Religious and Moral Education Teachers' Use of Information and Communication Technology in Teaching at the Basic School: A Study in Cape Coast, Ghana

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ABSTRACT

The purpose of the study was to investigate the use of Information and Communication Technology (ICT) in the teaching of Religious and Moral Education (RME) in basic schools in Cape Coast. It sought to establish RME teachers' levels of perceived ease of use (PEU) and perceived usefulness (PU) of Information and Communication Technology, as well as determine the effect they have on RME teachers' actual use (AU) of ICT. The Technology Acceptance Model was the undergirding theory for the study. The Cross-sectional survey design was used. All 150 RME teachers and 950 Basic 8 and 9 students of basic schools in the Cape Coast metropolis constituted the population of the study. Using proportionate simple random sampling procedure, a sample of 121 teachers and 561 students was obtained. Data was collected using two sets of structured questionnaires and analyzed descriptively using frequencies, percentages, mean, and standard deviation, as well as inferentially using simple linear regression. Results revealed that RME teachers have a high level of PU, PEU and AU of ICT in the teaching of RME. The regression analysis portrayed that PU of ICT moderately explains 51% of the variance in the AU of ICT in teaching RME, and PEU of ICT explains 39% of the variance in the AU of ICT. It is obvious from the findings that the usefulness and easy operation of ICT tools would lead to their use by RME teachers. To deal with this issue, the study recommended that the National Council for Curriculum and Assessment and Ghana Education Service should continue to enhance ICT training programmes for RME teachers. To address the limited knowledge about ICT among RME teachers, teacher development workshops and seminars that target comprehensive ICT training should be organised for RME teachers.

Keywords: Perceived Ease of Use, Perceived Usefulness, Religious and Moral Education, Teachers, Use of ICT

I. INTRODUCTION

Rapid Information and Communication Technology (ICT) advancements have profoundly shaped the twenty-first century, prompting educational institutions to restructure curricula and infrastructure, bridging the technology gap between developed and developing nations for specialized knowledge, meaningful learning, and enhanced professional efficacy (Zhao et al., 2021). ICTs significantly expedite skill acquisition, motivate students, connect education with professional practices, ensure economic viability, and strengthen instructional methodologies (Kundu & Bej, 2021). In the evolving global landscape, foundational education is crucial, requiring proficiency in ICTs for information access and application within the global village. Modern education prioritizes competency, performance, and applied information over content acquisition, with current ICTs playing a pivotal role in meeting these educational demands (Akinloye et al., 2020).

Traditional pedagogy prioritized content, employing lecture-based methods and tutorials, while modern education emphasizes competency, performance, and practical application of information. Current ICTs play a crucial role in meeting these educational demands, as demonstrated revealed by research (Haleem et al., 2022). ICTs revolutionize work practices and reshape educational systems, with the risk of training students in outdated skills necessitating global recognition of ICTs (Verhoeven et al., 2016). A global trend that has gained traction recently is the integration of ICT, into educational environments. Teachers are becoming more and more aware of how ICT may transform teaching and learning across a range of topics due to the rapid improvements in technology and its ubiquitous accessibility. If ICT tools and resources are used in these areas, Religious and Moral Education (RME) will gain a lot. A thorough comprehension of religious principles and values can be fostered and increased student participation can be achieved by carefully integrating ICT into the teaching of RME in basic schools. RME is essential for developing students' ethical and spiritual growth in Ghana's school system (Mensah & Ansah, 2023). Ghana's curriculum emphasises the use of ICT for teaching and learning. However, it is unknown how much it is being used in teaching RME in the Cape Coast Metropolitan basic schools. RME instruction has historically focused on teacher-centred methods that mostly depended on lectures and texts (Anti & Anum, 2003). On the other hand, the emergence of ICT presents innovative opportunities to transform RME instructions in basic schools across the world for which Ghana is not an exception.

In Ghana, students' character and ethical development are critically influenced by RME. The subject provides students with the information, abilities, and morals needed to successfully negotiate life's obstacles (Mensah & Ampem, 2023; Owusu & Mensah, 2022). Historically, teacher-centred techniques like lectures and discussions have been used to teach RME. Incorporating ICT into education is critical because it allows for information operations, independent learning, self-direction, sustained motivation, effective lesson planning and resource sharing (Kundu & Bej, 2021). Its function shifted from increasing academic effectiveness to boosting motivation (Verhoeven et al, 2016), understanding (Haleem et al, 2022) and memory retention (Kundu & Bej, 2021). Additionally, it promotes collaborative learning and a network of interconnections (Goswami et al., 2020).

RME plays a critical role in shaping the character and values of young individuals. Ghana's basic education curriculum equips students with knowledge, skills, and attitudes to become responsible citizens (National Council for Curriculum Assessment [NaCCA], 2019). However, traditional teaching methods in RME often rely heavily on textbooks and rote memorization, which can lead to disengagement and hinder deeper understanding (Asante, 2015). Eze et al. (2021) and Zaman et al. (2024) both utilise the Technology Acceptance Model (TAM) and found that perceived usefulness and perceived ease of use of ICT are high among basic school teachers. Kundu and Bej (2021) also found that self-concept significantly predicts teachers' perceived ease of use of ICT, implying that a teacher's confidence in their abilities can affect their perception of ICT's ease of use. Singhavi and Basargekar (2020) and Zaman et al. (2024) discuss external factors such as access to resources, school culture, and support that could influence teachers' perceived proficiency and ease of use of ICT.

The emergence of ICT offers exciting possibilities for enhancing RME instruction. ICT tools can provide access to a vast array of multimedia resources, including religious texts, inspirational stories, virtual tours of religious sites, and interactive simulations. These resources can bring abstract concepts to life, foster critical thinking, and cater to diverse learning styles. The Cape Coast metropolis presents an interesting context for studying ICT integration in RME. The metropolis has witnessed significant educational development initiatives, including investments in ICT infrastructure (Agyei & Voogt, 2012). However, research specifically exploring the use of ICT in teaching RME within Cape Coast basic schools is scarce. The utilization of ICTs in teaching in education is widely acknowledged as a critical aspect of improving teaching and learning results. However, teachers' successful adoption of ICTs is determined by various factors, including their attitudes and ideas about technology. The Technology Acceptance Model (TAM) (Davis, 1989) is an effective framework for analysing the elements that influence teachers' acceptance and use of ICTs. TAM is a reliable model for forecasting technological acceptance and use, according to numerous studies (Venkatesh & Davis, 2000).

1.1 Statement of the Problem

The National Education Reform Report for Ghana, in 2007, proposed comprehensive measures to improve teaching, including the provision of computer labs, internet connectivity, and capacity building for instructors, to equip schools with modern teaching and learning tools (Amedeker, 2020). Despite significant policy efforts to integrate ICT into teaching and learning in Ghana, there remains a lacuna between policy directives and actual practices, particularly in the context of teaching at the basic school levels. The Anamuah-Mensah Committee's Report (Government of Ghana, 2004) emphasized the importance of exposing students to ICT through computers, recommending its integration into the curriculum. However, challenges persist, hindering the realization of the potential benefits of ICT in education in developing countries, including Ghana.

Access to ICT facilities emerges as a significant challenge across many African countries, impeding the effective implementation of ICT in education (Ismail et al., 2020). Most of the teachers in Cape Coast indicate that they were born before ICT was introduced into the school system. Thus, they have not received adequate skills that will help them operate ICT resources efficiently in teaching. Despite policy recommendations, the integration of ICTs in Ghanaian schools reveals a substantial gap between policy directives and actual practices (Donkoh et al., 2021). Agyei and Voogt (2011) studied ICT use among mathematics teachers in Ghana, which, while not focused on RME, provides relevant insights into Ghanaian teachers' perceptions of ICT ease of use. The study found that many teachers perceived ICT as challenging to use, primarily due to a lack of training and limited access to resources. These findings suggest that similar challenges might exist for RME teachers.

In the context of teaching RME in basic schools in Cape Coast, the use of ICT has the potential to improve teaching outcomes. However, the successful integration of ICTs in teaching RME is dependent on teachers' acceptance and usage of these tools. TAM indicates that for technology to be accepted and actually used (AU), it heavily depends on the users' perceived usefulness (PU) and perceived ease of use (PEU) of the technology (Davis, 1989). Despite the importance of TAM in understanding teachers' adoption and use of ICTs, research on its applicability in the context of teaching RME is scarce. From researchers' observations made during internships and off-campus teaching practice supervision, it was noted that the utilisation of ICTs by teachers for teaching RME in basic schools in the Cape Coast metropolis is low despite the potential benefits of ICTs in enhancing teaching outcomes. Although there are a lot of studies on teachers' use of ICT in teaching (Lotey et al., 2023; Amuah, 2022; Bariham et al., 2019; Kwaah, 2024; Quayson & Halm 2020) none of these studies used TAM as a theoretical framework to understand RME teachers' use of ICT in basic schools in Cape Coast. It is crucial to gain this knowledge to help improve the integration of ICT in teaching RME. This knowledge and context gap is what this study sought to fill. The questions and hypotheses below guided the study.

1.2 Research Questions

i. What is the level of RME teachers' PU of ICT?
ii. What is the level of RME teachers' PEU of ICT?
iii. What is the level of RME teachers' AU of ICT in teaching?

1.3 Research Hypotheses

$H0_1$: There is no statistically significant effect of RME teacher' level of PU of ICT on their AU of ICT.
$H0_2$: There is no statistically significant effect of RME teachers' level of PEU of ICT on their AU of ICT.
$H0_3$: There is a statistically significant effect of RME teachers' level of PEU of ICT on their PU of ICT.

II. LITERATURE REVIEW

2.1 Theoretical Review

2.1.1 Technology Acceptance Model

This study is based on the TAM, which was used to develop the theoretical framework. The TAM is a popular information system theory that explains how users come to embrace and use technology. It proposes that technology acceptance is predicted by users' behavioural intentions, which in turn depend on two crucial factors; PU and PEU. Davis (1986) proposed TAM, a modification of the Theory of Reasoned Action (TRA) designed especially for modelling information system user acceptance. The objective of TAM is to offer a universal, theoretically motivated, and parsimonious explanation of the factors influencing computer acceptance that may explain user behaviour across a wide range of end-user computing systems and user populations. Therefore, one of TAM's main goals is to give a foundation for tracking how external influences affect one's own internal beliefs, attitudes, and intentions (Davis, 1989). It contends that consumers' PU and PEU of technology affect their intention to utilise and actual usage behaviour (Portz et al., 2019). The model identifies two belief constructs: PU, which refers to users' perception that ICTs can improve their work performance, and PEU, which refers to users' belief that ICTs are simple to use.

2.2 Empirical Review

2.2.1 Level of RME teachers' PU of ICT in teaching RME

Iita and Iipinge (2018) reveal that the lower PU of ICT could be compromised by the teachers' individual biases and the lack of resources for a more comprehensive understanding of RME. Portz et al. (2019) contend that consumers' PU of technology affects their intention to AU. Gyamfi (2017) examined Ghanaian pre-service teachers' perceptions of ICT integration in education and found that those training to teach Humanities subjects, which includes RME, reported lower PU in ICT compared to those in the STEM (Standard for Science, Technology, Engineering and

Mathematics) fields. Quayson and Halm (2020) discovered that RME tutors in the Volta and Eastern Regions of Ghana hold high perceptions towards technology integration, recognizing its usefulness in educational settings. Similarly, Boafo et al. (2024) revealed the importance of ICT in enhancing the teaching and learning of RME in Ghana, suggesting that addressing challenges such as the scarcity of textbooks could be mitigated through effective ICT integration.

2.2.2 Level of RME teachers' PEU of ICT for teaching RME

Eze et al. (2021) and Zaman et al. (2024) both utilise TAM and found that the PEU of ICT is high among teachers. Kundu and Bej (2021) also found that self-concept significantly predicts teachers' PEU of ICT, implying that a teacher's confidence in their abilities can affect their perception of ICT's ease of use. Singhavi and Basargekar (2020) and Zaman et al. (2024) discuss external factors such as access to resources, school culture, and support that could affect teachers' PEU of ICT. Okoro and Ekpo (2016) assess the influence of ICT application on the academic achievement of students in CRS. The research findings highlighted that students who are taught with the Projected Video Package (PVP) demonstrated superior performance compared to those taught with the Conventional Instructional Strategy (CIS) in CRS.

2.2.3 Level of RME teachers' AU of ICT in teaching

Cadorna et al. (2023) found that the AU of ICT in teaching was not high, suggesting that other factors such as confidence in using ICT and the availability of digital resources also play a critical role. Conversely, another study highlighted the use of various media, including ICT, for fostering religious and moral development in young children, suggesting that some educators do incorporate ICT in their teaching strategies (Permana et al., 2022). Some teachers demonstrate good ICT competencies, as seen in the case of Islamic Education teachers at MI Riyadlul Qori'in (Alindra et al., 2020). Appiah (2022) revealed that RME teachers possess adequate pedagogical knowledge and use certain instructional methods, but there was no explicit mention of their AU of ICT in teaching.

2.2.4 Effect of RME teacher' level of PU of ICT on their AU of ICT in teaching RME

Al-Rahmi et al. (2020) employing the TAM, found a significant relationship between PU and students' intentions to use ICT. Kumar et al. (2024) also identified PU as a dominant factor influencing ICT adoption and use decisions. Cadorna et al. (2023) found that despite teachers' positive attitudes towards ICT, actual utilization in teaching was not high, suggesting that other factors, such as confidence in using ICT and availability of digital resources, also play a critical role. Nzika et al. (2019) found that ICT integration in instruction is minimal in certain contexts due to poor ICT competencies and a lack of leadership support. Pasco (2023) although focused on English teachers, indicates that PU and PEU highly influence the AU of ICT.

2.2.5 Effect of RME teachers' level of PEU of ICT on their AU of ICT in teaching RME.

Eze et al. (2021) found that PEU is a positive partial mediator of ICT support and ICT use among teachers. Al-Rahmi et al. (2020) discovered that PEU influences students' intentions to use ICT and their satisfaction with its use, further implying that PEU is a significant factor in the AU of ICT in educational contexts. Yilmaz (2023) also identifies PEU as a mediating factor, this time in the context of job performance, which could be extrapolated to suggest that PEU would likely affect the AU of ICT in various settings, including education. Gyamfi (2017) examined Ghanaian pre-service teachers' perceptions of ICT integration in education. The researcher extended TAM by adding leadership support and job relevance as exogenous variables. The findings suggested that Leadership support significantly influences PEU; Job relevance significantly influences PU; PU significantly influence attitude towards the use of ICT; PEU significantly influence attitude towards use and the TAM is significant for pre-service teacher education context except for the relationship between PEU and PU.

2.2.6 Effect of RME teachers' level of PEU of ICT on their PU of ICT in teaching RME

Arthur (2022) found that PEU predicted PU in the context of mathematics education, suggesting that when teachers find ICT tools easy to use, they also tend to find them more useful. Similarly, Machdar (2019) confirmed that

PEU positively affects PU, indicating that ease of use enhances the perceived utility of ICT tools. These findings are consistent with the core assertions of the TAM, which posits that PEU is a determinant of PU. Arthur (2022) and Machdar (2019) suggest that there is a positive effect of the level of PEU of ICT on the PU of ICT in educational settings, including teaching mathematics and other subjects. It is important to note that the specific context of teaching RME was not directly addressed in the papers provided.

2.3 Conceptual Review

The theoretical framework for this study provides a structured approach to understanding the relationship between the PU, PEU, and AU of ICTs by RME teachers. The theoretical framework for this study is an adapted framework from the Original TAM (Davis, 1989) and is presented in Figure 1. The study looked at RME teachers' use of ICT, which is theoretically influenced, by teachers' PU and PEU leading to the AU of ICTs in teaching RME as internal variables because they directly relate to the adoption and use of ICTs in teaching. PU entails the teachers' belief that using technology will enhance their teaching. Therefore, when teachers see ICTs as valuable in RME instructions they are more likely to accept and use them effectively. PEU relates to how easy it is for teachers to use or learn how to use ICTs. Therefore, if teachers find ICTs user-friendly, they will adopt them in their teaching. AU refers to the extent to which teachers use ICTs in their RME teaching. Therefore, when ICTs are easy to use teachers are more likely to perceive them as useful, leading to higher adoption rates.

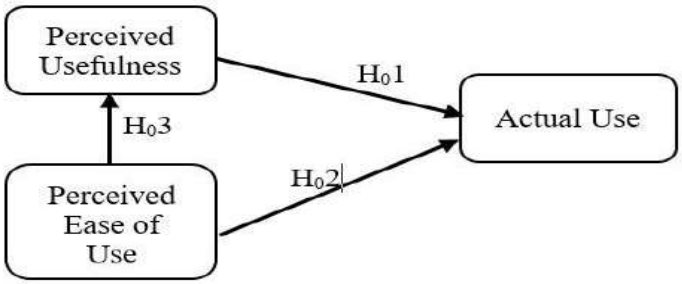

Figure 1
Theoretical framework. Adapted from the Technology Acceptance Model (Davis 1989)

III. METHODOLOGY

3.1 Procedures

The study was guided by the positivist paradigm and quantitative approach with the assumption that social reality has an objective ontological structure, with individuals acting as responding agents within this objective environment (Howell, 2012). Thus, the idea of using ICT in RME should be a general knowledge that can be measured objectively (Kumatongo & Muzata, 2021). Quantitative data were collected from teachers and students to determine teachers' actual of using ICT in teaching RME in basic schools. Consequently, we adopted a cross-sectional survey design, which enables the numeric description of characteristics of an observed phenomenon or the exploration of possible correlations among multiple phenomena, always examining the situation as it is.

All 150 RME teachers and 950 Basic 8 and 9 students of basic schools in the Cape Coast metropolis constituted the population of the study. Out of this, 121 RME teachers and 561 students formed the sample for the study. The teachers and students were selected through the proportionate simple random sampling procedure, a modification of simple random sampling that provides proportional representation (Babbie, 2022). The ethical dimension was also taken into account. To follow research protocols to ensure there were no ethical breaches, an introductory letter was obtained from the Department of Arts Education and sent to the Metropolitan Director of Education in Cape Coast to seek permission for the conduct of the study in schools. In addition, ethical clearance was sought from the Institutional Review Board of the University of Cape Coast. Before their participation, all participants received comprehensive information regarding the purpose of the research and the significance of their involvement in the research. Informed consent was sought verbally from respondents.

3.2 Measures

Data were collected with two sets of questionnaires. The data collected helped to determine RME teachers' level of PU, PEU and AU of ICT in teaching RME. It also helped to establish the effects of PU and PEU of ICT on the AU of ICT in teaching RME. The questionnaire for RME teachers had 41 items. Section A was on four (such as age, gender, professional qualification, and number of years in the service) demographic characteristics of teachers. Section B measured RME teachers' PU of ICT in teaching RME with 17 items crafted from the literature. Section C also

measured RME teachers' PEU of ICT in teaching RME with 10 items developed from the literature. Section D had 10 items that sought data on RME teachers' AU of ICT in teaching RME. The items were developed based on the conceptualisations in the literature on AU. The questionnaire for students had 13 items in two sections. Section A sought data on demographic information such as age, gender and class. Section B measured RME teachers' AU of ICT in teaching RME with 10 items crafted from the literature. Apart from items that sought information on RME teachers' and students' demographics, the items were responded to and measured on a 5-point Likert scale (1= Uncertain; 2, = Strongly Disagree; 3= Disagree; 4= Agree and 5 = Strongly Agree).

3.3 Validity and Reliability

Before the main data collection, judgement (face and content) validity was sought with the help of some experts in quantitative instrument construction. The instrument was subjected to scrutiny to ensure that it can measure and relate to the variables of interest for the study. There was also the need to establish internal consistency on the instrument. A pilot test was conducted with 50 RME teachers and 100 students from basic schools in Elmina District. The Cronbach alpha reliability coefficient was determined as 0.74 (PU of ICT), 0.71 (PEU of ICT), and 0.82 (AU of ICT). The overall reliability coefficient for the instrument before main data collection was determined as 0.75.

3.4 Data Analysis

Data collected from RME teachers and students through structured were analysed with the help of the Statistical Package for Service Solutions (SPSS) software version 27. Data related to RME teachers' levels of PU, PEU and AU of ICT in teaching were analysed with frequency counts, percentages means and standard deviations. Simple linear regression was used in analysing the hypothesised effects of PU and PEU on RME teachers' AU of ICT in teaching.

IV. FINDINGS & DISCUSSION

4.1 The Level of RME Teachers' PU of ICT in the Teaching of RME

One of the objectives of the study was to establish the level of RME teachers' PU of ICT in teaching. With adequate training and resources, ICT can be a valuable tool in the teaching of RME. Data was collected from 121 RME teachers by asking them to respond to 17 items. The teachers were to indicate their agreement or disagreement with the items based on the scale: "1= Uncertain; 2, = Strongly Disagree; 3= Disagree; 4= Agree and 5 = Strongly Agree". The mean scores and overall mean were interpreted as 1.00- 2.7 (low), 2.8 - 3.4 (moderate) and 3.5-5.0 (high). Table 1 details the results.

Table 1

Teachers' Level of PU of ICT in the Teaching of RME

Statement	U		SD/D		A/SA		M	SD
	No	%	No	%	No	%		
Using ICT tools makes my teaching engaging and interactive	7	5.8	8	6.6	106	87.6	4.0	1.0
ICT tools allow me to teach with a variety of learning resources	4	4	8	6.6	109	90	4.1	.9
ICT helps my students connect RME concepts to real-world situations	7	5.8	14	11.6	100	82.6	3.9	1.0
I use ICT tools to personalise RME lessons for students with different learning styles	15	12.4	17	14.	89	73.6	3.6	1.1
ICT tools make RME lessons effective	7	5.8	11	9.1	103	85	4.1	1.0
Students are motivated to learn when I use ICT tools in RME lessons	10	8.3	14	11.6	97	80	4.0	1.2
ICT tools help to promote critical thinking and problem-solving skills	10	8.3	14	11.6	97	80.2	3.9	1.1
ICT tools help to create a stimulating and positive learning environment	10	8.3	16	13.2	95	78.5	3.9	1.1
ICT tools encourage students' participation and discussion in RME lessons	7	6.6	13	10.8	101	83.5	4.0	1.0
Using ICT in RME lessons enhances students' learning	8	6.6	13	10.8	100	82.6	4.0	1.0
ICTs address my teacher-related needs	9	7.4	24	19.8	88	72.7	3.9	1.1
Using ICTs helps me complete instructional assignments quickly	9	7.4	15	12.4	97	80	3.9	1.1
Using ICTs increases my classroom performance	5	4.1	13	10.7	103	85	4.1	1.0
ICTs improve my productivity as an RME teacher	7	6.6	13	10.8	101	83.6	4.0	1.1
Using ICT improves my overall efficacy as a teacher	10	8.3	10	8.3	101	83.5	3.9	1.1
ICT helps me to teach and learn essential parts of RME	11	9.1	7	5.8	103	85	4.0	1.2
I find ICT useful for teaching	5	4.1	4	3.3	112	82.5	4.3	.9
Average							**3.9**	**1.1**

Table 1 shows the responses of teachers on their level of PU of ICT in teaching. The majority (112, 82.5%) agreed that they find ICT useful for teaching (M= 4.3, SD= .9). Almost all (103, 85.1%) of them agreed that ICT tools have the potential to make RME lessons more effective in achieving learning objectives (M= 4.1, SD= 1.0). Again, majority (109, 90.1%) agreed that ICT tools allow them to present a wider variety of learning materials in RME lessons (M= 4.1, SD= .9). Majority (97, 80.2%) agreed that students are more motivated to learn about religious and moral values when they use ICT tools in RME lessons (M= 4.0, SD= 1.2). Almost all (103, 85.2%) agreed that ICT helps them to teach and learn essential parts of RME (M= 4.0, SD= 1.2), using ICT tools in RME lessons makes their teaching more engaging and interactive for their students (M= 4.0, SD= 1.0). An average score of 3.97 (M= 1.05) was acquired indicating that the teachers have a high level of PU of ICT.

4.2 The Level of RME Teachers' PEU of ICT for Teaching RME

Another objective of the study was to establish the level of RME teachers' PEU of ICT in teaching RME. Data was collected from 121 teachers. The teachers responded to items to measure their PEU of ICT in teaching RME. Teachers were to indicate their agreement or disagreement to the items based on the scale, 1= Uncertain; 2, = Strongly Disagree; 3= Disagree; 4= Agree and 5, = Strongly Agree. The mean scores and overall mean were interpreted as 1.00-2.7 (low), 2.8 - 3.4 (moderate) and 3.5-5.0 (high). Table 2 details the results.

Table 2

Teachers' Level of PEU of ICT for Teaching RME

Statement	**U**		**SD/D**		**A/SA**		**M**	**SD**
	No	**%**	**No**	**%**	**No**	**%**		
Using ICT tools makes teaching easy	14	11.6	4	3.3	103	84.2	4.0	1.2
I can use most ICT tools for RME lessons on my own	12	9.9	14	11.6	95	78.5	3.8	1.2
Using ICT in RME lessons does not require a lot of effort on my part.	12	9.9	25	20.7	84	69.4	3.7	1.2
I do not find it frustrating to use ICT in RME lessons	3	2.5	20	16.5	98	81.0	4.0	.9
Using ICT for RME lessons does not take up too much of my time	9	7.4	23	19.0	89	73.5	3.9	1.1
If I receive training, I will be proficient in using ICT tools for RME lessons	3	2.5	8	6.6	110	90.9	4.3	.9
Using ICT in RME helps me to focus on teaching the content	9	7.4	16	13.2	96	79.4	3.9	1.1
Using ICT in RME lessons does not lead to technical problems during class	10	8.3	39	32.2	132	59.6	3.5	1.2
It is comfortable using ICT tools	12	9.9	6	5.0	103	95.1	3.9	1.2
My existing computer skills are sufficient for using ICT tools in RME lessons	9	7.4	34	28.1	78	64.5	3.6	1.1
Average							**3.9**	**1.1**

Table 2 shows the results of the responses of RME teachers on their level of PEU of ICT for teaching RME. Almost all of them (n= 110, 90.9%) agreed that when they receive training, they will be proficient in using ICT tools to teach RME (M 4.3, SD= .9). Majority (103, 84.2%) agreed that using ICTs for RME lessons makes it easier for them to teach (M= 4.0, SD= 1.2), and do not find it frustrating to use ICT in RME lessons (M= 4.0, SD= .9). More than half (n= 96, 79.4%) of them agreed that using ICT in RME lessons does not make it difficult for them to focus on teaching the content (M= 3.9, SD= 1.1). More than half (95 78.5%) again agreed that they figure out how to use most ICT tools for RME lessons independently if necessary (M= 3.8, SD= 1.2). Lastly, more than half (132, 59.6%) also agreed that using ICT in RME lessons does not lead to technical problems during class (M= 3.5, SD= 1.2). An average score of 3.9(SD= 1.1) was obtained indicating that the teachers have a high level of PEU of ICT for teaching RME.

4.3 The Level of RME Teachers' AU of ICT in Teaching RME

The study also aimed to find out the level of RME teachers' AU of ICT in teaching. The AU of ICT by RME teachers in teaching varies according to the contexts they find themselves. Both RME teachers and students were to indicate their agreement or disagreement on 10 items based on the scale, 1= Uncertain; 2, = Strongly Disagree; 3= Disagree; 4= Agree and 5 = Strongly Agree. The mean scores and overall mean were interpreted as 1.00- 2.7 (low), 2.8 - 3.4 (moderate) and 3.5-5.0 (high). Tables 3 and 4 detail teachers' and students' results respectively.

Table 3

Level of RME Teachers' AU of ICT in Teaching

Statement	U		SD/D		A/SA		M	SD
	No	%	No	%	No	%		
Integrating ICT into my lessons is a top priority for me	8	6.6	16	12.3	97	80.1	3.9	1.1
I use ICT tools to introduce new topics in RME lessons.	12	9.9	25	20.6	74	69.4	3.6	1.1
I explore and experiment with ICT tools	7	6.6	22	18.2	92	76.0	3.7	1.0
I incorporate online resources into RME lessons.	7	6.6	12	9.9	102	84.3	4.0	1.1
I utilise ICT tools to create interactive activities that promote student participation	16	13.2	14	11.6	91	75.2	3.7	1.3
I use ICT tools to share student work and reflections related to RME topics	13	10.7	27	22.3	81	67.0	3.6	1.2
I encourage students to utilise ICT tools for research and presentations	10	8.3	23	19.0	88	72.8	3.8	1.2
My school provides resources for teachers who integrate ICT into RME lessons	16	13.2	50	41.3	55	45.5	3.1	1.3
If I see successful examples of other teachers using ICT effectively in RME I try it myself	5	4.1	19	15.7	97	80	3.9	1.0
I can use ICT tools to present content to my students	10	8.3	19	15.7	92	76.0	3.7	1.2
Average							**3.7**	**1.15**

Table 3 shows the results of teachers' responses on their level AU of ICT in teaching. Almost all (n= 102, 84.3%) agreed that they incorporate various online resources into RME lessons (M= 4.0, SD= 1.1). More than half (97, 80.1%) agreed that integrating ICT in their lessons is a top priority for them (M= 3.9, SD= 1.1) and if they see successful examples of other teachers using ICT effectively in RME they try it themselves (M= 3.9, SD= 1.0). More than half (88, 72.8%) agreed that they encourage students to utilize ICT tools for research and presentations on RME topics (M= 3.8, SD= 1.2). The majority (92, 76.0%) agreed that they actively explore and experiment with using ICT tools in their RME lessons (M= 3.7, SD= 1.0), and can use ICT tools to present content to their students (M= 3.7, SD= 1.2). Finally, 66 (54.5%) out of 121 of them agreed that their schools provide more resources for teachers who integrate ICT in RME lessons (M= 3.1, SD= 1.3). An average mean value of 3.7(SD= 1.2) was obtained which indicates that RME teachers have a high level of AU of ICT in teaching even though the teachers appear to not be using ICT in teaching.

Table 4

Students' Responses on the Level of RME Teachers AU of ICT in Teaching

Statement	N		SD/D		A/SA		M	SD
	No	%	No	No	%	No		
My teacher integrates ICT RME lessons	222	39.6	139	41.2	201	35.9	2.6	1.5
My teacher uses ICT tools to introduce new topics in RME lessons.	98	17.5	185	33.0	278	49.6	3.2	1.4
My teacher actively explores using ICT tools in our RME lessons	105	18.7	208	37.1	248	43.2	3.1	1.3
My teacher includes various online resources in RME lessons.	76	13.5	147	26.2	328	60.3	3.5	1.3
My teacher uses ICT tools to create interactive activities that promote our participation	99	17.6	175	31.2	287	51.2	3.3	1.4
My teacher uses ICT tools to share our work and reflections related to RME topics	98	17.5	192	34.2	271	48.3	3.2	1.4
My teacher encourages us to use ICT tools for research and presentations	88	15.7	176	31.3	297	52.9	3.3	1.4
My school provides more resources for teachers who integrate ICT into RME lessons	121	21.6	225	40.1	215	38.3	2.9	1.4
My teacher can use ICT tools to present content to us	88	15.7	154	27.5	319	56.8	3.4	1.4
Average							**3.2**	**1.4**

Results in Table 4 show that more than half (328, 60.3%) of the students agreed that their teachers include various online resources in RME lessons (M= 3.5, SD= 1.3). However, more than half (319, 56.8%) of them disagreed that their teachers can use ICT tools to present content to us (M= 3.4, SD= 1.4). Most of them also disagreed that their teachers use ICT tools to create interactive activities that promote our participation in RME lessons (M= 3.3, SD= 1.4) and 297(52.9%) of them disagreed that their teachers encourage them to use ICT tools for research and presentations on RME topics (M= 3.3, SD= 1.4). More than half (283, 51.4%) of them disagreed that their teachers use ICT tools to introduce new topics in RME lessons (M= 3.2, SD= 1.4) and 290 (51.6%) of them also disagreed that their teachers

use ICT tools to share their work and reflections related to RME topics (M= 3.2, SD= 1.4). Finally, almost all (361, 80.8%) agreed that their teacher integrates ICT RME lessons (M= 2.6, SD= 1.5). Put together, an average mean score of 3.2 (SD= 1.4) was realised, which indicates that students perceive their teachers to have a moderate level of AU of ICT in teaching. Merging the results from both teachers and students, it becomes evident that the RME teachers are at a high level of AU of ICT.

4.4 $H_0$1: There is no Statistically Significant Effect of RME Teachers' Level of PU of ICT on their AU of ICT in Teaching RME

This hypothesis sought to investigate the effect of the level of PU of ICT on the AU of ICT in teaching RME. Simple linear regression analysis was conducted to determine if the PU of ICT affected the level of AU of ICT in teaching RME. Results from the analysis, using the enter method showed that the predictor variable (PU of ICT) moderately explains 51% of the variance in the outcome variable (AU of ICT), F (1, 119) = 124.822, p= .000[b], R = .715[a], R^2= .512, R^2 $_{Adjusted}$ = .508. Refer to Table 5 for the model.

Table 5

ANOVA and Model Summary for PU of ICT and the AU of ICT

Model	df	Mean Square	F	Sig.	R	R^2	R^2_{Adj}
Regression	1	45.975	124.822	.000[b]	.715a	.512	.508
Residual	119	.368					
Total	120						

Results from the analysis further indicated that a high level of PU of ICT (β = .304, t = 4.117, p = .000) statistically significantly predicts a high level of the AU of ICT in teaching as shown in Table 6. The results show that RME teachers' PU of ICT highly predicts their AU of ICT to teach RME. Therefore, the null hypothesis is rejected.

Table 6

Regression Coefficients of PU of ICT and the AU of ICT

Variable	B	SE	Beta	T	P	95% CL
Constant	.243	.313		.777	.438	(-.376, .863)
Perceived Usefulness	.863	.077	.715	11.172	.000	(.710, 1.016)

4.5 $H_0$2: There is no statistically significant effect of RME teachers' level of PEU of ICT on their AU of ICT in teaching RME

This hypothesis sought to investigate the effect of the level of PEU of ICT on the AU of ICT in teaching RME. Simple linear regression analysis was conducted to determine if the PEU of ICT affects the AU of ICT. Results from the analysis, using the enter method showed that the PEU of ICT (predictor) moderately explains 38% of the variance in the AU of ICT (outcome), F (1, 119) = 71.492, p= .000[b], R = .613a, R^2=.375, R^2 $_{Adjusted}$ = .370. Refer to Table 7 for the model.

Table 7

ANOVA and Model Summary for PEU of ICT and Level of AU of ICT

Model	df	Mean Square	F	Sig.	R	R^2	R^2_{Adj}
Regression	1	33.704	71.492	.000[b]	.613[a]	.375	.370
Residual	119	.471					
Total	120						

Results from the analysis further indicated that RME teachers' high level of PEU of ICT (β = .613, t = 8.455, p = .000) statistically significantly predict a high level of AU of ICT as shown in Table 8. The results imply that RME teachers' PEU of ICT highly predicts their AU of ICT in teaching RME. Therefore, the null hypothesis is rejected.

Table 8

Regression Coefficients of PEU of ICT and the AU of ICT

Variable	B	SE	Beta	t	P	95% CL
Constant	.917	.333		2.752	.007	(.257, 1.577)
Perceived Ease of Use	.719	.085	.613	8.455	.000	(.551, .888)

4.6 $H_0$3: There is no Statistically Significant Effect of RME Teachers' Level of PEU of ICT on their PU of ICT in Teaching RME

This hypothesis sought to investigate the effect of the level of PEU of ICT on the PU of ICT in teaching RME. Simple linear regression analysis was conducted to determine if the PEU of ICT affected the level of PU of ICT in teaching RME. Results from the analysis, using the enter method showed that the PEU of ICT (predictor) highly explains 48% of the variance in PU of ICT (outcome) in teaching RME, F (1, 119) = 110.513, p= .000[b], R =.694[a], R^2= .482, R^2 $_{Adjusted}$ = .477. Refer to Table 9 for the model.

Table 9

ANOVA and Model Summary for the level of PEU of ICT on the PU of ICT

Model	df	Mean Square	F	Sig.	R	R^2	R^2_{Adj}
Regression	1	29.741	110.513	.000b	.694a	.482	.477
Residual	119	.269					
Total	120						

Results from the analysis further indicated that RME teachers with a high level of PEU of ICT (β = .694, t = 10.512, p = .000) statistically significantly predict a high level of the PU of ICT as shown in Table 10. The results indicate that RME teachers' PEU of ICT moderately predicts their PU of ICT in teaching RME. Therefore, the null hypothesis is rejected.

Table 10

Regression Coefficients of the Level of PEU of ICT on the PU of ICT

Variable	B	SE	Beta	t	P	95% CL
Constant	1.390	.252		5.517	.000	(-.376, .863)
Perceived Usefulness	.676	.064	.694	10.512	.000	(.710, 1.016)

4.7 Discussion

Results from the study portray that RME teachers in basic schools in Cape Coast have a high level of PU of ICT in teaching. This finding is interesting because the teachers appear to have limited knowledge about ICT and perceive it to be a cumbersome task to use ICT in their teachings. This high level of PU of ICT in teaching from the teachers indicates that they see ICT as a tool that can be used to enhance the teaching of RME. This enhancement can lead to high levels of student engagement, which are linked to academic performance and an increase in interest. Quayson and Halm (2020) discovered a high recognition of ICT and its usefulness among RME tutors in the Volta and Eastern Regions of Ghana. Eze et al. (2021) and Zaman et al. (2024) also found high levels of PU of ICT in teaching among science and Mathematics teachers. Similarly, Boafo, et al (2024) revealed the importance of ICT in enhancing the teaching and learning of RME in Ghana from the perspectives of teachers, suggesting that addressing challenges such as the scarcity of textbooks could be mitigated through effective ICT integration. Jatileni and Jatileni (2018) revealed that teachers' personal religious and moral values might influence their PU of ICT in teaching. This suggests that the PU of ICT could be compromised by the teachers' individual biases and the lack of resources for a more comprehensive understanding of RME as a subject.

Further, the study revealed that RME teachers in basic schools in Cape Coast have a high level of PEU of ICT in teaching. This finding is interesting because the teachers appear to have limited knowledge about ICT and perceive it to be a cumbersome task to use ICT in their teachings. The high level of PEU of ICT in teaching also indicates that teachers find it very easy to utilise ICT tools to teach, do not find it frustrating, and do not waste time. Eze et al. (2021), Kundu and Bej (2021) and Zaman et al. (2024) both utilised the TAM and found that the PEU of ICT is high among science and mathematics teachers. Nurhaeti (2023) found a high level of PEU of ICT among teachers of Islamic religious education.

The study again revealed that RME teachers in basic schools in Cape Coast have a high level of AU of ICT in teaching. This finding contradicts the preliminary basis of this study that indicated that RME teachers do not use ICT in teaching. The finding indicates that RME teachers in Cape Coast use ICT to teach. The high level of AU of ICT shows that the teachers make integrating ICT into their lessons a priority, use it to introduce their lessons, use online resources, and make efforts to learn new skills in ICT usage. Some previous studies (Karakostantaki & Stavrianos, 2021; Bariham et al, 2019; Kwaah, 2024) suggest that some teachers in Religious education do incorporate ICT in their teaching. In addition, this finding contradicts previous findings on teachers' AU of ICT in teaching across subject areas and contexts. Appiah (2022) found that even though RME teachers possess adequate pedagogical knowledge and use certain instructional methods, they do not use ICT in teaching. Cadorna et al. (2023) found that the AU of ICT in teaching was not high; suggesting those other factors, such as confidence in using ICT and the availability of digital

resources, also play a critical role in the AU of ICT by teachers. The availability of ICT tools is crucial to teachers' AU of ICT to teach.

Furthermore, the study established that there was a statistically significant effect of RME teachers' PU of ICT on their AU of ICT in teaching RME. This means that RME teachers' AU of ICT in teaching RME is highly predicted and explained by their PU of ICT. Therefore, an RME teacher will use ICT to teach if only the teacher thinks the ICT tool is useful to the delivery of his lesson and the attainment of the daily lesson objectives. This finding confirms Kumar et al. (2024), study which identified PU as a dominant factor influencing ICT usage among teachers. Eze et al (2021) also found PU of ICT significantly predicts ICT use in teaching. Cadorna et al. (2023) found that despite teachers' positive attitudes towards ICT, AU of ICT in teaching was not high; suggesting that other factors, such as confidence in using ICT and availability of digital resources, also play a critical role. This indicates the significant role of PU in predicting the AU of ICT in teaching.

In addition, the regression analysis revealed that there was a statistically significant effect of RME teachers' PEU of ICT on their AU of ICT in teaching RME. This implies that RME teachers' AU of ICT in teaching RME is highly predicted and explained by their PEU of ICT. This means an RME teacher will use ICT to teach if the teacher has the required skills and finds it easy to use the ICT tools. Eze et al. (2021) found that PEU is a positive partial mediator of ICT support and ICT use among teachers. This suggests that ease of use does affect the AU of ICT, as it influences teachers' attitudes towards acceptance and predicts actual use. Similarly, Al-Rahmi et al. (2020) found that PEU influences students' use of ICT implying that ease of use is a significant factor in the actual employment of ICT in educational contexts. Yilmaz (2023) also identifies perceived ease of use as a mediating factor in the context of job performance. While none of the studies directly addresses the use of ICT in teaching RME, the general findings across multiple educational contexts suggest that perceived ease of use is indeed an influential factor in the actual use of ICT.

Finally, the study revealed a statistically significant effect of RME teachers' PEU of ICT on their PU of ICT in teaching. This means that RME teachers' PU of ICT in teaching RME| is highly predicted and explained by their PEU of ICT. This indicates that an RME teacher will find ICT useful in RME lesson delivery if only the teacher has the required skills and can easily use ICT tools. Arthur (2022) corroborates this finding by revealing that when mathematics teachers find ICT tools easy to use, they tend to find them more useful. Similarly, Machdar (2019) confirmed that ease of use enhances the perceived utility of ICT tools. These findings are consistent with the core assertions of the TAM, which posits that PEU is a determinant of PU. However, it is important to note that the specific context of teaching RME is not directly addressed in previous studies. Literature suggests that there is a positive effect of the level of PEU of ICT on the PU of ICT in educational settings, including teaching mathematics and other subjects (Arthur, 2022; Machdar, 2019). While the reviewed studies do not directly address RME, the established relationship between PEU and PU in other educational contexts provides a basis to challenge the claim of no effect in the context of teaching RME.

V. CONCLUSIONS & RECOMMENDATIONS

5.1 Conclusions

Based on the findings, it can be inferred that RME teachers in Cape Coast recognise the potential benefits of integrating ICT into their lessons. This perception can lead to more effective, interactive and innovative teaching methods, which will lead to an enhanced overall learning experience for students. It can also be concluded that RME teachers in Cape Coast are comfortable and confident in utilizing ICT in their teaching. This ease of use is critical for the seamless integration of ICT into the classroom, reducing any potential resistance to adopting new technologies. In addition, it can be said that RME teachers in Cape Coast use ICT in teaching.

Findings from the study show that RME teachers' AU of ICT underscores the importance of teachers understanding and valuing the benefits of ICT. When teachers perceive ICT as useful, they are more likely to implement it effectively in their teaching practices. Again, the AU of ICT highlights the role of user-friendliness in technology adoption. When ICT tools are easy to use, teachers are more inclined to integrate them into their teaching, making the process less cumbersome and more efficient. The combination of high PU and PEU results in teachers making significant AU of ICT in teaching RME. This demonstrates that when teachers see value in and are comfortable with ICT, they are more likely to incorporate it into their teaching, leading to a more dynamic and interactive learning environment. Finally, it is concluded that RME teachers are more inclined to use ICT in their teaching because they have an appreciable level of easiness to use. This indicates that when teachers find ICT tools easy to use, they are more likely to perceive them as useful, leading to increased adoption and integration of technology in teaching RME.

5.2 Recommendations

The NaCCA and Ghana Education Service (GES) should continue to organise workshops and seminars targeted at enhancing RME teachers' skills and competence in the use of ICT. Topics like "selecting appropriate ICT tools", "effective integration of ICT in teaching RME", etc. These training would help teachers improve the integration of ICT effectively into their teaching practices, thereby boosting their confidence and competence. In addition, Colleges of Education and Universities that are responsible for training teachers for basic schools should expand the scope of courses in ICT to include the actual selection and integration of appropriate ICT tools into teaching. This will equip future teachers with the necessary skills to integrate technology into their teaching from the start of their careers. Further, the Ministry of Education and GES should endeavour to equip schools with adequate ICT resources. When teachers have access to ICT resources, it can facilitate the effective use of ICT in teaching RME. Finally, Since PEU of ICT affects teachers' level of PU, the Cape Coast metropolitan directorate of education should organise seminars and workshops aimed at training teachers to gain skills in the use of ICT resources. If teachers become proficient in the use of ICT, they will be willing to use ICT resources.

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