumed that autonomous motivation of students is a key prerequisite for realizing the diverse educational potentials that art education can offer. RME supports students' autonomy when learners are allowed to question beliefs and form independent moral judgments. Giving students space for discussion and reflection encourages self-directed thinking and responsibility for their own views, which strengthens both autonomy and critical thinking skills (Van Woezik et al., 2019).

2.2.2 JHS RME Students' Level of Critical Thinking

Education plays a crucial role in preparing future generations of the nation who are of high quality and ready to face the challenges of the future (Purwanto, 2023). Along with the changing times, rapid technological advancements require education to continually evolve and produce individuals with high-quality skills, capable of thinking critically, creatively, Systematically, and possessing problem-solving abilities, as well as having good morals (Putra et al., 2020). Critical thinking ability plays a vital role, as it can be used to address problems and serve as a consideration in making appropriate decisions (Gambrill, 2006). Critical thinking is a process aimed at making rational decisions concerning beliefs and actions taken (Fisher & Scriven, 2001). Twenty-first century education requires students to possess higher-order thinking skills and strong learning resilience. The ability to think critically and the capacity to remain resilient in the face of academic challenges are two essential aspects that must be developed in tandem. Critical Thinking is required to analyze information, evaluate strategies, and draw conclusions based on logical and objective evidence (Facione, 2011). Critical thinking among students is "reasonable and reflective thinking focused on deciding what to believe or do" (Ennis, 2011). Numerous studies indicate that Indonesian students' critical thinking ability, particularly at the secondary school level, remains low (Aji et al., 2023; Fitriani et al., 2022). In addition, students' learning resilience is also relatively weak, as reflected in low motivation, a tendency to give up easily, and limited active participation in classroom activities (Skinner et al., 2014). These findings highlight the need for learning models that are capable of fostering critical thinking ability. RME encourages students to construct conceptual understanding gradually by exploring, modelling, and symbolizing the contextual situations their encounter. This approach has been proven effective in creating a reflective, contextual, and engaging learning environment, while also encouraging students to think logically and remain resilient when dealing with complex problems (Brown et al., 2001). Previous studies have shown that RME have emphasized conceptual exploration through real-world contexts (Jamil, 2024). RME students show that instructional strategies significantly influence students' reasoning abilities. Research indicates that when teachers employ discussion-based and inquiry-oriented approaches, students demonstrate improved skills in analyzing

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religious concepts, evaluating arguments, and making reasoned moral judgments. In contrast, traditional lecture methods that emphasize memorization tend to limit the development of critical thinking skills among learners (Ironside, 2005).

2.2.3. Effect of JHS RME Students' Level of Autonomy on Their Level of Critical Thinking

The 21st century education landscape demands learners who can think critically, solve problems creatively, and take responsibility for their own learning (Sawyer, 2019). In the context of primary education, these competencies form the foundation for lifelong learning and adaptation to the rapidly changing world. Traditional teacher-centered methods, which emphasize memorization and rote learning, are no longer adequate to nurture students' higher-order thinking skills. As a result, there is a growing need for learning models that promote inquiry, reasoning, and autonomy among young learners. In Indonesia, educational reform under the Kurikulum Merdeka emphasizes the importance of developing students' critical thinking and learning autonomy from early stages of schooling. This paradigm shift aligns with global educational trends that prioritize active learning and student-centered instruction (Allayarova, 2025). However, many elementary schools, especially in rural areas such as Bram Itam District, still face challenges in implementing these approaches effectively. Limited resources, conventional classroom routines, and teachers' lack of training in innovative pedagogies often hinder the development of critical and independent learner. By engaging students in real-world problems and encouraging collaborative exploration, allows learners to construct knowledge meaningfully rather than passively receive information. Prior studies have demonstrated that problem-based learning enhances not only cognitive outcomes but also affective domains such as motivation, confidence, and self-regulation (Sungur & Tekkaya, 2006; Arani, 2025).

Therefore, implementing PBL in elementary classrooms may serve as a powerful tool to bridge the gap between curriculum expectations and classroom realities. In the context of Bram Itam, where students often rely heavily on teacher direction, the integration of PBL represents a significant pedagogical innovation. It provides opportunities for students to think independently, analyze information critically, and take initiative in the learning process. Students' learning autonomy also increased substantially, as reflected in their ability to plan, monitor, and evaluate their own learning. Observation data indicated that 82% of students in class actively participated in discussions and sought information independently, compared to 57% in the control class, supporting Abdullah et al. (2012) view that critical thinking develops through autonomy and self-regulated learning and reflection. These quantitative results were reinforced by teacher interviews, which revealed increased student confidence, proactivity, and responsibility. Key indicators of meaningful cognitive and affective engagement within a constructivist learning framework (Anthony, 1996). When RME students have more autonomy, their critical thinking improves because they are able to question ideas and form their own judgments. Student-centred learning such as discussion and inquiry helps them reason and evaluate religious and moral issues better (Sangwa, 2025). Autonomy also makes students more independent in learning, which strengthens their ability to think and make decisions on their own (Facione, 2011).

III. METHODOLOGY

3.1 Research Design

The positivism paradigm gave a solid ground and framework that guided the investigation of the effect of RME students' autonomy on their critical thinking ability. The positivism paradigm is characterized by the following key principles: objectivity, empiricism, and determinism. This study was conducted using the cross-sectional research design procedures (Bryman, 2016). The design has procedures that enable the collection of quantitative data to determine patterns in human behaviour (Park et al., 2020).

3.2 Study Area

The study was conducted in the Cape Coast Metropolis in the Central Region of Ghana. Cape Coast Metropolis is widely recognised as an educational hub due to its concentration of well-established basic schools. The study was conducted on 20 basic school (Junior High Schools) in the metropolis. Data on these schools was obtained from the Ghana Education Service metropolitan office. Religious and Moral education is one of the compulsory subjects studied by students in these schools. The metropolitan area is populated with people from diverse religious backgrounds especially, Christianity, Islam and African Traditional Religion. These make conducting the study in this area appropriate.

3.3 Population and sampling

The population of the study was all 736 JHS students in the Cape Coast Metropolis. A sample size of 225 was selected for the study using the proportionate simple random sampling technique (Noor et al., 2022). This sampling technique ensured every student in the population had an equal chance to be selected based on the number in their respective schools. This approach helped to minimize bias and ensure representativeness. The researchers using the

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probability sampling technique benefitted as it helped to increase the accuracy of the results and reduce bias in the selection of the students.

3.4 Data Collection Instrument and Procedures

Based on the research design, questionnaires were used to collect data for this research. As a mechanism for obtaining information and opinions, questionnaires have several advantages and disadvantages when compared with other evaluation tools. The questionnaire was made up of three main sections. Section A collection demographic information on the students. Section B measured students' level of autonomy. The items for measuring students' level of autonomy was adopted from the Arc's Self-Determination Scale developed by Wehmeyer, and Kelchner (1995). The scale has 72 items and is divided into four sections: Autonomy, Self-Regulation, Psychological Empowerment and Self-Realization. The 32 items measuring autonomy were measured on a 4-point Likert scale. Section C focused on measuring students' level of critical thinking. This section was made up of 25 items adopted from the Critical Thinking Questionnaire (CThQ) developed by Kobylarek, et al. (2022). These items were measured on a 5-point Likert scale.

In response to Chandran and Wee (2021) who insist on the need for the researchers to observe the principle of ethics when conducting research, an introductory letter and a permission letter from GES were sent to all the schools within the Cape Coast Metropolis, seeking official permission to conduct the study within their institution. Verbal informed consent was obtained from students after the rationale for the study was explained to the respondents, ensuring they were fully aware of the study's purpose, the voluntary nature of their participation, and their right to withdraw at any time without any consequences. Additionally, strict confidentiality and anonymity were maintained for all participants. Their personal information was securely stored and used solely for research purposes, with all identifiers removed in publications. Informed consent was obtained from all participants.

3.5 Validity and Reliability

The survey questionnaire was pilot-tested to find and fix any problem with the relevance, comprehensibility, and clarity of the survey items. furthermore, routine oversight and monitoring of data-gathering operations is carried out to guarantee compliance with set guidelines and standards. items having low validity and reliability indicators were removed as they were used to measure a construct. according to Cronbach 1951, Cronbach alpha (ca) was used to evaluate the factors' validity and reliability; a cut-off of 0.7 is required.

3.6 Data Analysis

The data obtained with the questionnaire was analysed quantitatively. Descriptive statistics was used to show frequencies, percentages, means and standard deviation. Simple linear regression was employed to analyse the influence of autonomy on critical thinking. The Statistical Package for Social Sciences (SPSS Computer Software) version 27 was used to analyse the quantitative data.

3.7 Ethical Consideration

This study prioritised ethical considerations through comprehensive measures to protect participants' rights and dignity. Initial approval was obtained from the University of Cape Coast's Institutional Review Board and Department of Arts Education. The research team emphasised participant privacy and anonymity, implementing verbal consent procedures to facilitate open communication. Students were informed that participation was voluntary, with the right to withdraw at any time, and that data would be used solely for academic purposes. These ethical safeguards aimed to create an environment conducive to honest participation while maintaining data integrity and participant trust. The careful attention to ethical protocols enhanced both the study's ethical standing and data quality. Written informed consent was subsequently obtained.

IV. FINDINGS & DISCUSSIONS

4.1 Demographic Characteristics of respondents

The section of the results details the demographic characteristics of the respondents who participated in the study

Table 1

Demographic Characteristics of Students (n= 225)

Variable	Subscale	No	%
Sex	Male	119	52.9
	Female	106	47.1
Age	13 years	10	4.4
	14 years	65	28.9

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	15 years	83	36.9
	16 years	37	16.4
	17 years	23	10.2
	18 years	7	3.1

Table 1 presents the demographic characteristics of the 225 students who participated in the study. Regarding sex**,** 119 (52.9%) were male, while 106 (47.1%) were female**,** indicating a relatively balanced representation of male and female students, although males constituted a slightly larger proportion of the sample. With respect to age, the students ranged from 13 to 18 years. The largest proportion were 15 years old (36.9%), followed by those aged 14 years (28.9%) and 16 years (16.4%)**.** Students aged 17 years constituted 10.2%**,** while those aged 13 and 18 years represented 4.4% and 3.1%**,** respectively. Overall, the distribution suggests that the sample was predominantly composed of students aged 14–16 years (82.2%)**,** indicating that most participants were within the typical adolescent age range for the educational level studied. The relatively balanced sex distribution and concentration of participants within the middle adolescent age range provide a useful demographic basis for examining the study variables across the student population.

4.1.1 JHS RME Students' Level of Autonomy

This question sought to establish students' level of autonomy. Literature shows that the teaching of RME contributes to making students autonomous in making decisions. Students with a high level of autonomy can partake in religious activities, keep personal items together, keep personal care and grooming, and save part of pocket money. The students were to indicate their agreement or disagreement with the items based on the scale: "4=Always, 3=Often, 2= rarely, and 1=Never. The mean scores and overall mean were interpreted as 1.0-1.9 (low), 2.0-3.0(moderate) and 3.1-4.0 (high). Table 2 details the results.

Table 2 shows the results that almost all (170, 85.6%) agreed they often keep personal care and grooming (M= 3.3, SD= 1.1). Similarly, more than half (167, 74.2%) agreed that they are often punctual (M= 3.2, SD= 1.1), often partake in religious activities (M= 3.1, SD= 1.0), and 153 (68.0%) of them often keep their items together (M= 3.0, SD= 1.1) and 147 (65.3%) often save parts of their pocket money (M= 3.0, SD= 1.1). Majority (154, 68.4%) often read their religious books (M= 2.9, SD= 1.1), they often choose what to study in religious and moral education books (M= 2.9, SD= 1.1), 151 (67.2%) of them agreed that they often make friends with other students of their age (M= 2.9, SD= 1.1), and are often in or have been in career classes or training (M= 2.9, SD= 1.1). Majority (119, 52.9%) often use religious premises (M= 2.6, SD= 1.1). More than half (148 65.8%) often deal with their mate at religious premises and school (M= 2.8, SD= 1.1), and make life-long plans (M= 2.8, SD= 1.2). The majority (127, 56.5%) often have spoken to people about career plans (M= 2.6, SD= 1.2). However, 109 (48.5%) often choose their denomination (M= 2.4, SD= 1.2) and choose their denominational programme to attend (M= 2.4, SD= 1.1) as well as care for their religious cloth (M= 2.3, SD= 1.2). However, the majority (125, 55.6%) rarely make their own religious decision (M= 1.9, SD= 1.2). An average mean score of 2.8 (SD= 1.1) was obtained indicating that they have a moderate level of autonomy.

The finding in Table 2 indicates that the students demonstrated an overall moderate level of autonomy**,** as reflected by the overall mean score of 2.8 (SD = 1.1**)**. This suggests that although the students exhibited autonomous behaviours in several aspects of their daily, academic, religious, and personal lives, their autonomy was not sufficiently developed across all domains. The results therefore portray autonomy as a multidimensional characteristic in which students appear more independent in routine personal activities than in areas involving complex religious decision-making. This study's finding deviates from Mensah (2017) who found that students in the Cape Coast Metropolis exhibit weak abilities in solving mathematics word problems, which may suggest challenges in critical thinking as it relates to mathematical reasoning. The highest level of autonomy was observed in personal care and grooming (M = 3.3, SD = 1.1), with 85.6% of students indicating that they often engaged in this behaviour. Similarly, students reported relatively high levels of punctuality (M = 3.2), participation in religious activities (M = 3.1), and responsibility for keeping their personal items together and saving part of their pocket money (both M = 3.0). These suggest that students are relatively capable of exercising independence in routine personal responsibilities and activities. Such behaviours are important manifestations of developing self-management and personal responsibility, which are essential dimensions of autonomy. This is supported by the findings of Boud (2012) and (Zirkel & Cantor, 1990).

However, the findings reveal a comparatively lower level of autonomy in areas requiring independent judgement, religious choice, and future-oriented decision-making. For instance, students recorded moderate scores for reading religious books and choosing what to study in RME books (M = 2.9), making friends with peers (M = 2.9), participating in career-related training (M = 2.9), making life-long plans (M = 2.8), and discussing career plans with others (M = 2.6). The relatively lower scores on these items may suggest that students are developing the capacity to make choices but may still depend on parents, teachers, religious leaders, or other significant adults for guidance in more consequential areas of their lives. Of particular significance is the finding that only 52.9% of students indicated

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that they often use religious premises (M = 2.6), while 48.5% indicated that they often choose their denomination and denominational programmes to attend (M = 2.4). Most importantly, 55.6% reported that they rarely make their own religious decisions, resulting in the lowest mean score of 1.9 (SD = 1.2)**.** This finding is noteworthy because religious decision-making represents a more advanced form of autonomy than routine personal care. It suggests that students may participate in religious activities but have limited independence in determining their own religious beliefs, choices, and practices. This is critical because the promotion of students' autonomous motivation is increasingly regarded as a distinct aim of classroom instruction, Ryan and Powelson (1991) and education in general (Deci et al., 1991).

Overall, the results suggest that students' autonomy is stronger in personal and routine behavioural responsibilities than in critical, reflective, and religious decision-making. This finding has important implications for RME because the subject is expected not merely to promote participation in religious activities but also to develop learners' ability to reflect critically on moral and religious issues, evaluate alternatives, and make informed and responsible decisions. The moderate overall autonomy therefore indicates a need for RME teaching approaches that provide students with greater opportunities for critical reflection, dialogue, independent judgement, problem-solving, and decision-making. This is because autonomy positively affects not only academic achievement but also learning quality and students' well-being by fostering their natural curiosity, the development of personal interests, and inherent growth tendencies (Littlewood, 1996). It not only promotes students' engagement in artistic practices in the classroom but also increases the likelihood that adolescents participate in extracurricular cultural activities (Benson, 2008). It can therefore be assumed that autonomous motivation of students is a key prerequisite for realizing the diverse educational potentials that art education can offer. RME supports students' autonomy when learners are allowed to question beliefs and form independent moral judgments. Giving students space for discussion and reflection encourages self-directed thinking and responsibility for their own views, which strengthens both autonomy and critical thinking skills (Chakim et al., 2026).

Table 2

Level of RME students' autonomy (n= 225)

Statement	N		R		O/A		M	SD
	No	%	No	%	No	%		
I make my own religious decision	125	55.6	36	16.0	64	28.4	1.9	1.2
I care for my religious cloth	91	40.4	41	18.2	93	41.3	2.3	1.2
I partake in religious activities	22	9.8	42	18.7	161	71.6	3.1	1.0
I keep my items together	25	11.1	47	20.9	153	68.0	3.0	1.1
I do simple aid care	84	37.3	46	20.4	95	42.2	2.3	1.2
I keep personal care and grooming	27	12.0	28	12.4	170	85.6	3.3	1.1
I make friends with other students of my age	36	16.0	38	16.9	151	67.2	2.9	1.1
I use religious premises	52	23.1	54	24.0	119	52.9	2.6	1.1
I am punctual	27	12.0	31	13.8	167	74.2	3.2	1.1
I deal with my mate at religious premises and school	46	20	31	13.8	148	65.8	2.8	1.1
I do free time activities based on my interests	20	8.9	34	15.1	171	76.0	3.2	1.0
I plan weekend activities that I like to do with my religious believers	52	23	51	22.7	122	54.2	2.5	1.1
I have always been involved in religious and school-related activities	29	12.9	26	11.6	170	75.5	3.2	1.1
My friends and I choose activities that we want to do in school	36	16.0	58	25.8	131	58.2	2.7	1.0
I write letters, and notes or talk on the phone to friends and religious believers	48	21.3	42	18.7	135	50.0	2.7	1.2
I listen to religious songs	46	20.4	27	12.0	152	67.6	2.9	1.2
I volunteer in things that I am interested in my religious denomination	51	22.7	41	18.2	133	59.1	2.7	1.1

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I go to a religious programme that I like	50	22.2	54	24.0	121	53.8	2.6	1.1
I watch religious movies and concerts	50	22.2	46	20	129	57.3	2.7	1.1
I attend a religious gathering	41	18.2	32	14.2	152	67.6	2.9	1.1
I take part in youth groups in my religious denomination	49	21.8	56	24.9	120	53.3	2.6	1.2
I do school and free time activities based on my career interests	37	16.4	44	19.6	144	64.0	2.9	1.1
I read religious and moral education to improve my career chances	24	10.7	23	10.2	178	79.1	3.2	1.0
I make lifelong plans	49	21.8	41	18.2	135	50.0	2.8	1.2
I save parts of my pocket money	32	14.2	46	20.4	147	65.3	3.0	1.1
I am in or have been in career classes or training	40	17.8	31	13.8	154	68.4	2.9	1.1
I have spoken to people about career plans	62	27.6	36	16.0	127	56.5	2.6	1.2
I choose my denomination	72	32	44	19.6	109	48.5	2.4	1.2
I choose my denominational programme to attend	60	26.7	56	24.9	109	48.4	2.4	1.1
I choose gifts to give to my friends at school and religious denomination	38	16.9	117	52.0	126	56.0	2.7	1.1
I read my religious books	38	16.9	33	14.7	154	68.4	2.9	1.1
I choose what to study in religious and moral education books	36	16.0	32	14.2	157	69.7	2.9	1.1
Average							**2.8**	**1.1**

4.1.2 JHS RME Students' Level of Critical Thinking

This question sought to establish the level of critical thinking of RME students. The students were to indicate their agreement or disagreement with the items based on the scale: "5=Strongly agree, 4=Agree, 3= Disagree, 2=Strongly Disagree and 1=Uncertain for statements. The mean scores and overall mean were interpreted as 1.00- 2.6 (low), 2.7- 3.3 (moderate) and 3.4-5.0 (high). Table 3 details the results.

Table 3 shows the results of students' responses on their level of critical thinking. The majority (166, 73.8%) of them agreed that, if necessary, they could recall what they learnt in religious education (M=3.9, SD=1.3). Again, the majority (160, 70.1%) of them agreed that they like discussing new meanings in religious and moral education text that they already know (M= 3.8, SD= 1.1), but do have difficulty in putting a sentence differently (M= 3.8, SD= 1.3). Most (151, 67.1%) of them agreed that in the RME discussion, they try to use practical examples to justify their views on the matter (3.7, SD= 1.3). 147 65.2 I pay attention to circumstances, variations and meaning of the statement in religious and moral education (M= 3.7, SD= 1.2).

The majority of them, (142, 63.1%) agreed when they talk in class, they give many examples (M= 3.6, SD= 1.3) more than half (140, 62.3%) agreed that in a discussion, they care about explaining their opinion on their matter and understanding others views (M= 3.6, SD= 1.2) when are interested in some religious information, they try to check if it is true (M= 3.6, SD= 1.4) and they like finding the connection between two different things (M= 3.6, SD= 1.3). More than half (128, 56.9 %) of them agreed that they could see the structure of religious and moral education text and they could change it (M= 3.5, SD= 1.3). However, half (115, 51.1%) of them either were uncertain or disagreed that they could extract the most relevant part of religious and moral education texts (M= 3.4, SD= 1.3), and they evaluated the religious information, they checked their sources (M= 3.4, SD= 1.3). Lastly, the majority (114, 55.1) of them agreed that they remember much from what they learned in religious and moral education (M= 3.1, SD= 1.5). An average mean score of 3.5 (SD=1.3) was seen from the students' responses indicating that they possess a high level of critical thinking.

The finding suggests that, generally, the students possessed the ability to engage with RME content beyond simple memorisation and demonstrated several behaviours associated with critical thinking, including reflection, interpretation, justification, comparison and verification of information. The relatively high level of critical thinking may indicate that RME provides students with opportunities to question, discuss and make sense of religious and moral issues. These findings suggest that students were able to engage with previously acquired knowledge while exploring

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new interpretations and meanings. These behaviours are important indicators of critical thinking because they involve interpretation, application of knowledge and justification of opinions. The finding suggests that students were developing the capacity to examine issues from different perspectives and establish relationships among concepts. These are particularly important skills in RME, where learners encounter diverse religious beliefs, values and moral positions that require thoughtful analysis rather than unquestioned acceptance.

The finding contradicts previous studies. Boamah et al. (2025) found that students in the Cape Coast Metropolis exhibit weak abilities in solving mathematics word problems, which may suggest challenges in critical thinking as it relates to mathematical reasoning. Gambrill (2006) revealed that the critical thinking abilities of JHS students on ecosystem materials are low (Fisher & Scriven, 2001; Aji et al., 2023; Fitriani et al., 2022) found low critical thinking skills in the context of solving mathematical problems. However, Rahayu et al. (2014) found that the critical thinking skills of JHS students in Surakarta are in the Skinner ability category, and Ushioda (2011) found that the average critical thinking and problem-solving skills of students are in the medium criteria. These findings, while not specific to RME or the Cape Coast Metropolis, provide a broader perspective on the critical thinking abilities of JHS students. It is important to note that these findings may not be directly transferable to RME students in the Cape Coast Metropolis due to differences in subject matter and regional educational contexts. Further research would be required to ascertain the critical thinking levels of RME students in this specific demographic.

Table 3

Level of RME Students' Critical Thinking (n= 225)

Statement	U		SD/D		A/SA		M	SD
	No.	%	No.	%	No.	%		
After reading religious and moral education, I check important information even if it seems to be true	29	12.9	54	24.4	142	63.2	3.6	1.3
I like combining information from different religions	27	12.0	82	36.4	116	51.6	3.2	1.3
I am willing to share newly gained information	33	14.7	74	32.9	118	52.5	3.3	1.3
Deep analysis of reality is an advantage to life	30	13.3	77	34.2	118	52.4	3.4	1.3
After reading religious and moral education, I can repeat important issues from the texts	36	16.0	49	21.7	140	62.3	3.5	1.4
I can understand the same content in many ways	16	7.1	95	42.3	114	50.7	3.5	1.3
I can understand text from various fields	29	12.9	63	39.5	107	47.5	3.2	1.3
I formed my ideas based on various information that I combined	39	17.3	63	28.0	123	54.7	3.4	1.4
Everything already exists but new things can be created	18	8.0	62	27.6	145	64.5	3.7	1.3
When I talk in class, I give many examples	17	8.4	66	29.3	142	63.1	3.6	1.3
In a discussion, I care about explaining my opinion on my matter and understanding others' views	10	8.4	66	29.3	140	62.3	3.6	1.2
I like finding the connection between two different things	26	11.6	50	22.2	149	66.2	3.6	1.3
I can see the structure of religious and moral education text and I could change it	22	9.8	75	33.5	128	56.9	3.5	1.3
In religious and moral education discussions, I try to use practical examples to justify my view on the matter	22	9.8	52	23.1	151	67.1	3.7	1.3
If necessary, I can recall what I learnt in religious education	22	9.8	37	16.5	166	73.8	3.9	1.3
When am interested in some religious information, I try to check if it is true	24	10.7	63	28.0	138	61.3	3.6	1.4
I can extract the most relevant part of religious and moral education texts	23	10.2	92	40.9	110	48.9	3.4	1.3
I evaluate the religious information; I check my sources	34	15.1	74	32.8	117	52.0	3.4	1.3
I remember much from what I learned in religious and moral education	52	23.1	72	32.0	101	44.9	3.1	1.5
I like discussing new meanings in religious and moral education texts that I already know	14	6.2	18	8.0	160	70.1	3.8	1.1
I like to add different opinions and compare them to each other	22	9.8	74	32.8	129	57.4	3.5	1.3
I try to use the religious information I have learnt in my everyday life	27	8.4	65	28.9	133	59.1	3.5	1.3

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When I read religious and moral education texts I research the relationship between	19	8.4	65	28.8	141	62.8	3.6	1.2
I pay attention to circumstances, variations and meanings of statement statements in religious and moral education	19	8.4	59	26.3	147	65.2	3.7	1.2
I do not have difficulty in putting a sentence in a different way	20	8.9	50	22.3	155	68.9	3.8	1.3
Average							**3.5**	**1.3**

4.1.3 Effect of RME Students' Autonomy on Their Critical Thinking in the Cape Coast Metropolis

This question sought to investigate the effect of RME students' autonomy on their critical thinking in the Cape Coast Metropolis. Simple linear regression analysis was conducted to determine if RME students' autonomy affected their critical thinking. Results from the analysis, using the enter method showed that the predictor (RME students' autonomy) does explain (11%) the variance in their critical thinking $F(1, 223) = 26.524$, $p = .000^b$, $R = .326^a$, $R^2 = .106$, $R^2_{\text{Adjusted}} = .102$. Refer to Table 4 for the model.

Table 4

ANOVA and Model Summary for RME Students' Autonomy and Critical Thinking

Model	**Df**	**Mean Square**	**F**	**Sig.**	**R**	**R^2**	**R^2_{Adj}**
Regression	1	6.799	26.524	.000b	.326a	.106	.102
Residual	223	.256					
Total	**224**						

Results from the analysis further indicated that RME students' moderate level of autonomy ($\beta = .326$, $t = 5.150$, $p = .000$) statistically significantly predicts a high level of Critical Thinking as shown in Table 6. Therefore, the null hypothesis can be rejected.

Table 5

Regression Coefficients of RME Autonomy and Their Critical Thinking

Variable	B	SE	Beta	T	P	95% CL
Constant	2.106	.277		7.598	.000	(.257, 1.577)
Autonomy	.511	.099	.326	5.150	.000	.551, .888)

The results indicate that RME students' autonomy significantly predicts their critical thinking in the Cape Coast Metropolis. The simple linear regression model was statistically significant. Although the proportion of explained variance is modest, the statistically significant result demonstrates that autonomy is an important predictor of students' critical thinking. The regression coefficient further shows that autonomy had a positive and statistically significant effect on critical thinking ($B = .511$, $\beta = .326$, $t = 5.150$, $p < .001$). This means that increases in students' autonomy were associated with corresponding increases in their critical-thinking scores. Specifically, a one-unit increase in autonomy was associated with an estimated 0.511-unit increase in critical thinking, holding the simple regression relationship constant. The standardized beta of .326 indicates a positive, moderate relationship between the two variables. The 95% confidence interval for the regression coefficient (.551, .888), as reported in the table, also supports the statistical significance of the predictor because the interval does not include zero.

The finding suggests that students who are encouraged to exercise greater independence in making decisions, expressing their views, solving problems and taking responsibility for their actions may also be more likely to engage in critical thinking. This is particularly relevant to RME because the subject deals with religious, moral and social issues that require learners to examine different perspectives, evaluate information, justify their positions and make reasoned decisions. Autonomy may therefore provide students with the confidence and independence necessary to question assumptions, consider alternatives and develop their own informed conclusions. However, the 10.6% explained variance also indicates that autonomy is only one of several factors associated with students' critical thinking. Approximately 89.4% of the variance remains unexplained by autonomy in this model, suggesting that other factors—such as teaching methods, classroom environment, teacher characteristics, prior knowledge, parental influence and students' cognitive abilities—may also contribute to critical-thinking development. Therefore, the result should not be interpreted as indicating that autonomy alone determines students' critical thinking.

The finding corroborates Jaquith' (2011) view that critical thinking develops through autonomy and self-regulated learning and reflection. Student-centred learning such as discussion and inquiry helps them reason and evaluate religious and moral issues better (Ennis, 2011; Fisher & Scriven, 2001). Autonomy also makes students more independent in learning, which strengthens their ability to think and make decisions on their own (Facione, 2011;

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Ushioda, 2011). Other studies have also demonstrated that problem-based learning enhances not only cognitive outcomes but also affective domains such as motivation, confidence, and self-regulation (Ryan & Powelson, 1991). other studies reviewed do not directly address the effect of students' autonomy on their critical thinking within the context of Religious and Moral Education (RME) in the Cape Coast Metropolis. However, they provide insights into the teaching and learning environment of RME, which may indirectly influence students' critical thinking skills. For instance, Bhardwaj et al. (2025) identifies a lack of autonomy for teachers in developing teaching methods, which could imply a similar lack of autonomy for students in their learning processes. This could potentially stifle the development of critical thinking if students are not encouraged to explore diverse perspectives and develop their understanding.

Additionally, Jaquith (2011) and Rostan (2010) highlight challenges in the RME curriculum, such as scarcity of resources and a need for teacher training, which may affect the quality of education and the opportunities for students to engage in critical thinking exercises. The pedagogical approaches mentioned in Appiah which do not include the concept cracking approach, suggest a possible limitation in the methods used to foster critical thinking among RME students. The identified teaching challenges and lack of teacher autonomy may reflect a learning environment that does not fully support the development of critical thinking skills in students.

V. CONCLUSION & RECOMMENDATIONS

5.1 Conclusion

Based on the findings, it can be concluded that the RME students in the Cape Coast can make autonomous decisions since the subject prepares them for life and helps them arrive at concrete decisions. The relatively low level of independent religious decision-making suggests that students may not yet have fully developed the critical thinking and reflective judgement required to make informed and autonomous religious and moral choices. This highlights an important area in which RME can contribute to students' holistic development. This suggests that while students are somewhat capable of independent thought and action, there is still significant room for improvement to reach a higher level of self-directed learning and decision-making.

Again, the students demonstrate a laudable thinking skill derived from the teaching of RME. The students showed considerable ability to recall, interpret, discuss, justify and connect ideas in RME. However, some aspects, particularly evaluating information, verifying sources and identifying the most relevant information, were comparatively weaker. Thus, while students possess a generally strong foundation in critical thinking, there is a need to further develop higher-order information-evaluation skills that enable them to distinguish reliable religious and moral information from inaccurate or unsupported claims. This implies that students are generally proficient in analysing information, evaluating arguments, and solving complex problems. Therefore, one cannot say the students are not able to make good decisions after learning RME.

It can be surmised that the teaching of RME to an extent prepares the learners to be competent enough to make conscious decisions, a true trait of critical thinking. Students with higher levels of autonomy tend to demonstrate higher levels of critical thinking. Since the regression model was statistically significant, the null hypothesis that autonomy does not significantly predict critical thinking is rejected. Nevertheless, the relatively small proportion of explained variance indicates that autonomy is an important, but not exclusive, contributor to the development of students' critical-thinking abilities. This signifies a moderate but meaningful relationship between autonomy and critical thinking, highlighting that while autonomy contributes to critical thinking abilities, other factors also play a significant role.

5.2 Recommendations

Based on the findings and conclusions made it is recommended that RME teachers should deliberately employ learner-centred and reflective teaching approaches, such as debates, case studies, problem-based learning and structured discussions, to provide students with regular opportunities to examine different religious and moral perspectives, express their own views, evaluate alternatives and make reasoned decisions. This would help strengthen students' capacity for critical reflection, independent judgement and responsible religious and moral decision-making.

Further, RME teachers should strengthen the use of inquiry-based and evidence-oriented teaching strategies, particularly activities that require students to compare different religious sources, verify claims, identify evidence, evaluate the credibility of information and justify conclusions. Regular use of debates, source-analysis exercises, problem-based learning and critical discussions of contemporary religious issues would help students move beyond understanding and recalling RME content towards more advanced analysis, evaluation and evidence-based reasoning**.**

It is again recommended that curriculum developers strengthen the emphasis on autonomy, ethical reasoning, decision-making and personal responsibility within the RME curriculum**.** Practical activities that allow students to make choices, solve problems, plan activities and reflect on the consequences of their decisions should be incorporated into the curriculum. In addition, professional development programmes for RME teachers should equip them with appropriate strategies for fostering learner autonomy, particularly through inquiry-based, dialogical and reflective

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teaching approaches. Collectively, these measures can help strengthen not only students' behavioural independence but also their capacity to think critically, exercise independent judgement and make informed and responsible religious and moral decisions. Finally, RME teachers deliberately promote learner autonomy through teaching strategies that give students opportunities to make choices, express and defend their views, investigate religious and moral issues, solve problems independently and reflect on alternative perspectives. Strategies such as problem-based learning, debates, inquiry-based learning, case studies and reflective discussions should be integrated into RME instruction to simultaneously strengthen students' autonomy and critical-thinking skills.

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