LEARNING BEYOND THE CLASSROOM: Enhancing Grade 11 Students' Learning Outcomes through Quizventures

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ABSTRACT

This action research study aims to investigate the effectiveness of QuizVenture as an intervention tool to enhance Grade 11 student learning outcomes in World Religions. QuizVenture is a mobile-based game that uses gamification elements to engage students in learning activities outside the classroom. A total of 26 Grade 11 students from Lapinigan National High School participated in the study. The intervention was implemented over a period of four weeks, and data were collected through pre- and postintervention quizzes and focus group discussions. The results of the study revealed that the use of QuizVentures significantly improved students' learning outcomes, with a mean score increase of 10.20 points in the postintervention quiz compared with the preintervention quiz. Additionally, the data shown in the Results and Discussion section revealed that the intervention or treatment that was applied between the pretest and posttest effectively improved the participants' scores on the second cycle posttest compared with the data gathered via the Statistical Package for the Social Sciences (SPSS Tool) during the pretest and posttest of cycle 1. Moreover, the students reported high levels of engagement and motivation in using QuizVenture for learning. Focus group discussions revealed that QuizVenture helped students develop a deeper understanding of the concepts and principles of world religion and improved their critical thinking skills. These findings suggest that QuizVenture is an effective intervention tool that can enhance student learning outcomes within and beyond the classroom.

Key words: QuizVenture, Gamification in education, Game-based learning, Learning outcomes, World Religions education

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INTRODUCTION

World religion courses go beyond the study of diverse faith traditions; they serve as vital platforms for fostering intellectual engagement, cultural competence, and global awareness. In today's increasingly interconnected world, where religious and cultural interactions are unavoidable, religious literacy is not just an academic pursuit—it is a crucial skill for navigating complex social, political, and ethical landscapes[1]. These courses cultivate empathy, cross-cultural understanding, and the ability to approach religious diversity with intellectual curiosity and respect[2]. More importantly, they encourage students to engage with fundamental human questions regarding meaning, morality, and belonging—universal themes that transcend religious and ideological boundaries. Empirical research on the impact of World Religion courses is essential for evaluating their effectiveness in shaping students' perspectives, fostering inclusivity, and enhancing critical thinking skills. Misconceptions about religious traditions often fuel prejudice, social divisions, and even conflict, but education has the power to challenge these biases and promote mutual understanding (Blackmer & Athanasius Akila, 2025)[3]. Through rigorous analysis of the cognitive, behavioral, and attitudinal shifts resulting from these courses, researchers can assess their role in equipping students with the tools necessary for respectful discourse, stereotype reduction, and a deeper appreciation of religious and cultural pluralism. By refining pedagogical approaches on the basis of evidence-driven insights, educators can ensure that World Religion courses fulfill their potential in preparing students for meaningful engagement in an increasingly diverse global society.

In the global context, religion is viewed as important and essential for well-rounded education and personal development[4]. They argue that religion has played a crucial role in shaping human history, culture, and values and that understanding religious traditions can promote tolerance, respect, and empathy toward people with different beliefs[5]. According to a survey conducted in 2007 in the United States of America, the majority of Americans considered religion to be an important part of their lives, with 56% of respondents stating that it was very important and

26% saying it was somewhat important. In terms of education, countries such as Iran and Saudi Arabia view religious education as highly valued and consider it a crucial part of a student's education[6]. Students in these countries are required to take religious courses as part of their curriculum, and these courses are often taught by religious leaders or scholars. In the United States and Canada, the importance of religious education is more dependent on individual preferences and beliefs[7]. In terms of students' academic performance, the data from the National Longitudinal Survey of Youth suggest that there may be a positive correlation between attending religious services frequently and academic performance, as measured by GPA. Specifically, the data show that students who attended religious services weekly or more had a higher average GPA (3.0) than those who attended religious services less frequently (2.8). These data suggest that promoting regular attendance at religious services or creating opportunities for students to engage in religious activities may be a potentially effective strategy to improve academic outcomes. However, a study conducted by Pew Research Center (2010)[8–11] revealed that most Americans have very low knowledge of world religion, with respondents answering only half of the 32 questions correctly on average. Furthermore, the respondents in the study scored the lowest on questions related to non-Christian religions, indicating a lack of understanding and awareness of other religious traditions. This study highlights the importance of further improving religious education in America to increase learners' knowledge of different religions and foster a more inclusive and informed society, where people can better appreciate and respect diverse religious beliefs and practices.

In the Philippines, Filipinos are very devoted people. In fact, the country comprises Filipinos, who identify themselves as Christians (92.5%)[12]. More specifically, 82.9% of the population identified as Catholic, 2.8% identified as Evangelical Christian, 2.3% identified as Iglesia ni Kristo, and 4.5% identified with other Christian denominations. This makes studying religion very important because it plays a significant role in shaping the country's culture, values, and way of life. Integrating religious education into the education system, as the Department of Education has done, allows for the development of a deeper understanding of different belief systems and promotes religious tolerance and respect for diversity. It also enables students to understand the historical and cultural significance of religion and its impact on society. However, despite these numbers and data, Filipino students still lack the ability to understand the concepts of every religion presented in the DepED curriculum[13]. In fact, a study by Bual and Cena (2021)[14] revealed that only religious education in public should be strengthened, as participants in their data presented moderate results. The results of this study imply that public schools not only in Bacolod city but also throughout the Philippines should prioritize strengthening religious and value formation programs to establish a stronger foundation for the spiritual well-being of every student.

In light of this context, during our two-week observation at the Department of Education as part of our Field Demonstration at Lapinigan National High School in the province of Agusan del Sur, we observed a significant lack of knowledge and interest among students in World Religion, particularly regarding the five major world religions: Christianity, Islam, Hinduism, Buddhism, and Judaism. During oral recitations, the majority of students struggled to actively participate in class discussions, with many unable to provide accurate responses to questions. Even those who raised their hands to answer often struggled to articulate correct or well-informed answers. Furthermore, the results of the 1st Grading Final Exam for the entire Grade 11 level revealed a concerning deficiency in understanding and overall performance in World Religion. Alarmingly, most students—with the exception of those in the science class—failed to achieve a passing score in the Introduction to World Religion and Belief System course. Seeing this firsthand made us curious: Why are students struggling with this subject? Is it due to the way the material is being taught, a lack of exposure to religious studies, or perhaps a deeper disinterest in the topic? More importantly, how can we help? These questions have driven us to explore the root causes of the issue and find meaningful ways to make world religion more engaging and accessible to students. Our goal is to develop interventions that will not only improve their academic performance but also foster a deeper appreciation for the diverse religious beliefs that shape our world.

THEORETICAL BASIS

In light of the purpose of this research setting, the SAMR model pioneered by Dr. Ruben Puentedura was used. SAMR stands for substitution, augmentation, modification, and redefinition. The SAMR model provides a framework that focuses on how technology can be used as a simple substitute for traditional teaching methods. The goal of the SAMR

(Substitution, Augmentation, Modification, Redefinition) model is to help educators and instructional designers integrate technology into teaching and learning in a way that goes beyond simply substituting traditional tools with digital tools[15].

Several studies have shown that when teachers apply the SAMR model in their teaching pedagogy, it has a positive effect on students. For instance, Aprinaldi et al. (2018)[16] concluded that integrating technology-enhanced materials in daily classroom discussions helps improve the learning competencies of students in language and vocational courses. In addition, a study by Wijaya et al. in 2021[17] revealed that integrating technology-enhanced tools is highly effective in ensuring continuous education, even during a pandemic. Overall, these studies demonstrate the positive impact of using the SAMR model in education. When teachers use the model to design technology-rich learning activities, they are more likely to create activities that foster higher-order thinking skills and engage students, leading to improved learning outcomes.

Furthermore, cognitive load theory was pioneered by John Sweller, an educational psychologist, and Professor Emeritus at the University of New South Wales, Sydney, Australia. Sweller is known for his work on cognitive load theory, which proposes that the cognitive load imposed on a learner during instruction affects the learning process (Sweller, Ayres & Kalyuga, 2011)[18]. According to theory, the cognitive capacity of students is limited, and when the cognitive load exceeds the limit, learning is impaired[19]. Hence, this theory suggests that to achieve effective learning from the discussion, working memory must be used effectively and not overloaded. This can be achieved by reducing the cognitive workloads of the students through the use of effective instructional designs that make learning more fun and exciting, similar to the created intervention tools for researchers.

In line with the research study, the intervention tool created by the researchers is designed to make the learning of the students more interactive, which, in turn, promotes better learning outcomes. In this approach, students' enjoyment of the learning process can be attributed to the reduced cognitive load. When learning becomes enjoyable, students are less likely to perceive the cognitive effort required to learn[20]. This leads to better retention and recall of learned material.

DESIGN OF INNOVATION, INTERVENTION AND STRATEGY

The intervention consists of two different online tools: the customized online website using the Google website and the online game created by the researchers using genial. This tool is an intervention to help Grade 11 students with their academic problems in the Introduction to World Religion and Belief System course at Lapinigan National High School.

a. Definition of a customized online website (Supplementary Tool)

The customized online website has been carefully designed by the researcher to include all of the relevant learning competencies for the Introduction to World Religion and Belief System course. The website includes a comprehensive collection of informative resources and engaging learning materials that are tailored to the needs of Grade 11 students. The website's content is composed of lessons that cover a wide range of topics related to the World Religion and Belief System, such as the history and development of major world religions, key religious figures and their teachings, and the significance of religious practices and beliefs in different cultures. The content is presented in a clear, concise, and engaging manner that is accessible to students of varying levels of familiarity with the subject matter. The website also features an interactive quiz in the form of games and other educational tools that allow students to test their knowledge and reinforce their learning in a fun and engaging way. The quiz and game have been carefully designed to be challenging but not overwhelming and to provide students with valuable feedback and insights into their progress. The researcher also provides a special tab at the site that allows students and visitors to the website to write any comments and feedback about the website. The comments and feedback of the researchers will be used by the researchers to further improve their website and gamified quizzes.

b. Role of customized online websites (Supplementary Website

The role of the customized online website is to enhance student learning outcomes by providing students with a comprehensive and engaging supplementary website that improves their learning experience. By providing students with easy access to a wide range of learning resources and tools, such as reading materials and informative videos about the content, the website can help students develop a deeper understanding of the subject matter and improve their critical thinking skills.
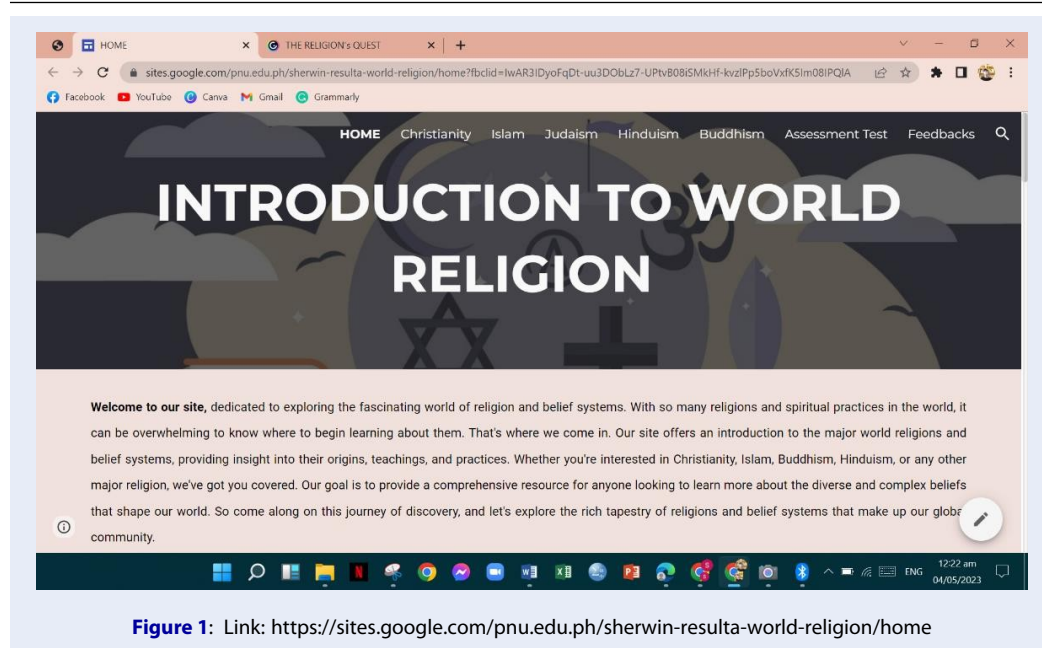
Figure 1: Link: https://sites.google.com/pnu.edu.ph/sherwin-resulta-world-religion/home

c. Definition of Game-based Intruction through QuizVenture

Game-based instruction refers to the idea of using game application in learning instructions as a substitute for the traditional method of teaching[21]. The researchers designed a web-based application that contains a series of activities that are anchored to the lessons discussed in the Introduction to World Religion and Belief System course. In this method, the student must have a cellular phone or a laptop and internet connection. The students then answer the prepared activities of the teachers. The purpose of this approach is to make learning more engaging and interactive, as well as to increase the motivation and retention of knowledge in the material used. Game-based instruction can also be used to assess student learning and provide immediate feedback to improve performance. This strategy will be realized through QuizVenture, a customized game that contains questions to assess student proficiency in the Introduction to World Religion course. The word QuizVenture is a combination of the words "Quiz" and "Adventure", which implies that learning can be fun and exciting. Thus, students are allowed to learn the content of the course in an enjoyable way.

d. Role of game-based learning (quizVenture)

Tamosevicius (2022)[21] mentioned in his article titled "Why Is Game-based Instruction Improtant?" that one of the purposes of game-based instruction is to increase student learning by promoting active learning through fun and interactive games and simulations. Game-based instruction aims to improve critical thinking and problem-solving skills while aligning with the learning objectives and instructional goals of a specific course or lesson (Balic & de Gracia, 2024)[22] (Rifayanti et al., 2024)[23]. It is intended to capture students' interest and attention, increase their engagement and motivation, provide instant feedback to track progress and adjust strategies to achieve better results. The purpose of game-based instruction is to provide a flexible and adaptable approach to teaching and learning that supports the acquisition of essential knowledge and skills in an enjoyable and memorable way.

e. The Process of Enhancing Students' Learning Outcomes in World Histories through Customized Online Websites and Game-based Instruction

The intervention will be applied in Grade 11 students at Lapinigan National High School in 3 cycles. The first cycle of the implementation will be held in the first week of March, followed by the second and third cycles in the subsequent weeks of the month.

The following are the detailed schedule and other information regarding the implementation of the research intervention:

1. Phase 1: Pretest and Diagnostic Analysis – Students take a pretest to assess their baseline knowledge and
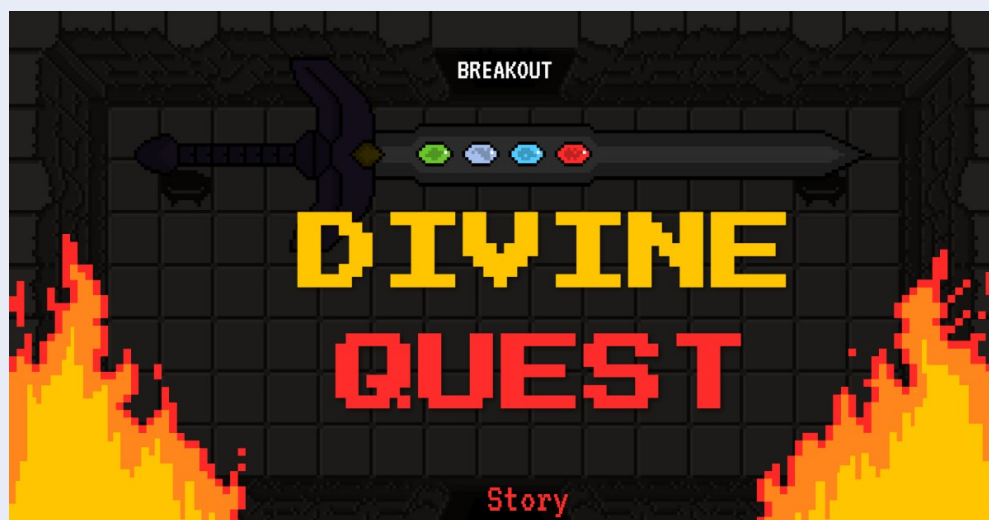
Figure 2: Link: https://view.genially.com/643d19ec1203c7001ad24257/interactive-content-the-religions-quest

retention of key concepts. Following this, an open forum is conducted to analyze their reasoning behind their responses, providing deeper insight into their thought processes and learning gaps. The data collected are then used to design a targeted instructional intervention.

2. Phase 2: Implementation of the initial intervention – The first iteration of the intervention, which is based on pretest results, is introduced. A posttest follows to evaluate its impact. Students are grouped according to their scores and participate in discussions to explain their performance. Their feedback is then analyzed to refine and enhance the intervention. Additionally, a customized online learning platform is introduced, providing supplementary resources to reinforce learning.

3. Phase 3: Enhanced intervention with gamified learning—The intervention is revised on the basis of previous feedback, incorporating interactive elements such as a gamified quiz to foster engagement. Students use personal devices to interact with the quiz, and those struggling receive additional support. Researchers encourage inquiry and discussion to ensure comprehension. Performance data and student feedback are used to make further refinements to both the website and the quiz, ensuring that they effectively address diverse learning needs.

4. Phase 4: Final Implementation and Comprehensive Assessment – The fully optimized online learning platform and gamified quiz are implemented. Students are encouraged to engage with these tools at their own pace for improved knowledge retention. A final posttest is administered, and the results are compared with those of earlier assessments to measure overall progress. A concluding focus group discussion provides students with insights into the effectiveness of the intervention. The feedback informs any final refinements, ensuring that the tool is an effective, sustainable learning resource for future use in the course.

ACTION RESEARCH METHODS

In this study, a mixed-method design is implemented to gather both qualitative and quantitative data, especially with an explanatory sequential design. The mixed-methods sequential explanatory design is a research approach that involves two phases: quantitative and qualitative[24]. In the first phase, the researcher collects and analyzes numeric data, whereas in the second phase, text data are collected and analyzed to explain the quantitative results obtained in the first phase. The two phases are connected, and the rationale for this approach is that the quantitative data provide a general understanding of the research problem, whereas the qualitative data refine and explain those statistical results by exploring participants' views in greater depth (Rossman and Wilson 1985; Tashakkori and Teddlie 1998; Creswell 2003)[24,25].

Moreover, the test questionnaire used by the researcher to measure the understanding of the students was rigorously validated by subject matter experts and educational professionals to ensure that the instruments were both valid and reliable for the intended

purpose. To guarantee the validity of the assessment, the test items were meticulously designed and aligned with a Table of Specifications, which provided a clear framework for the distribution of test items across different cognitive domains: knowledge, process learning, and understanding. This ensures that the test is balanced and covers all relevant aspects of the curriculum comprehensively. Additionally, this careful alignment ensures that no area is underrepresented, contributing to a more accurate measurement of students' learning outcomes. Once the test materials were thoroughly reviewed and approved by experts, they were subjected to a pilot test to assess their reliability. The pilot testing phase allowed the researchers to identify any potential issues in the test items, such as ambiguous questions or inconsistencies in scoring. After necessary adjustments were made on the basis of the pilot results, the final version of the test was administered to the students.

Research participants

The study included 26 Grade 11 students from Lapinigan National High School, representing 32.5% of the total 80 students enrolled in the Introduction to World Religions course. This sample size is sufficient, as it captures a significant portion of the population, making it adequate for identifying patterns and insights, especially in qualitative or exploratory research [26] [27]. In such studies, a sample of 20–30 participants is often enough to reach data saturation, ensuring that key themes are adequately explored. Additionally, the voluntary sampling method, while subject to self-selection bias, ensures that participants are genuinely interested, leading to more engaged and meaningful responses. Although the findings may not be broadly generalizable, they remain highly relevant within the specific school context, providing valuable insights applicable to similar educational settings.

Data Gathering Method

This study employs a triangulation method to ensure a comprehensive analysis by integrating multiple data sources (Carter et al., 2014). Data collection includes focus group discussions, individual written evaluations, and pretest/posttest results, providing both quantitative and qualitative insights. The pretest establishes a baseline for comparison, whereas the posttest evaluates the intervention's impact on students' learning outcomes in the World Religions course, allowing for an objective assessment of knowledge improvement. Additionally, focus-group discussions serve as a qualitative approach where diverse student groups engage in structured conversations to share insights, perceptions, and experiences

related to the intervention (Eeuwijk et al., 2017). This method enriches the literature by capturing deeper perspectives beyond numerical results. By combining these methods, the study ensures a well-rounded, data-driven evaluation of the intervention's effectiveness in enhancing student learning.

Data Analysis Method

The data collected from the research respondents were analyzed via advanced statistical methods, specifically through the Statistical Package for the Social Sciences (SPSS). This analysis provided robust insights into the effectiveness of the intervention, including statistical measures of significance that helped gauge the impact of the teaching methods on student learning. In addition to the quantitative data, the researchers also conducted a focus group discussion to capture the qualitative perspectives of the students. This discussion aimed to explore the participants' perceptions, experiences, and personal insights regarding the intervention. By engaging students in an open dialog, the researchers sought to understand the factors that influence their learning, including aspects such as the clarity of instructional materials, the applicability of the content, and the overall learning experience. These qualitative data help contextualize the quantitative results and provide a richer understanding of the intervention's impact.

The combination of quantitative and qualitative data offers a comprehensive analysis of the intervention's effectiveness. While quantitative data allow for the measurement of learning outcomes and statistical comparisons, qualitative data provide a valuable context, revealing students' lived experiences and perspectives. By integrating both types of data, researchers aim to obtain a holistic view of how the intervention affects students' learning and to derive actionable insights for improving future educational practices. The dual approach also enhances the validity of the conclusions drawn, as it offers a more complete picture of the educational process from both an objective and a subjective viewpoint. Researchers believe that by utilizing both quantitative and qualitative methods, they can present a more nuanced understanding of the intervention's impact on student learning, as well as gain deeper insights into students' perceptions and experiences, which are crucial for refining teaching strategies and improving educational outcomes in future iterations of the course.

Furthermore, to determine the level of students' proficiency in the course, the mean percentage score of every student was computed, and the descriptive

equivalent of students' performance in the pretest and posttest was determined via the scale provided by the DepEd Memorandum Order 160 series of 2012 (Department of Education, 2012)[28] (Table 1):

The instrument was utilized to assess whether there was progress from the pretest to the posttest following the intervention of the three cycles. In accordance with Memorandum No. 76, 2018, from the Department of Education (DepEd)[29], the passing score for the 2016 Accreditation and Equivalency (A&E) Test conducted in November 2017 was adjusted from 75% to the commonly recognized passing score of 60%.

RESULTS AND DISCUSSION

The following tables show the statistics and interpretation of the data gathered.

PART I: Results of the study analyzing the collected quantitative data

Results

General scores of the students based on the conducted series of tests

Table 2 shows the distribution of student participants on the basis of their mastery of the subject in the Introduction to World Religion and Belief System, as revealed in their prete scores. In the data, none of the student participants reached the "Mastered" descriptive equaivalent or "Closely Approximating Mastery". The majority of the students, approximately 81% of the respondents, fall under the "Average" category, which indicates that only 21 respondents have reached the average level of mastery. In addition, 2 students out of 26, which is equivalent to 8% of the total population, fall under the "Low" category, whereas 11% or 3 students are "Moving Toward Mastery". The data suggest that there is still room for improvement and that some students are making progress toward achieving a higher level of mastery. The data presented suggest that there is a need to improve the current teaching strategy applied to students. The fact that none of the students have "mastered" the subject or are "closely approximating mastery" suggests that the current teaching strategies or methods may not be sufficient to achieve the desired level of mastery.

Table 3 presents the results of the posttest administered to the students after the implementation of the intervention during the 1st cycle. The findingsrevealed that although there was a slight improvement in the students' scores, the majority of them scored at the level of "Moving Toward Mastery," with only nine students falling under the "Closely Approximating Mastery" category. Nevertheless, this result suggests that the intervention employed in the first cycle

could be effective in enhancing the students' learning outcomes compared with their pretest scores. Moreover, the data support this claim since no students were categorized under the "Low and Very Low" level. Table 4 presents the results of the posttest during the second cycle of applying the designed intervention tool. The data show that in this phase, all of the student participants had already achieved a high level of mastery, with 100% of the students categorized as "mastered". Furthermore, the absence of any students categorized below "Mastered" suggests that the intervention tool applied during the process has been highly effective in enhancing students' learning outcomes in the course. The results also suggest that QuizVenture has successfully addressed any potential gaps or weaknesses in students' knowledge and skills. Table 5 shows the comparison of students' scores in the administered pretest and posttest during cycle 1 of applying the designed intervention tool. As shown in the table, the mean score of students from pretest to posttest cycle 1 significantly increased from 9.8462 to 13.9615. The increase in the mean score of the data suggests that the intervention tool effectively addressed the students' learning needs and helped the learners master the content more efficiently.

Table 6 shows the data of the results of a paired samples t test conducted on a sample of 26 participants, who were administered a pretest and a posttest for cycle 1. The results indicate that there was a significant difference between the pretest and posttest scores, with a mean difference of -4.11538, indicating that the posttest scores were significantly higher than the pretest scores. On the other hand, the standard deviation of the paired differences was 1.36607, indicating that there was some variation in the differences between the pretest and posttest scores. These data suggest that the intervention or treatment that was applied between the pretest and posttest was effective in improving the participants' scores on the posttest, as revealed by the data. The statistically significant difference between the pretest and posttest scores suggests that the intervention had a meaningful impact. Moreover, the practical significance of the score improvements goes beyond statistical figures, as the mean difference of 4.11538 suggests that the intervention led to a meaningful enhancement in student learning. This increase implies not only statistical significance ($p = .000$) but also real-world educational benefits, such as improved comprehension, greater engagement, and better academic performance. The standard deviation of 1.36607 further indicates that the improvements were consistent across participants, reinforcing the reliability of the intervention's impact.

Table 1: DepEd Scale

Mean Percentage Score	Descriptive Equivalent
96-100%	Mastered
86-95%	Closely Approximating Mastery
66-85%	Moving Toward Mastery
35-65%	Average
15-34%	Low
5-14%	Very Low
0-4%	Absolutely No Mastery

Table 2: Distribution of student-participants in terms of their mastery (pretest)

Descriptive Equivalent	Number of Student	Percentage
Mastered	0	0%
Closely Approximating Mastery	0	0%
Moving Toward Mastery	3	11%
Average	21	81%
Low	2	8%
Very Low	0	0%

Source: Data analysis results

Table 3: Distribution of student-participants in terms of their mastery (Cycle 1 Posttest)

Descriptive Equivalent	Number of Student	Percentage
Mastered	0	0%
Closely Approximating Mastery	9	34%
Moving Toward Mastery	15	58%
Average	2	8%
Low	0	0%
Very Low	0	0%

Source: Data analysis results

Table 4: Distribution of student-participants in terms of their mastery (Cycle 2 Posttest)

Descriptive Equivalent	Number of Student	Percentage
Mastered	26	100%
Closely Approximating Mastery	0	0%
Moving Toward Mastery	0	0%
Average	0	0%
Low	0	0%
Very Low	0	0%

Source: Data analysis results

Table 5: Paired Sample Statistics of Pre-Test and Post-Test-Cycle-1 in Pair 1

Paired Samples Statistics					
		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	pretest	9.8462	26	2.32710	.45638
	posttest1	13.9615	26	1.92833	.37818

Source: Data analysis results

While statistical analysis confirms effectiveness, future research could explore whether these gains persist over time and translate into long-term knowledge retention.

Furthermore, the effect size provides additional insight into the magnitude of the intervention's impact. Calculating Cohen's d via the mean difference and standard deviation of paired differences results in a value of approximately 3.01, which is considered a very large effect. This suggests that the intervention was not only statistically significant but also had a substantial practical impact on student performance. This high effect size indicates that the learning method employed in this study was particularly effective, potentially outperforming other instructional strategies.

Table 7 shows the data gathered by the researchers from the scores of the students during the administration of the posttest of the first and secondcycles of applying the designed intervention to Grade 11 students from Lapinigan National High School. As shown in the table, the mean score of students from posttest cycle 1 to posttest cycle 2 increased from 13.9615 to 20.0000. The data indicate a significant increase in the mean score of student performance from posttest 1 to posttest 2. This suggests that the designed intervention tool was successful in improving the students' performance, as evidenced by the increase in the mean score.

Table 8, a paired samples t test was conducted to compare the mean scores of posttest1 and posttest2. As shown in the table, the mean difference between the two tests is -6.03846, which means that the students' scores significantly increased by an average of 6.03846 points from posttest 1 to posttest 2. The results also show that there is a significant difference in the mean scores between the two tests, with a t value of -15.967 and a p value of .000. This finding indicates that the difference in mean scores is unlikely due to chance and is likely a result of the intervention or treatment being applied. In conclusion, the intervention tool created by the researcher effectively enhances students' proficiency in the Introduction to World Religion course.

Moreover, the findings of this study demonstrate both statistical and practical significance in the observed score improvements. The mean difference of -6.038 between posttest 1 and posttest 2, with a p value of .000, confirms that the improvement is statistically significant. However, beyond statistical significance, the practical implications of this improvement must be considered. A 6-point increase could represent a meaningful enhancement in students' learning outcomes, skill retention, or engagement, depending on the context. If similar interventions in education yield smaller gains, this suggests that the current approach has a particularly strong impact.

Furthermore, the effect size, calculated as Cohen's d = 3.13, indicates an exceptionally large impact of the intervention. An effect size of this magnitude is rarely seen in educational studies, reinforcing the idea that the intervention had a substantial influence on learning outcomes. This suggests that the gamified learning approach implemented in this study is highly effective in improving student performance.

The findings reveal a significant and progressive improvement in student mastery levels following the implementation of the intervention. Initially, the pretest results indicated that none of the students had mastered the subject, with the majority (81%) falling under the "Average" category, whereas others were classified as "Low" or "Moving Toward Mastery." These results highlight the limitations of the existing teaching strategies in fostering a deep understanding. After the first intervention cycle, student performance noticeably improved, with most progressing to "Moving Toward Mastery" and nine students reaching "Closely Approximating Mastery." Importantly, no students remained in the "Low" or "Very Low" categories, demonstrating the intervention's initial effectiveness. By the second cycle, all the students had achieved full mastery, marking a remarkable transformation in their learning outcomes. This outcome underscores the success of QuizVenture and the revised instructional approach in bridging learning gaps. The findings suggest that interactive and gamified learning tools significantly enhance student engagement, retention, and comprehension, making them highly effective in improving academic performance and the

Table 6: Paired Samples Test Results for Pretest and Posttest1 in Pair 1.

Paired samples test									
		Paired Differences							
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		t	df	Sig. (2-tailed)
					Lower	Upper			
Pair 1	pretest - posttest1	-4.11538	1.36607	.26791	-4.66715	-3.56362	-15.361	25	.000

Source: Data analysis results

Figure 3: Illustrations of the improvement of students as per the conduct of the intervention.

Table 7: Paired sample statistics of posttest cycles 1 and 2 in Pair 1

Paired Samples Statistics					
		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	posttest1	13.9615	26	1.92833	.37818
	posttest2	20.0000	26	.00000	.00000

Source: Data analysis results

mastery of complex subject matter.

PART 2: Results of the study analyzing the collected qualitative data

To support the data shown above, the researchers utilized a focus-group discussion approach and prepared two main questions with several follow-ups for the respondents to answer, aimed at determining their opinions and providing feedback regarding the benefits and effectiveness of the tool.

The focus group discussion method is an effective way to collect qualitative data by encouraging participants to share their thoughts and experiences openly[30]. With the FGD, the researchers were able to gather rich and detailed information that could not be captured by quantitative surveys alone and helped to substantiate the data of the research.

By using this method, the researchers were able to generate insights and identify common themes from the responses of the participants. These insights were used to refine the intervention tool, making it more effective and useful for the target audience.

Perceptions and Experiences of Students with the QuizVenture

Table 9

The data above pertain to the perceptions and experiences of students with the applied intervention tool. It is evident that the students are excited to try this new method of teaching, as it brings variety to their usual classroom routine, which can be monotonous and uninteresting. However, students also experience a sense of anxiety toward the new teaching method, as they are unfamiliar with it and may feel hesitant to make mistakes. This feeling of anxiety is not uncommon among students, especially when they encounter new teaching styles, and can be seen as a natural response to unfamiliar situations.

Discussion of the Summary of the Results

The integration of gamification strategies, such as QuizVenture, into curriculum design presents a promising approach to enhancing student engagement and learning outcomes. Institutions such as the Department of Education (DepEd) can incorporate these strategies to make learning more interactive and effective. The sustainability of QuizVentures as an intervention depends significantly on the continuous training of teachers, ensuring that they are equipped with the necessary skills to implement and adapt gamified learning methods effectively.

Table 10 presents the outcomes of apretest and two posttests conducted on twenty-six Grade 11 students from Lapinigan National High School. The pretest results indicate that students' scores ranged from 5–14 out of a possible 20, with an average score of 9.8462, corresponding to 49% in the mean percentage score (MPS). The DepEd Memorandum No. 55, 2018 scale, falls under the "Average" category, implying that students had little to moderate prior knowledge of the World Religion subject. In cycle 1 posttest, the students' scores improved significantly, ranging from 9–19, with a mean score of 16.2 (81% MPS), which was classified as "Moving Toward Mastery." This finding indicates that the intervention applied before the posttest was effective, although some students still struggled. However, in the second cycle, all the students achieved a perfect score of 20 out of 20 (100% MPS), placing them in the "Mastered" category. This suggests that adjustments made to the intervention after analyzing the pretest and cycle 1 posttest data contributed to significant improvements in student performance.

The students' qualitative feedback further reinforced the effectiveness of QuizVenture. One student expressed that the new teaching method facilitated a better understanding of the lessons: "Mas nasabtan nako ang lessons namo sa World Religion sir" (P8:L25–26). These findings suggest that gamification strategies can significantly enhance comprehension and engagement in learning. Additionally, the students found the learning process more enjoyable, as indicated in the following statement: "Mas lingaw gyud tong QuizVenture sir kaysa sa reporting og recitation" (P4:L26–29). This aligns with research suggesting that interactive and enjoyable activities contribute to a more engaging learning environment[31].

Table 8: Paired Samples Test Results of Posttest Cycle 1 and Posttest Cycle 2 in Pair 1.

Paired samples test

		Paired Differences			95% Confidence Interval of the Difference		t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper			
Pair 1	posttest1 - posttest2	-6.03846	1.92833	.37818	-6.81733	-5.25959	-15.967	25	.000

Source: Data analysis results

Table 9: Main question: What are the perceptions and experiences of students with respect to effectiveness?

Significant Statements	Generated Code/s	Theme
Na excite sir.. Kay bag o man to na style sa pagtudlo sa amoa jud sir. Ang kasagaran man na ginahimo namo diria sir kay klase ra na klase… grabe ka boring sir hahahaha. (P2:L10-12) **Translation:** Excited, sir, because it's a new style of teaching for us. Most of what we usually do here is just regular classes—so boring, sir, hahaha!	Excited to try	Students are excited to try new methods, but at the same time, they feel a little anxious about it. Additionally, a more interactive and varied learning approach can lead to a better understanding of the subject matter.
Nakulbaan ko sir kay dili man mi maayo sa kompyuter sir og cellphone.. basin mamali me og gamit sir ba ato na time. (P7:L23-24) **Translation:** I was nervous, sir, because we're not very good with computers and cellphones. We might make mistakes using them during that time.	Felt a little anxious	
Mas effective sya kay interactive man gyud kaayo sya and nakatabang jud sya sa among pagsabot sir. (P3:L45-46) **Translation**: It's more effective because it's very interactive, and it truly helped us understand, sir.	Effective as it is interactive	
… mas lingaw siguro og masabtan namo ang topic sa World Religion gyud sir gamit ang QuizVenture kaysa sa reporting og recitation tungod kay cellphone man ang gamit and then dula dula pajud. (P4:L31-32) **Translation:** … It's probably more enjoyable and easier for us to understand the topic in World Religion using QuizVenture compared to reporting and recitation because we're using cellphones, and it feels like playing a game.		

Source: Data analysis results

Table 10: cores of the students during the pretest, cycle 1 posttest, and cycle 2 posttest.

Descriptive Statistics					
N		Minimum	Maximum	Mean	Std. Deviation
Pre-Test	26	5.00	14.00	9.8462	2.32710
Post-Test 1	26	9.00	19.00	16.2692	2.58546
Post-Test 2	26	20.00	20.00	20.0000	.00000
Valid N (listwise)	26				

Source: Data analysis results

Providing students with opportunities to correct their mistakes is crucial for gaining a deeper understanding. One participant noted, "Nindotay pajud kaayo to kay miskan na mali ang akung gipili na answer kay naa gihapon kay makat-unan kay naay mutunga na mga information paghuman namo og tuplok sa mali na tubag sir" (P4:L41–43). These findings support those of Clifford (2012) **(author?)** [28] and **(author?)** [32], who emphasized that learning from mistakes and receiving immediate feedback enhances comprehension and retention.

The findings indicate that QuizVenture is an effective, enjoyable, and interactive teaching tool that enhances student learning and engagement. Additionally, the ability to identify and correct mistakes contributes to a deeper understanding of the subject matter. Given these benefits, DepEd must take proactive steps in integrating gamification strategies into the curriculum. Research has clearly demonstrated that such approaches lead to significant improvements in

student comprehension, motivation, and overall academic performance. By embracing gamified learning tools, DepEd can transform traditional classroom settings into more engaging and dynamic learning environments that cater to diverse learning styles.

Furthermore, ensuring the long-term success of gamified learning interventions requires equipping teachers with the necessary skills to effectively implement these strategies. DepEd should prioritize training programs that empower educators to integrate technology seamlessly into their lessons. With proper training, teachers can maximize the potential of digital tools such as QuizVenture, making learning more interactive, personalized, and effective. By investing in teacher development and the integration of innovative teaching methods, DepEd can take a significant step toward modernizing education and enhancing student learning experiences.

CONCLUSIONS & RECOMMENDATIONS

Conclusion of the Research

This mixed-method study investigated the effectiveness of the QuizVenture intervention tool in enhancing students' proficiency in learning lessons in world religion. The research findings, obtained through both quantitative and qualitative approaches, provide substantial empirical evidence supporting the effectiveness of QuizVenture as a gamified learning tool. The paired samples test revealed a statistically significant improvement in students' posttest scores ($p = .000$, mean difference = -6.038), demonstrating that QuizVenture positively impacts learning outcomes. Additionally, the exceptionally large effect size (Cohen's d = 3.13) suggests that this intervention had a profound educational impact, further validating its potential as a transformative tool for student engagement and comprehension.

In addition to these statistical improvements, the findings highlight the practical significance of QuizVenture in fostering an interactive and immersive learning environment. Traditional teaching methods often struggle to maintain student engagement, particularly in subjects such as world religion, which require deep conceptual understanding. QuizVenture effectively addresses this challenge by integrating game-based elements that enhance knowledge retention and student motivation. These findings align with prior research on gamified learning, but the magnitude of the effect observed in this study suggests that well-designed, subject-specific gamification tools can offer even greater benefits than previously reported.

However, this study is not without limitations. First, the sample size ($n = 26$) is relatively small, which may limit the generalizability of the findings to broader student populations. Additionally, the study primarily measured short-term learning gains, leaving open the question of whether the improvements observed persist over time. Future research should conduct longitudinal studies to assess the long-term retention effects of gamified learning tools such as QuizVenture. Moreover, while QuizVenture was found to be effective, it is important to consider individual differences in learning styles—some students may respond better to other pedagogical approaches. Further studies could explore how gamification can be personalized to meet diverse student needs.

Given the strong evidence supporting the effectiveness of QuizVenture, future research should explore its application in other subjects beyond world religion. Additionally, incorporating adaptive learning algorithms or multiplayer collaboration features could enhance the tool's interactivity and effectiveness. Educators and instructional designers should consider integrating gamification strategies more broadly to improve engagement and learning outcomes across various disciplines.

In conclusion, this study reinforces the educational potential of gamification in enhancing student learning experiences. The compelling results of QuizVenture underscore the importance of innovative digital tools in modern education, paving the way for further advancements in technology-enhanced learning. By addressing its limitations and expanding its applications, QuizVenture has the potential to become a model intervention for future gamified learning initiatives.

Recommendations

In light of the conclusions drawn from the mixed-methods study, educators and institutions should consider incorporating technology-based activities such as QuizVenture as a supplementary tool to increase students' learning proficiency in any academic subject. This study provides empirical evidence that the QuizVenture intervention tool is effective in improving students' proficiency in learning lessons. The incorporation of technology-based activities such as the QuizVenture into teaching strategies can provide an engaging and interactive learning experience for students that can improve their learning outcomes (Drexel University School of Education, n.d.)[33]. As a result, teachers and school administrators should

consider using QuizVenture or other similar intervention tools to supplement their traditional teaching methods and enhance students' engagement in the lesson.

Furthermore, the effectiveness of QuizVenture and supplementary customized websites can be further explored by conducting future research in other subject areas and with different student populations. This research can provide more evidence of the effectiveness of QuizVenture as an intervention tool and help educators make informed decisions about incorporating it into their teaching strategies.

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COMPETING INTERESTS

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