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User Acceptance: Quranic Verses Inspire Motivation Used into the Creation of Augmented Reality Board Games

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ABSTRACT

Numerous studies have revealed that Malaysian students are developing spiritually and intellectually every year. Mental health illnesses may endanger students' wellbeing and academic progress. Students with mental health illnesses may find it difficult to handle a task or communicate with others due to their inability to control their emotions and lack of desire, which may have an effect on their ability to study. The key to personal behaviour, zeal, and reinforcement for exceptional academic success is motivation. In light of technological improvements, particularly Augmented Reality Board Games (ARBG), a learning tool that can be connected to cell phones has been developed in order to increase motivation. It was found that there is still little research on motivation, particularly when Quranic verses are used in augmented reality. The research method was carried out using a quantitative approach. This study investigates users' approval of employing Qur'anic verses to boost motivation, notably in ARBG technology. It looks at works that were published in six journals over the relevant five-year span (2019-2023). Users acknowledged the Quran's inspirational passages, on the results of the survey, which was carried out as part of the research approach used in this study, which used descriptive statistics of user perception. Students at Malaysia's Sultan Zainal Abidin University (UniSZA) made up the study's subjects (n=100). The survey results show that adding motivational translations of Quranic verses to ARBGs is consistently and favourably viewed by users as having an impact. The study not only produces remarkable findings, but it also paves the way for further investigation into the use of Al-Quran verses and ARBGs.

1. Introduction

This wave of psychological change has an impact on young people, especially those who are enrolled in higher education institutions (IPT), and they are faced with a variety of challenges and

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demands. They must make sure that their academic achievement is outstanding in order to prepare for a professional future. The national objective for producing holistic graduates is stated in Malaysian Education Development Plan 2015–2025 (Higher Education), which is illustrated by this circumstance. However, as shown by a number of studies, Malaysia is experiencing an increase in problems with students' mental health and spiritual awareness. The concept of spiritual intelligence extends beyond mental health. Spiritual intelligence can be shown in the ability to purge one's soul of negative influences, moral awareness, and understanding of life's purpose in a healthy relationship with one's creator, God, other people, and environment [15].

In Islam, a person's spiritual intelligence and amount of faith are closely related concepts. Muslims won't behave in ways that go against their beliefs thanks to this conviction's persistence [20]. As a result, [16] found that (n=153) of the 460 UMP Bachelor's students had encountered mental health disorders between 2017 and 2019. Buddhist students score the lowest in the religious category but are still in a moderate level (average score=3.460) when compared to other. In this cohort, there are 45% men and 55% women students. The study's findings suggest that this problem is widespread throughout Malaysian campuses, not just at the university where the study was conducted. As a result, the researcher in this study incorporates motivational Quranic verses into the ARBG application as a form of spiritual therapy for pupils.

For the purpose of guiding people through historical eras and the expansion of human intellect, Allah (SWT) revealed the Quran to Prophet Muhammad (SAW). The Quran offers profoundly insightful solutions to a variety of issues, including social, political, economic, and psychological ones. In many parts of life, the Most Wise and Most Praiseworthy set an example by making decisions in front of others. For instance, in Surah Al-Mu'minun, verse 60, Allah urges Muslims to continue praying and not give up, assuring them that God will hear their cries. According to [2], memory and comprehension aid children in developing the motivation that eventually promotes the establishment of their religion. The Quran employs a range of strategies to arouse readers' emotions and foster motivation, including dialogue, stories, parables, examples, lessons, rebukes, encouragement, and desperation [3]. However, developments in AR technology have boosted research, learning, and comprehending approaches.

The Objective is to investigate users' acceptance of using verses from the Quran to enhance motivation, specifically in the context of Augmented Reality Board Games (ARBG) technology. The study aims to understand how individuals respond to the incorporation of motivational translations of Quranic verses into ARBGs and assess their perceived influence on motivation. The results of this study will help universities develop new augmented reality applications or other tools that can draw inspiration from Quranic verses, keep students engaged until graduation, and lay the groundwork for a lasting relationship with the university once they have graduated.

2. Literature Review

2.1 Augmented Reality

Ivan Sutherland, in Harvard professor, developed the first head-mounted device in 1968 and invented augmented reality. He gave it the moniker "The Sword of Damocles." The word "AR" was coined in 1990 by Boeing researcher Tim Caudell. Since then, AR has developed and been used to streamline processes in numerous sectors. HUDs, GPS, hybrid board games, Microsoft HoloLens 2, and HMDs [4] are a few examples of cutting-edge technology devices that can access it.

Using a device's camera, AR overlays the real world with pictures, movies, and GPS data. Because it combines the physical and digital worlds into a single presentation, digitally generated virtual data enhances the real world [6]. In augmented reality, multimedia, 3D modelling, real-time tracking,

intelligent interaction, and sensors are all utilized [7]. It is preferred because it encourages knowledge sharing and keeps people interested. AR can be triggered, marker-less, projected, superimposed, or view-based, in accordance with its classification [11]. Marker-based augmented reality controls the location and orientation of the camera by using two-dimensional predefined screens known as fiducial markers. Square markers with four corner points are widely used for precise localization. The position of the camera with respect to the marker is determined by computer vision algorithms.

2.2 Augmented Reality Board Game (ARBG) Design

ARBG are a future trend that adds an extra layer of immersion and fun to traditional board games challenging the design in ARBGs. Designing an AR board game requires a balance between physical and digital components to ensure a smooth and enjoyable experience. Game designers must consider factors such as physical board size, player interaction and technical limitations in addition to factors such as accessibility and usability designers must consider the availability and capabilities of AR hardware. Additionally, ARBG must explore real-world examples of ARBG such as "Mansions of Madness" and "Pokémon GO." This example showcases how AR can be integrated into board game design. Players can interact with virtual elements superimposed on the physical game board, making the game more dynamic and interesting.

Therefore, ARBG is one of integrated technology that rely on smartphones, tablets, or AR glasses to deliver the AR experience. Players use these devices to view and interact with digital content overlaid on the physical game board [21]. ARBG represent an exciting fusion of traditional board games and digital technology, providing players with an immersive and interactive gaming experience. These games typically involve the use of a smartphone or tablet to overlay digital elements onto the physical game board or pieces, enhancing gameplay and storytelling. Therefore, in Table 1 that explain the specialties of AR and ARBG.

Table 1
Explain the Specialties AR and ARBG

Specialties	Design	Title and year	Author	Result
Enhance Gameplay experience	a type of tabletop game that combines real-world game pieces with virtual counterparts on smartphones and other portable devices.	Design of a Board Game with Augmented Reality [2018]	[30]	According to findings of the focus group interviews, the feature makes the game more engaging to play and unquestionably draws gamers. The second interviews with the participants showed that, to a certain extent, the AR experience was favourable. The effect will be considerably greater if the AR capability is included in game play and allows you to influence game elements.
Real-time feedback, interaction and Innovative Mechanics	Business simulation games place a strong emphasis on the need for players to weigh the advantages, disadvantages, and results of their choices while also learning by examining the game's broader background. Due to the fact that they replicate the actual face-to-face interactions that take place in organizations, board games that place an emphasis on physical interaction are suitable for teaching organizational strategy planning. Board game regulations usually place a lot of emphasis on player cooperation and communication.	ARBG with multidimensional scaffolding mechanism: A potential new trend for effective organizational strategic planning training [2022]	[17]	Prior studies have shown that planning training is lacking in experience and feedback in practical settings. It is anticipated that augmented reality gaming activities in multimedia environments with multidimensional scaffolding would aid in resolving this issue. There is a need for a framework for developing educational video games that integrates real-world organizational strategy planning exercises with multimedia-contextual cooperation.
Dynamic environment, customizability and Reduced Setup and Cleanup	Introducing a board game that uses augmented reality (AR) to teach students about health. It claims that board games mixed with augmented reality can increase students' enthusiasm for learning and technological comfort. It links the card games, presentations, and learning workbooks used in the gamification teaching paradigm to the learning process.	Effects of Incorporating Augmented Reality into a Board Game for High School Students' Learning Motivation and Acceptance in Health Education [2021]	[21]	52 high school students took part in this study. There were 27 people in the control group (no AR) and 25 people in the experimental group (with AR). Both the TAM (technology acceptance model) and the IMMS (instructional material motivation survey) are utilized to gather quantitative data for the study. These are the conclusions: 1. The adoption of the healthy education board game was significantly impacted by the incorporation of AR. 2. (2) The addition AR to the health education board game significantly increased students' desire to learn.
Educational Opportunities	This study attempts to look at how students use the board game REV-OPOLY, which uses web-based augmented reality, to learn.	REV-OPOLY: A Study on Educational Board Game with Web based Augmented Reality [2022]	[26]	The study's findings indicate that 98.8% of participants are interested in using REV-OPOLY for educational purposes, and 86.1% of them are happy with the game's design, particularly its multiplayer features (95.3%), which encourage player involvement and debate (89.5%). 93.0%

				of respondents also concurred that using the game as an informal learning tool helps them learn more efficiently. According to the findings of this investigation, the respondents had positive things to say about REV-OPOLY.
Multiplayer Interaction	His idea attempts to create an augmented reality (AR) battleship board game with holographic display. First, a new perspective was taken on the multi-user interaction for AR battleship board game and holographic projection. This was the first of three phases. The second step is to create the multi-user interface for the board game AR Battleship. The final stage involves fusing a pyramid holographic display with the board game AR Battleship.	Augmented reality battleship board game with holographic display [2020]	[13]	Three tiles may be chosen in one round by the person who is given the turn. The holographic display allows spectators to view the live game match. Only changes in board tile colour and ship position information from both players are sent for holographic display. Due to the application's ability to offer an internet connection and the portability of handheld devices for both players and non-players, the location for both parties can be anywhere.
Storytelling and narrative	It details the creation of GLARE, an augmented and virtual reality platform that can be used produce hybrid storytelling and gaming experiences, as well as its open access availability.	Building an augmented reality system for consumption and production of hybrid gaming and storytelling [2023]	[14]	1. AR production research and support for adoption. 2. Tailoring AR creation to individual needs and motivations. 3. Exploring AR's potential for well-being and social capital. 4. Assessing AR production in various learning and social environments. 5. Evaluating GLARE production features for usability and efficacy across different audiences and objectives.
Potential for Updates	This study investigates issues and possible solutions for developing a multiplayer augmented reality board game using generally available and affordable technologies.	All AR-Board: Seamless AR Marker Integration into Board Games [2021]	[10]	6. HMDs with integrated marker less tracking that are lightweight and cheap. 7. AR strategies based on markers. 8. Right now's hybrid games. 9. Consumers already own smart devices. 10. Several printed markers for the game board and components. 11. A practical and inexpensive substitute. 12. Conditions for creating markers. 13. The strategy used by the AR Team. 14. Excellent markers. 15. Graphics incorporated into the setting of the printed game. 16. Almost undetectable to players.

As a result, in addition to these benefits, the application of ARBG technology has the ability to motivate people to learn the Quran by creating an engaging experience. It is possible to encourage people to memories the Qur'an using the following techniques, each of which is supported by pertinent references:

i. Engaging Quranic Experiences: Augmented reality (AR) uses superimposition and interactive 3D models to bring Quranic verses to life [1].
ii. Quranic learning with augmented reality and gamification, or ARBG, creates motivating and engaging teaching challenges, particularly for younger students [9]. In prior studies, [18,24] also looked into the effectiveness of gamified AR applications for memorization of Quranic passages.
iii. Immersive Quranic Tours: By teaching students to the Quran's historical context, AR enables them to experience virtual tours of Quranic locations [28].
iv. Personalised Learning Experiences: Depending on the learner, AR may modify the pace, difficulty, and substance of Quranic learning experiences. This personalised and flexible learning environment increases motivation and engagement levels [19].

As a result, including Quranic text in ARBGs is still uncommon. Table 2 details the technological impact of Ayah Al-Quran, specifically the creation of ARBGs.

Table 2
Al-Quranic verses' influence on technology, particularly in ARBGs

Author	Contribution	Methodology	Result
The Effectiveness of Murottal Al-Qur'an Therapy and Virtual Reality to Reduce Pain Intensity in Post Operating Patients [12].	Pharmacotherapy is only form of **treatment** available at the Shofa Room at PKU Muhammadiyah Hospital in Temanggung for the management of post-operative pain. After the pharmaceutical reaction has passed, non-pharmacology for the first time ever brings together virtual reality, murottal Al-Qur'an therapy, and complementary therapy.	As a result, 32 patients underwent surgery. The Numeric Rating Scale (NRS) was the tool utilized to collect the data. The average pain intensity between the intervention groups and the control group is compared using the Wilcoxon test and the Mann-Whitney test to see if there are any differences between the pre- and post-test averages for each group. The Shapiro-Wilk test is employed to assess the normality of the data.	In comparison to the control group between from 32 postoperative patients at PKU Muhammadiyah Temanggung Hospital reported significantly less pain between February 2 and March 2, 2020.
Towards Designing a Framework for Adaptive Gamification Learning Analytics in Quranic Memorization [5].	a framework for applying adaptive gamification technology to the teaching and learning of students by giving them useful, original formative memorization challenges.	Utilizing adaptive gamification elements, learning strategies, and memorizing techniques, the Gamification Learning for Al-Quran memorising (GLAM-Q) system was developed.	The dashboard's capacity to boost motivation, encourage more enjoyable and interesting learning situations.
Measuring Tajweed AR-Based Gamification Learning Model (TARGaLM) Implementation for Children in Tajweed Learning [24].	In an effort to pique children's interest in studying tajweed, gamification and augmented reality are being used.	The Tajweed AR-based Gamification Learning Model (TARGaLM) is used in Tajweed learning. 198 kids were separated into four groups and given the learning tasks in order to evaluate the effectiveness of the suggested technique in terms of the ability for an emotional connection (enjoyment) and learning performance.	TARGaLM was effective in achieving autonomy, challenge, points, badges, leaderboard, advancement, immersion, and feedback—all elements necessary for enjoyment. In the post-activity interviews, the students observed that the proposed strategy engaging, fun, and successful. Comparing recommended approach group to other groups, they also saw the biggest drop in articulation errors from the post-test.
AR to memorise al-Quran for hearing-impaired students [1].	Hearing-impaired people studying the Quran.	A first inquiry was carried out using a qualitative methodology. To learn more about the study habits and methods used by hearing-impaired students, five seasoned professors were questioned.	It has been established that memorising the surahs of the Quran requires using the Tahfiz Akhyar technique, which uses numbers to order the verses. The verse order of the surahs is still incorrect in the present teaching resource. These results will be used as a reference when creating a teaching resource that use augmented reality technology to assist

			students with hearing impairments in memorising the surahs of the Quran.
AR Book to Aid Learning Tadabbur AlQuran: A Visualization Tool [28].	The topic on learning principles to encourage learning with AR books covers the tadabbur method, the importance of augmented reality in education, and the potential application of AR books for studying the tadabbur Quran.	Tadabbur AR Book, or TAR Book Tadabbur AR learning model, or TARLM	The strategy makes use of an embedded AR environment to wrap up the learning process, promote engagement, motivate students to study tadabbur, and enhance learning outcomes. The Tadabbur AR book, which will serve as a visual aid to encourage comprehension and efficient study of Tadabbur Al-Quran, will be produced using it.
The Potential of AR Technology in Moral Education for Educational Module of Surah Luqman Al-Hakim [23].	The use of AR can help students learn. They have trouble visualizing when using movement and auditory-visual technology, which realistically supports the theory and method of learning, especially emotion, which is crucial in designing.	The AR approach promotes unintentionally the teaching of religious principles through cutting-edge technology. The three religious education precepts are drawn from Surah Luqman, verses 12 to 19, and are based on a moral learning module.	Technology supports education by providing wealth of benefits, conveniences, and engaging learning possibilities. Students can use AR to create excitement in the classroom. This concentration may enable the student to engage in a thorough and more hands-on learning experience. Kids can learn by using augmented reality, too.

2.3 Game-Based Learning Motivation

Behaviour traits such curiosity, attentiveness, concentration, and perseverance in accomplishing goals serve as indicators of learning motivation [6,27]. The traits of driven people include increased effort, perseverance, interest, independence, hate of routine, motivation for positive outcomes, the capacity to drive change, the capacity to advocate for one's opinions, perseverance, and problem-solving skills. Figure 1 provides a summary of the primary motivating categories based on the findings of past investigations.

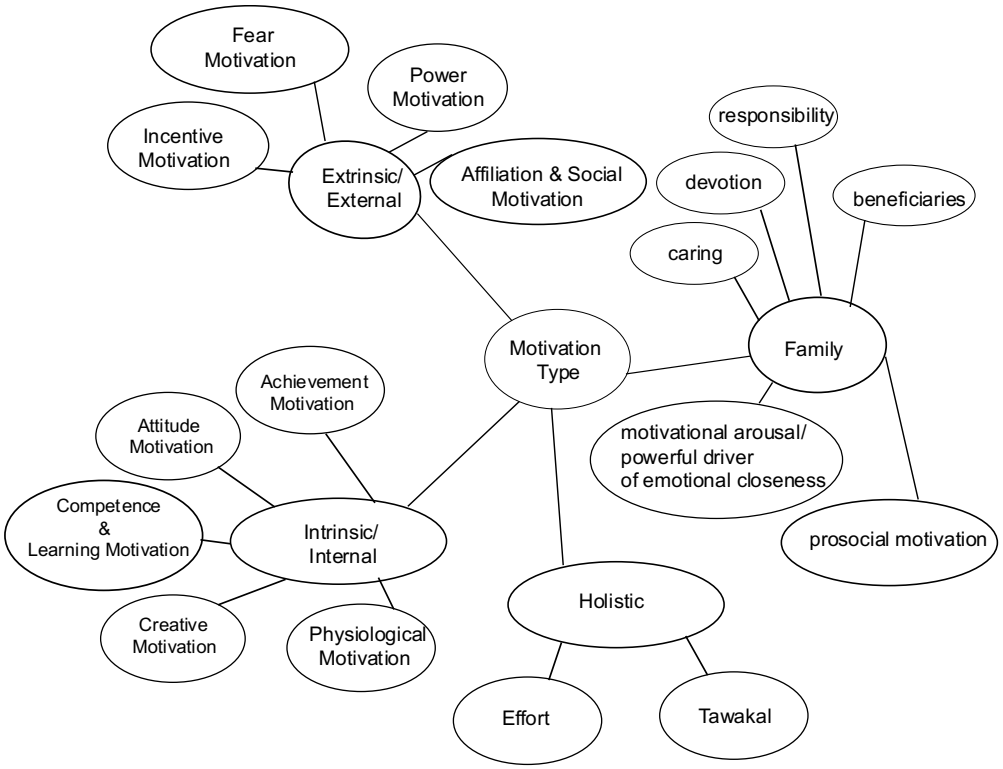

Fig. 1. Various Motivations

The drive of an individual to learn greatly influences their involvement in and efforts towards learning. How ready they are to give success the time and focus it requires is affected [8,22]. Academic achievement and motivation have been linked since elementary school, according to research. As a result, when comparing various apps, the hardware and software environment, tracking methods, acceptance of the content, project evaluation, and adaptation/personalization were all taken into account. Only small percentage of entries, however, list students as their intended audience [29]. The four motivational categories in the video game industry are player-driven motivation, hardware and software-driven motivation, technology-driven motivation, and interface-driven motivation (Figure 2).

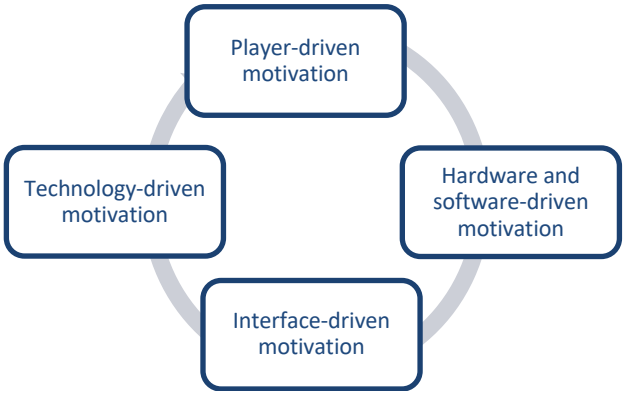

Fig. 2. Characteristics of Motivation from the player

In an early investigation, issues with developing designs were discovered. Low levels of student satisfaction with the current ARBG designs were found in polls of student opinion. In a previous study, the interface design, educational elements, player interaction, results, evaluations, play possibilities, competition, and prizes were the main focus (Figure 3).

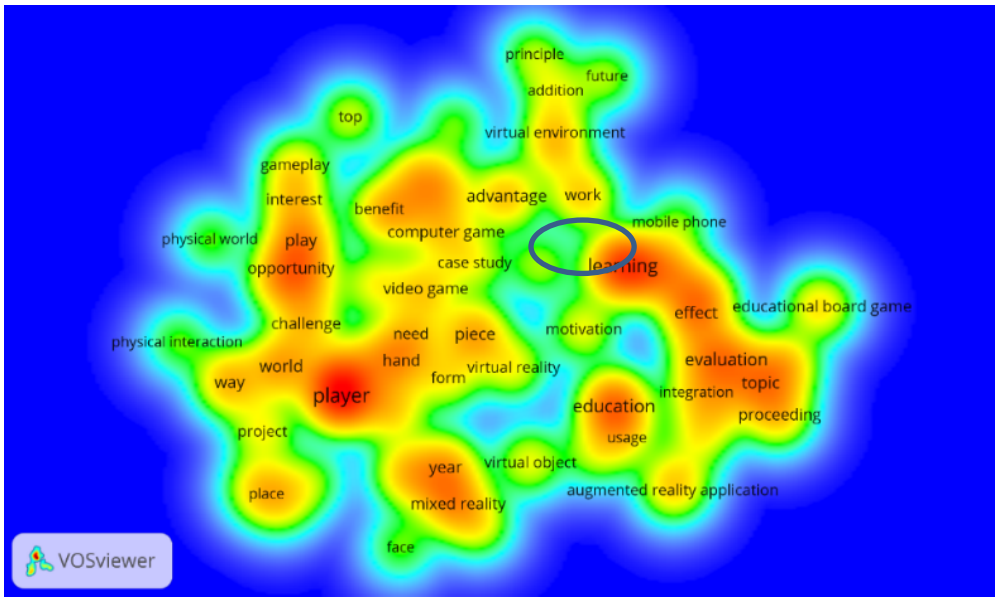

Fig. 3. Hot topic keywords network visualisation map with 71 items and 5 clusters

A network visualisation of the current hot topics in the area is shown in Figure 3 with a minimum of 71 items and 5 clusters. The bibliometric network analysis tool VOS viewer was used to map the hot topic keywords that writers frequently used. The nodes' widths and colours show how frequently one topic is present alongside another. Red nodes represent hot areas that scholars are very interested in, such as play opportunity, learning, and education. Colours like turquoise, yellow, and green, on the other hand, denote less researched subjects. One problem is the lack of understanding of user acceptance, ARBG design traits, and their positive impacts on student motivation.

There has been minimal research on user acceptance and motivation in ARBGs, and relevant papers are underrepresented in databases like Scopus. Furthermore, there aren't many complex models that consider the characteristics and maturation of motivation in ARBGs. How much do motivational translations of Quranic verses improve the wellbeing and motivation of Malaysian students? is the research topic that this study seeks to address.

3. Methodology

In order to understand users' impressions of acceptance of Quranic verses on ARBG and effectiveness in boosting motivation among the target audience, this study uses a quantitative technique. The pipeline design in (Figure 4) consists of three consecutive phases, with an emphasis on the ways in which ideas evolve via the phases of discovery, identification, and analysis, as well as output of ideas.

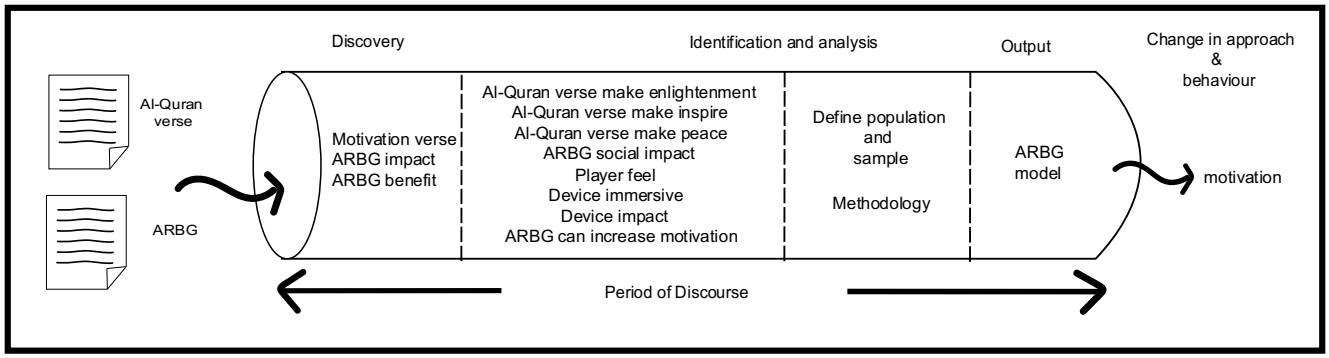

Fig. 4. Pipeline framework

3.1 Phase 1: Establishing Goals, Formulating Research Questions and Reviewing Pertinent Literature

An extensive literature review on the fields of AR and ARBG is conducted in the first phase of the study, which also involves using Quranic verses in a variety of applications, particularly in ARBG, and establishing clear objectives and relevant research questions that direct the investigation. Six articles were selected for the review, which is shown in Tables 1 and 2. The research provided information on how Quranic verses have influenced current technology, such as ARBG.

3.2 Phase 2: Defining Population and Sample

During this stage, the target group is determined, and a representative sample is carefully selected to precisely reflect the characteristics of the target group. Surveys are used to choose study participants.

3.3 Phase 3: Selecting Survey Methodology

In this step, the sort of survey method to be used is carefully considered in order to match it with the study's goals and ensure effective data collecting.

3.4 Phase 4: Developing ARBG Prototype

The focus of step four is conceptualizing, designing, and creating a prototype for the ARBG that incorporates the inspirational passages from the Quran.

3.5 Phase 5: Crafting and Validating Survey Instruments

In this phase, the survey instruments are painstakingly designed and validated to ensure their dependability and efficiency in precisely capturing users' impressions.

3.6 Phase 6: Data Analysis and Report Preparation

The final stage involves a thorough analysis of the collected data using the relevant statistical methods. The results, interpretations, and consequences of the study are then methodically presented in a thorough research report.

This research builds a strong platform for examining users' adoption of Quranic verses within an ARBG framework by methodically moving through these six steps, illuminating their motivational impact on the target audience.

4. Results

The study's findings showed that users' motivations for accepting Quranic passages were dependent on their perceptions. The study used 100 post-test participants from UniSZA in Terengganu as its research participants. 46% of the population was male and 56% was female. 78% of the participants were between the ages of 21 and 23, 18% were between the ages of 18 and 20, and the remaining 24% were beyond the age of 24. 96% of them were single, with only 3% of them married. Convenient sampling and descriptive statistics used for the sample preparation and analysis after participants had used the ARBG. The following values were provided by the participants for the Likert scale used in the measurement tools: Extremely unimportant is 1, not important is 2, not important is moderate is 3, important is 4, and extremely important is 5. The study's findings and conclusions are shown in Table 3 and Table 4.

Notably, the findings are shown in Table 3 and show that a significant majority of participants—86.2%—demonstrated strong agreement with the claim that enlightenment can be gained through embracing motivational translations of Quranic passages. Similar numbers of participants (86.2%) strongly agreed that they might be motivated by the motivational translations. Additionally, a sizable 86.8% of replies showed strong agreement with the notion that using motivational translations of Quranic texts promotes inner tranquilly.

Table 3
Descriptive statistics of the users' perception on the efficacy of Quranic verses usage in the ARBG prototype

Item ID	Item	mean	S.D.	%
MT1	I can become enlightened by using motivational translations of Quranic passages.	4.31	0.76	86.2
MT2	I can be motivated by the usage of inspirational translations of Quranic texts.	4.31	0.79	86.2
MT3	The usage of motivational translations of verses from the Quran can give me tranquilly.	4.34	0.73	86.8

While Table 4's findings and results from the study using ARBG demonstrate that a significant majority of participants, 82%, concur that using a mobile phone to play ARBG is more intriguing. When playing ARBG, players can experience intimacy, clear images, responsiveness, sympathy, and satisfaction. While (76%) claimed that this ARBG's recognition can boost motivation. While 75% of respondents feel that mobile AR allows users to get fully immersed in the game and that ARBG have a bigger social impact than other electronic games.

Table 4
Descriptive statistics of the users' perception on the ARBG

Item ID	Item	Mean	S.D	%
A1	Augmented reality electronic board games have a greater social Impact than other electronic games	4.05	0.845	75
A2	Players can feel intimacy, clear images, responsiveness, sympathy and satisfaction while playing augmented reality electronic board games.	4.1	0.732	82
A3	Mobile augmented reality brings user immersive into the game	4.0	0.876	75
A4	The use of mobile phones is more exciting in the world of games	4.09	0.842	82
A5	Appreciation in this ARBG can increase motivation	4.0	0.985	76

5. Discussion

The research's findings emphasize seven key conclusions, which are detailed below:

i. Enlightenment via Motivational Translations: A significant portion of survey participants (Mean = 4.31, S.D. = 0.76% = 86.2) agreed with the claim that adopting motivational translations of Quranic verses can result in enlightenment. The results suggest that adding inspirational Quranic verses in the ARBG has a favourable impact on the participants. According to the fairly low standard deviation, the participant responses are closely clustered around the mean, which shows a consistent perception among the sample.
ii. Inspiration from Quranic Verses: The majority of the participants (Mean = 4.31, S.D. = 0.79% = 86.2) agreed that adopting motivational translations of Quranic passages may inspire them. This result confirms the first claim and emphasises the usefulness of Quranic verses in inspiring and motivating ARBG users.
iii. Peace through Quranic Verses: There is strong consensus among the participants, as evidenced by their responses (Mean = 4.34, S.D. = 0.73% = 86.8), that motivational translations of Quranic passages can help people find tranquilly. This research highlights the ability of Quranic verses to promote calmness and wellbeing, which is especially significant in the setting of an engaging board game.
iv. Augmented Reality Electronic Board Games (ARBG) and Social Impact: 75% of respondents agree that ARBGs have a greater social impact compared to other electronic games. (Mean = 4.05, S.D = 0.845). this is because this ARBG a new, unique technology and more immersion in the real-world making players excited to play on it
v. Player Experience in ARBGs: (Mean = 4.1, S.D = 0.732, and % = 82) of respondents agree that when playing ARBGs, players can feel intimacy, clear images, responsiveness, sympathy, and satisfaction. The participants' replies are closely clustered around the mean, which suggests a consistent perception among the sample, according to the comparatively low standard deviation.
vi. Mobile Augmented Reality Gaming: 75% of respondents agree and (Mean = 4.1, S.D = 0.876) that mobile augmented reality brings users into the game in an immersive way. While, excitement of Mobile Phones in Gaming: respondents have higher agreed that the use of mobile phones is more exciting in the world of games. (Mean = 4.09, S.D = 0.842 and % = 82%) These findings underscore the potential of mobile phones to create a sense of excitement in the context of interactive board games that are noteworthy and can be further varied in their production.
vii. Motivation in ARBGs: 76% of respondents agree that appreciation in ARBGs can increase motivation among players. (Mean = 4.0, S.D = 0.985)

In summary, the data suggests that ARBGs are perceived to have a greater social impact, offer an immersive and satisfying player experience, and can increase motivation, with a significant

proportion of respondents agreeing with these statements. Additionally, mobile augmented reality gaming and the use of mobile phones in gaming are seen as exciting aspects of this gaming genre.

6. Conclusion

This study aims to determine whether motivational Quranic verses used to the AR game board's design are acceptable to users. The study's conclusions not only allow for enjoyment but also provide a foundation for future research on the ARBGs and verses from the Al-Qur'an. The survey results demonstrate that incorporating motivational translations of Quranic verses to an ARBG is both user-acceptable and has beneficial benefits, according to respondents. Participants overwhelmingly concur that these passages have a positive effect, as seen by the high means for all three statements (ranging from 4.31 to 4.34).

While for the selection of ARBG development, the survey's findings paint a consistent and fascinating picture of ARBG's user acceptability and perceived effects. The still high meaning (ranging from 4.00 to 4.110) for each of the five assertions demonstrates the participants' significant consensus regarding the use of ARBG in model creation. The moderate standard deviation further shows a low amount of response variability, pointing to a common understanding among respondents. This shows that users accept technological change (ARBG) and has a positive effect that the use of ARBG that integrates the verses of the Al-Quran is able to increase motivation.

Additionally, this demonstrates that the motivational feature of the Quranic verses is very likely to consistently affect the many participants in ARBG. The study demonstrated that adding motivational Quranic verses to ARBG boosts users' feelings of insight, inspiration, and calm. These results have important ramifications for planning and creating comparable programmers that attempt to include inspirational and religious components to enhance user experiences and feelings.

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