GAMIFICATION IN ISLAMIC RELIGIOUS EDUCATION: DEVELOPING INTERACTIVE LEARNING MEDIA VIA QUIZIZZ WITH THE ADDIE MODEL

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Abstract

This study aims to develop gamified learning media using the Quizizz application for the Islamic Religious Education and Character subject. The research was conducted at public junior high schools in Banda Aceh, Indonesia, involving Grade VII students and Islamic Education teachers who had experience implementing digital media in the classroom. The study was driven by the low levels of student motivation and participation caused by the dominance of conventional lecture-based methods. Quizizz was chosen as the development platform for its game-based features—such as points, leaderboards, avatars, and instant feedback—that are known to enhance student engagement and interaction. A Research and Development (R&D) approach was employed using the ADDIE model (Analysis, Design, Development, Implementation, and Evaluation), providing a systematic framework for the creation, testing, and refinement of the gamified media. Data were collected through participatory observation, semi-structured interviews, and documentation, and analyzed qualitatively using an interactive model. Each phase of ADDIE was integrated with data collection: identifying student learning needs, designing gamified content based on Islamic values, developing the product with expert validation, implementing it through field trials, and evaluating its impact. The findings demonstrate that the gamified media effectively fostered a more interactive, enjoyable, and motivational learning atmosphere. There was a significant increase in students' engagement, participation, and academic achievement. Teachers also reported positive experiences using Quizizz for instruction and real-time assessment. The study concludes that gamification can serve as an effective pedagogical innovation for Islamic education, promoting meaningful learning experiences aligned with religious and character-building goals.

Keywords: ADDIE, gamification, interactive learning media. Islamic Religious Education, Quizizz

Introduction

Islamic Religious Education and Character subject is a systematic effort to shape the character and personality of students as a whole through the process of internalizing Islamic values. In this context, religious education is not only limited to the transfer of knowledge (cognitive), but also includes the development of attitudes (affective) and skills (psychomotor) that are integral to Islamic teachings (Abdullah, 2006; Fahrudin et al., 2017). Islamic education ideally forms people who are not only intellectually intelligent, but also spiritually and ethically sensitive. In the long run, religious education is expected to be able to form a pious, rational person, and contribute morally and spiritually in the life of society and the nation (Al-Attas, 1991; Sajjad & Ashraf, 2000).

In the learning process, teachers have a great responsibility in transforming Islamic values into a form that is applicable and touches all aspects of students' intelligence. The role of teachers is not

only limited to cognitive aspects, but also required to be able to develop the affective domain of students through humanistic and contextual learning approaches. The classification of education through cognitive, affective, and psychomotor domains introduced by Bloom et al. (1956) is an important reference in developing objective learning objectives (Napitupulu, 2017). For this reason, teachers must be able to create a conducive, fun, and meaningful learning atmosphere in order to achieve optimal learning outcomes (Husamah et al., 2016).

However, the current educational reality shows complex challenges, especially after the Covid-19 pandemic. Online learning implemented during the pandemic has changed the way students learn, where the use of technology and gadgets has become part of everyday life (Nurulita & Arifin, 2024). However, the learning process, which is dominated by the lecture method and is one-way in nature, has proven to reduce students' interest in learning. Many students feel bored, lose motivation, and only learn to fulfill academic obligations, not because of intrinsic motivation (Zubaedi et al., 2021). In the context of Islamic Religious Education and Character subject, this is a big challenge considering the complexity of the material and the approach that has tended to be monotonous (Qamariyah, 2021).

On the other hand, the development of information and communication technology (ICT) has provided great opportunities for the world of education to innovate. The utilization of ICT in learning, including through the gamification approach, is one of the alternatives in overcoming boredom and fostering student learning motivation. Gamification is the application of game elements in non-game contexts such as education to improve learner engagement, motivation and learning outcomes (Deterding et al., 2011). Through gamification, the learning process becomes more fun, interactive and challenging, so that students are encouraged to continue learning actively.

One form of implementing gamification in learning is by using applications such as Quizizz. Quizizz is a web-based interactive quiz platform that teachers can use to develop more dynamic and competitive learning. This application has features such as points, leaderboards, avatars, and response times that can trigger students' enthusiasm to engage in learning activities actively (Bicen & Kocakoyun, 2018). In Islamic Religious Education and Character subject learning, the integration of Quizizz allows teachers to teach Islamic teaching materials creatively, contextually, and fun, so that students not only memorize but also understand and internalize Islamic values.

Recent studies, such as by Samah et al. (2022), found that the application of gamification-based tools like Quizizz significantly increased student engagement and improved learning outcomes, particularly in character-based subjects. This supports the potential of gamification in Islamic Religious Education learning, emphasizing not just memorization but meaningful internalization of Islamic values. Gamification not only impacts cognitive aspects, but also includes affective and social aspects. According to Lee & Hammer (2011) in research, games can provide psychological benefits in the form of improved cognitive abilities, emotional engagement, and social relationships between players. In the context of learning, these three aspects are very important to increase learning motivation and strengthen social interaction between students. Thus, gamification has great potential in increasing the effectiveness of Islamic Religious Education and Character subject learning, especially in building religious attitudes and Islamic character through a more participatory and fun approach.

However, it is important to note that the success of gamification in learning is highly dependent on proper instructional design and teacher readiness to utilize technology. Teachers must understand the principles of gamification and be able to organize teaching materials according to the structure of educational games and in accordance with the curriculum. The use of gamification should not only aim for entertainment, but should also be directed to achieve meaningful and character-oriented learning goals (Hamari et al., 2014). Therefore, training and mentoring teachers in the utilization of

gamification-based learning media is an important aspect that must be considered by education stakeholders.

In addition, literature studies show that the application of technology in learning does not automatically improve motivation or learning outcomes. High learning motivation requires adaptive, contextual and learner-needs-based learning design. Some students may feel enthusiastic about gamification approach, but others may need a more personalized approach. Therefore, teachers need to analyze students' learning needs and preferences before implementing a particular learning method (Ryan & Deci, 2000). Research by Suh & Prophet (2018) also emphasized that without proper alignment between gamification design and students' psychological needs, the effectiveness of gamification interventions can diminish. This is important so that learning is not just uniform, but able to accommodate the diversity of learning styles of learners.

Departing from these various problems, the author sees the need for systematic research to evaluate and develop gamification as a learning media for Islamic Religious Education, especially through the Quizizz application. This study aims to describe the concept of gamification in learning and examine the effectiveness of using the Quizizz application in increasing students' interest and participation in learning Islamic Religious Education and Character subject. This research specifically addresses the gap where there are limited studies applying gamification tools in religious character education, thereby offering novel insights into technology-driven Islamic pedagogy. Through this approach, it is hoped that Islamic Education learning will not only be a rote routine, but also a fun and meaningful process of Islamic character building.

Therefore, this research aims to: (1) describe the concept of gamification in Islamic Religious Education and Character subject; and (2) examine the effectiveness of the Quizizz application in increasing student interest and participation in learning Islamic Religious Education and Character subject. Based on these objectives, the research questions formulated in this study are: (1) How is gamification conceptualized and implemented in the Islamic Religious Education and Character learning process? (2) How effective is the use of the Quizizz application in increasing student interest and participation in learning Islamic Religious Education and Character subject?

Thus, this research is not only relevant in the post-pandemic context that demands technological adaptation in education, but also a contribution to the development of innovative learning models based on Islamic values. The results of this study are expected to be a reference for educators and policy makers in designing Islamic Religious Education and Character subject learning that is more effective, fun, and in accordance with the needs of the times.

Literature Review

Gamification utilization in learning Islamic religious education in the digital era

Islamic Religious Education and Character subject is an integral part of the national education system that not only prioritizes cognitive aspects, but also touches the affective and psychomotor domains of students. The main objective of Islamic Religious Education and Character subject is to form a Muslim character who is faithful, pious, and has noble character as stated in Law No. 20/2003 on the National Education System. According to Ramayulis (2002), Islamic Religious Education and Character subject plays a role in shaping human personality based on holistic Islamic teachings, covering aspects of faith, worship, and muamalah. The educational process in Islamic Religious Education and Character subject should ideally be able to instill spiritual values that become the basis of students' daily behavior.

Digital transformation after the Covid-19 pandemic has encouraged a paradigm shift in the learning process. The limitation of direct interaction causes teachers to look for alternative teaching approaches that are able to maintain student involvement, one of which is by utilizing digital media. According to Haryanto (2024), modern learning does not rely solely on the lecture method, but requires interactive strategies that can build active student participation. The digital era has required teachers to innovate learning to not only educate cognition, but also stimulate students' creativity, participation, and interest in learning.

Gamification is an approach in education that adopts game elements to increase learner engagement and motivation. Deterding et al. (2011) define gamification as the use of game elements in a non-game context. In education, gamification involves features such as point earning, challenges, level systems, and leaderboards. Kapp in Malamed (2012) asserts that gamification helps strengthen learning motivation through fun and competitive learning experiences. With this approach, the learning process can be linked to students' emotional experiences, making it more meaningful.

Islamic Religious Education and Character subject learning is often dominated by conventional methods such as lectures, memorization, and one-way assignments. This leads to low student active participation and decreased interest in religious materials. According to Muhibbin (2014), religious learning should be able to internalize spiritual values through a fun and communicative approach. The application of gamification is one of the strategic solutions because it is able to bridge religious material with the interests and learning habits of students who like to play games. This is also reinforced by the research of Miranda et al. (2024) which shows that gamification in Islamic Religious Education and Character subject learning can improve retention, material understanding, and student discipline.

Integration of gamification through quizizz application in islamic education learning

Quizizz is a gamification-based educational platform that allows teachers to create interactive quizzes complete with leaderboards, automatic scores, and attractive avatars. This platform is very suitable to be applied in subjects that require repeated practice such as Islamic Education. According to Yolanda & Meilana (2021), Quizizz not only helps teachers in the learning evaluation process, but is also able to increase student engagement by 70% compared to conventional evaluation methods. The real-time feedback feature and score-based competition make Quizizz more favorable for students to explore teaching materials.

Learning motivation is a fundamental aspect in learning effectiveness. Deci & Ryan (2000) in their Self-Determination Theory (SDT) explain that humans are intrinsically motivated to learn when their needs for competence, autonomy and social relationships are met. Gamification provides a space for the fulfillment of these three needs. Game-based learning allows students to feel more autonomous in answering questions, feel a sense of accomplishment through scores and badges, and build social relationships through leaderboards. Lee & Hammer (2011) stated that gamification contributes to increasing students' cognitive, emotional, and social engagement.

A number of studies have shown positive results from the application of gamification. Citra & Rosy (2020) in their quantitative study concluded that students who learned using the gamification approach obtained higher grades than students who used conventional methods. Similarly, a study by Hamari et al. (2014) showed that game elements in gamification contribute positively to increased motivation and learning achievement, as long as they are used in a structured and learning goal-oriented manner.

The use of gamification in Islamic Religious Education and Character subject not only aims to increase interest in learning, but also as a means of instilling values. In the Islamic context, joyful

learning is recommended as the practice of Prophet Muhammad SAW in conveying religious teachings. Game-based learning does not contradict Islamic principles as long as the substance of the material and the values of the teachings are maintained. According to Assegaf (2005), contemporary Islamic education is required to be adaptive to the times without losing the essence of its spirituality. Therefore, the integration of gamification into Islamic education is an important innovation.

Although there has been a lot of research related to gamification, most of it is still focused on exact subjects and the use of Quizizz as an evaluation tool only, not much touching on the pedagogical and value aspects in Islamic Religious Education and Character subject. Islamic Religious Education and Character subject learning has its own complexity because it involves the affective and spiritual aspects of students. Thus, research is needed that examines in depth the design of Islamic value-based gamification that is not only technically effective, but also substantively essential.

The theoretical framework in this study refers to the integration of the gamification approach with constructivism and behaviorism learning theories, as well as SDT motivation theory. In the context of Islamic Education, this approach is reinforced with Islamic ethical and spiritual values. Gamification through platforms such as Quizizz becomes a bridge between the demands of technology and the needs of value-based education. Thus, the development of gamification in Islamic Religious Education and Character subject is not just a technical innovation, but part of a pedagogical transformation that is in accordance with the spirit of the times and the needs of today's learners.

Methodology

Research design and approach of the study

This research employed a Research and Development (R&D) approach using the ADDIE model (Analysis, Design, Development, Implementation, and Evaluation) to develop gamification-based learning media for Islamic Religious Education and Character subject. The ADDIE model was chosen because it provides a systematic framework in developing, applying, and evaluating educational products. This approach allows researchers to explore complex realities from the perspective of participants, not solely based on numbers or statistics (Creswell & Poth, 2016). In this R&D model, the researchers conducted a series of steps: needs analysis, instructional design, product development (Quizizz-based gamification media), implementation through field trials, and final evaluation for product improvement. This method is particularly relevant when researchers want to understand teaching and learning practices in real, contextualized settings (Gall et al., 1996).

Research site and participants

The research subjects were teachers and students in grade VII of public junior high schools in Banda Aceh city who had implemented learning using digital media. The subjects were selected purposively, namely based on certain considerations, in this case their experience and direct involvement in the technology-based Islamic Religious Education learning process (Sugiyono, 2013). The object of this research is the application of gamification in learning Islamic Religious Education and Character subject through the Quizizz platform-an interactive online quiz application that offers leaderboard features, a point system, and badges as gamification elements that support increased student learning motivation (Lee & Hammer, 2011).

Data collection and analysis

Data collection was integrated with the ADDIE stages to support the R&D development process. Three main techniques were used to ensure data validity through triangulation: participatory observation, in-depth interviews, and documentation studies. Participatory observation was carried out directly by researchers to observe learning activities, student involvement in Quizizz, and patterns of interaction between teachers and students (Spradley, 1980). In-depth interviews were conducted in a semi-structured manner with teachers and students to explore experiences, perceptions, and challenges during the implementation of gamification (Moleong, 2017). Documentation study was conducted by collecting teaching tools, quiz results, student grades, and visual documentation to verify other findings (Bowen, 2009).

Instruments used included observation sheets for student engagement, interview guidelines for teachers and students, documentation formats for learning outcomes, and validation checklists for material and media experts. These instruments were aligned with each phase of the ADDIE model to ensure comprehensive data collection at every step of development. Data analysis followed the ADDIE framework:

- In the Analysis phase, data from needs analysis were categorized to identify learning problems and student needs.
- In the Design and Development phases, validation results from experts and trial data were descriptively analyzed to refine the gamification media.
- In the Implementation phase, field trial observations and student feedback were thematically analyzed to evaluate learning engagement and motivation.
- In the Evaluation phase, all collected data (including pre- and post-implementation assessments) were analyzed to assess the media's effectiveness.

Data analysis in this study was conducted using an interactive model (Miles et al., 2014), integrated within the ADDIE framework. The analysis process involved continuous data reduction, where important information from interviews, observations, and documentation was selected and summarized throughout data collection. The reduced data were then organized and presented in the form of descriptive narratives, tables, and thematic matrices to illustrate the relationships between phenomena, such as the correlation between gamification implementation and student learning motivation. The final stage was conclusion drawing, based on the interpretation of emerging data patterns and verified through method and source triangulation to ensure validity. The main instrument in this study was the researcher himself, supported by structured auxiliary instruments, namely student involvement observation sheets, interview guidelines for teachers and students, learning outcomes documentation formats, and media validation checklists completed by content and media experts (Miller & Brewer, 2015).

The overall development procedure followed the ADDIE model, consisting of five main stages: (1) Needs Analysis, identifying the requirement for interactive, technology-based learning media in Islamic Religious Education and Character subjects; (2) Design, preparing gamified Quizizz content aligned with basic competencies and Islamic values; (3) Development, creating the product and conducting expert validation to assess content quality and technical feasibility; (4) Implementation, carrying out limited field trials with Grade VII students to observe media effectiveness; and (5) Evaluation, gathering user feedback and analyzing learning outcomes improvements to refine the final product. Through this systematic process, the development of gamified learning media was carefully

aligned with educational objectives, technological innovation, and the principles of Islamic character education.

Findings

Quizizz is an online learning media consisting of quiz features, surveys, games, discussions and several other games that are interactive. This Quizizz application is described as a webtool to create fun games that make students who are learning like playing games where this application can be run using Gadgets and can be accessed through the website www.Quizizz.com. Quzizz is an application that has been around since 2015.

According to Amornchewin (2018), Quizizz is a learning media tool that is believed to provide student motivation in learning with interesting features. Quizizz is an application that can be used to create Multiplayer interactive quizzes that can be accessed via devices such as computers, smartphones or tablets to complete a quiz Quizizz is a game-based educational application, which brings multiplayer activities into the classroom and makes it a fun interactive exercise class. By using the Quizizz app learners can do in-class exercises on their electronic devices. Quizizz can also increase learning motivation and competition to be the best because the quizizz also provides a leaderboard that can be seen directly by participants. This application can help stimulate interest and improve learner concentration.

How to use this Quizizz application is very easy, for a teacher we only need to log in through the website www.Quizizz.com, while for students can join and do quiz questions by opening the Quizizz application that is already in Playstore or through the webtool mentioned earlier, students just have to join then enter the code that has been given and enter their name as an identification. The order of questions for students has been randomized, so it is not easy for students to cheat (Chaiyo & Nokham, 2017). A nice feature in Quizizz is that it gives statistical data on student performance and can track how many students answered the questions created. This statistical data can be downloaded in the form of an excel spreadsheet. And the "Homework" feature allows teachers to give assignments and evaluations with set time limits.

It is very clear that teachers can create the desired quiz questions according to the material used. In making these quiz questions, Quizizz makes it very easy for teachers, where questions can be saved and edited, and teachers do not need to use printouts to present these quizzes because teachers only need to send the links that have been provided so that students can be directly redirected to the webtool containing the quizzes that have been prepared. So what the author means by the Quizizz application is an interactive game application that is used in online and offline classroom learning which has many benefits and is easily accessible by teachers and students.

This study aimed to develop gamified learning media using the Quizizz application for Islamic Religious Education and Character subject to address low student motivation and participation caused by the dominance of lecture-based methods. The research findings are systematically presented in alignment with the study's objectives and research questions, covering three main areas: (1) analysis of student needs for gamified learning media in Islamic education, (2) development of the gamified learning media using the ADDIE model, and (3) evaluation of the media's effectiveness in enhancing student motivation and learning outcomes.

Student needs for gamified learning media in Islamic religious education

The initial stage of data collection through observation and interviews revealed that students in Grade VII at public junior high schools in Banda Aceh expressed boredom and disengagement during Islamic Religious Education classes that relied heavily on lecturing. Teachers also reported limited access to interactive media and a lack of prior experience using gamified learning tools.

A needs analysis survey distributed to 30 students showed that 86.7% found Islamic Religious Education and Character subject learning monotonous and unengaging, while 90% expressed a strong preference for game-based learning tools like Quizizz. Additionally, 83.3% believed they would be more motivated if Islamic content were delivered through a competitive, interactive digital quiz format. These findings clearly indicate the necessity for developing engaging, student-centered learning tools that align with the digital nature of today's learners.

Development process of the gamified media using the ADDIE model

The learning media was developed using the Research and Development (R&D) approach with the ADDIE model, which consists of five stages: Analysis, Design, Development, Implementation, and Evaluation. In the Analysis stage, researchers identified the need for digital, interactive, and contextual learning tools. The Design stage involved aligning the Quizizz content with basic competencies and integrating Islamic values into question items, designed to stimulate higher-order thinking (HOTS).

During the Development stage, the media was built on the Quizizz platform, incorporating game elements such as points, leaderboards, avatars, and countdown timers. The developed product was validated by content and media experts, yielding an average feasibility score of 89.5%, categorized as "highly appropriate" for classroom use. A limited-scale pilot test was then conducted with 30 Grade VII students. The Implementation phase involved quasi-experimental testing with two groups: an experimental group using the gamified media and a control group receiving conventional instruction. Teaching sessions were conducted over two weeks with three meetings per group. In the Evaluation stage, both groups completed pre- and post-tests, and student motivation was measured using a questionnaire based on the ARCS model (Attention, Relevance, Confidence, Satisfaction). Observations and feedback from both students and teachers were also collected.

Effectiveness of gamified media in enhancing motivation and learning outcomes

The pre-test results indicated that the experimental group's average score was 66.5, while the control group's was 65.8. After the intervention, the experimental group's average post-test score significantly increased to 83.2, whereas the control group's only rose to 72.1. A paired t-test confirmed that the difference in learning outcomes was statistically significant ($p = 0.001$), highlighting the positive impact of gamification on student performance.

In terms of motivation, 92% of students reported increased enthusiasm when using Quizizz, 87% felt the content was easier to understand, and 90% expressed a desire to continue using Quizizz in future Islamic Religious Education and Character subject classes. Students stated that competitive elements, such as leaderboards and countdown timers, created a fun and challenging environment that encouraged greater focus. Teachers also found the platform effective for real-time assessment and promoting active classroom engagement.

These findings strongly support the relevance of the developed media to the initial research problem. The gamified learning media not only successfully addressed issues of low student motivation and participation but also fostered a more interactive, joyful, and collaborative learning environment. Furthermore, the integration of Islamic values into a modern educational platform like Quizizz exemplifies a contextual and innovative pedagogical approach suitable for Islamic education in the digital era.

Creating learning media by using the quizizz application

a. How to create an account on Quizizz.com
   Step 1   : Enter the site https://quizizz.com
   Step 2   : Click sign up. We can sign up by using a google account, or by entering our email.
   Step 3   : After successfully signing up, please click a teacher. Take a look at the following picture!

   Step 4   :
                1) Select a country.
                2) Enter the postal code.
                3) Enter the school name manually by clicking can't find your organization.
                4) Click add organization.
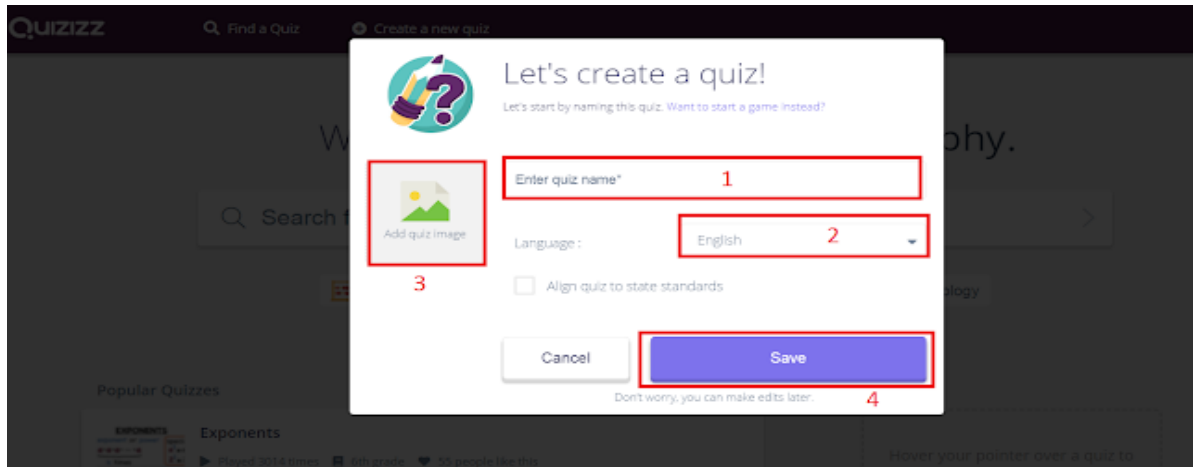   5) Click continue.
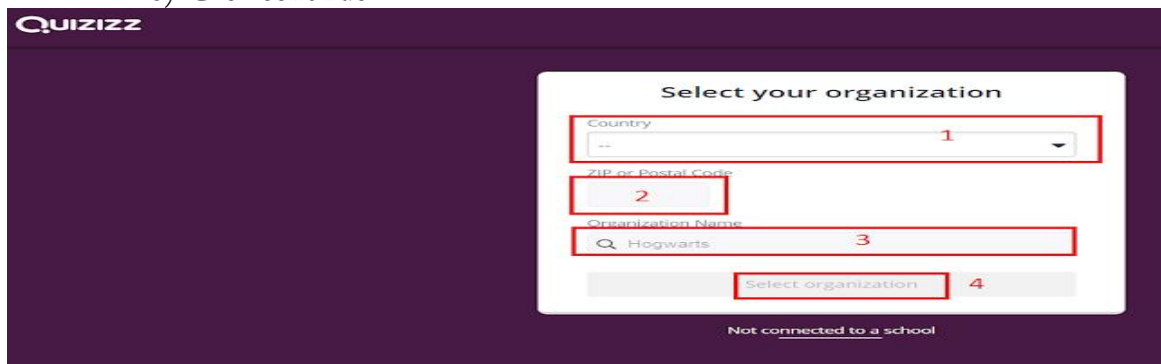
At this point, we have successfully created an account on quizizz.com.

b. How to create questions on Quizizz.com

After completing creating an account, the next step is to create a question on quizizz.com. For that, follow the steps below!
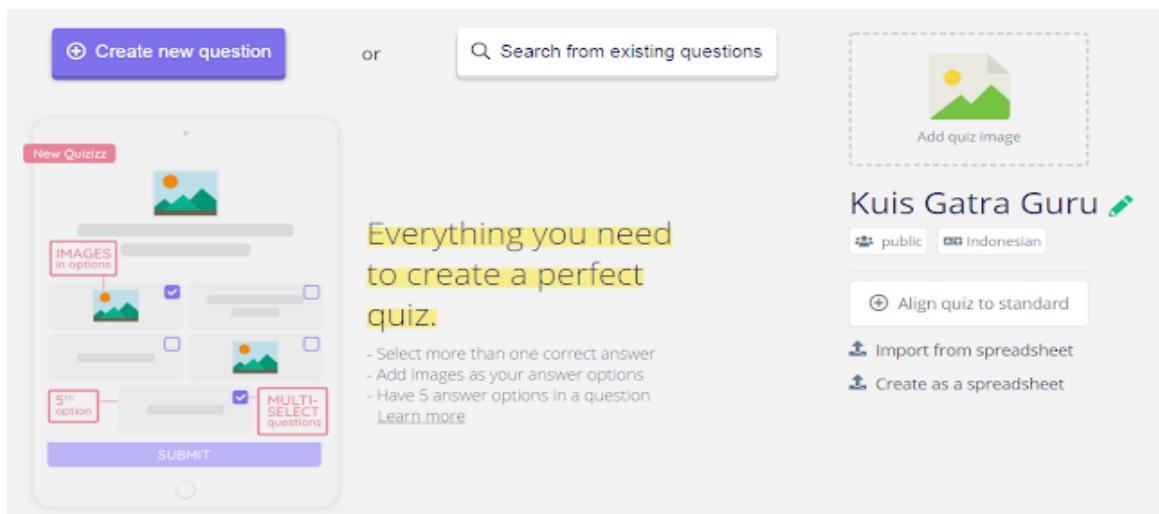
Step 1 : Click open quiz creator

Step 2 : Take a look at the following picture!

Description:

1. Enter the name of the quiz to be created. For example, "Gatra Guru Quiz"
2. Select the language used in the quiz.
3. Enter an image for the quiz. This image may or may not be filled in.
4. When finished, click save.

Step 3 : Click on create new question to start creating the question.

Step 4   : We will be taken to a page like the one below. Please fill it in according to the information below!
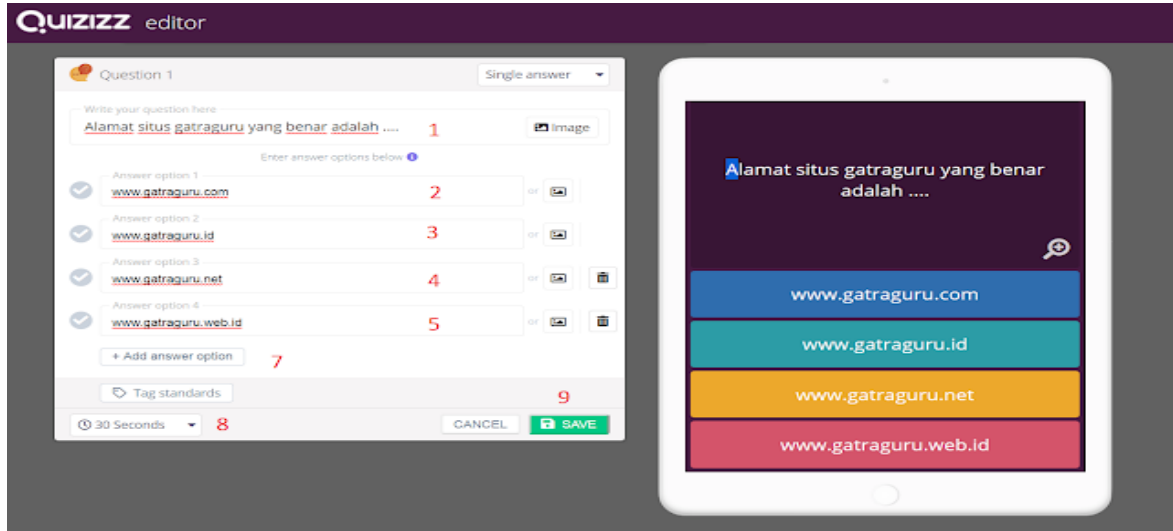
Description:

- Single answer is a question with one correct answer.
- Multiple select, is a question with more than one correct answer.

1. To create a question
2. For choice 1
3. For choice 2
4. For option 3
5. For option 4
6. To delete an option, simply press the trash can icon. For the correct answer, please click the check mark on the left until it is green.
7. To add an answer option
8. To set the answer time, you can choose 5, 10, 15, 20, etc. (time in seconds)
9. If everything is finished, click save.

The screen on the right is the display of the questions that will appear on the student's cellphone.

Step 5   : Create as many questions as you want. If so, please click finish quiz then fill in the grade and choose relevance subjetc.
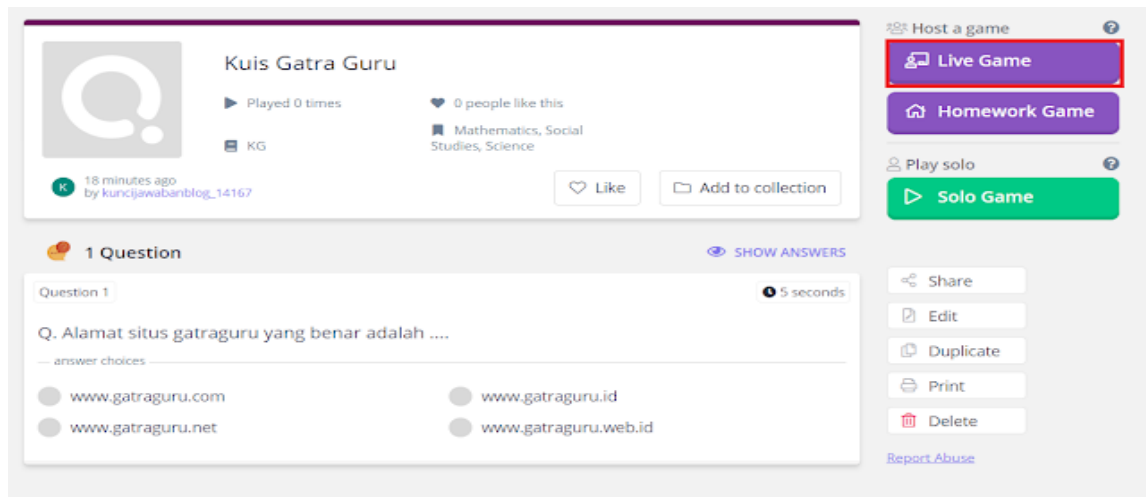
      Grade: For which grade students

      choose relevance subjetc : please choose what our quiz is about.

  c. How to give quizizz.com questions to students.

After the quiz has been created, our next step is to give the quiz to students. Here are the steps that must be taken so that we can give the quiz to students.

Step 1   : Click live game

Step 2   : Please make the settings as below!

Description
- If green, the question will be randomized. (make it green)
- If green, answers will be randomized. (make it green)
  1. If it is green, after finishing the student will be shown the correct answer. (make it green)
  2. Make it black.
  3. Make it black.
  4. Leave it green
  5. Leave it green
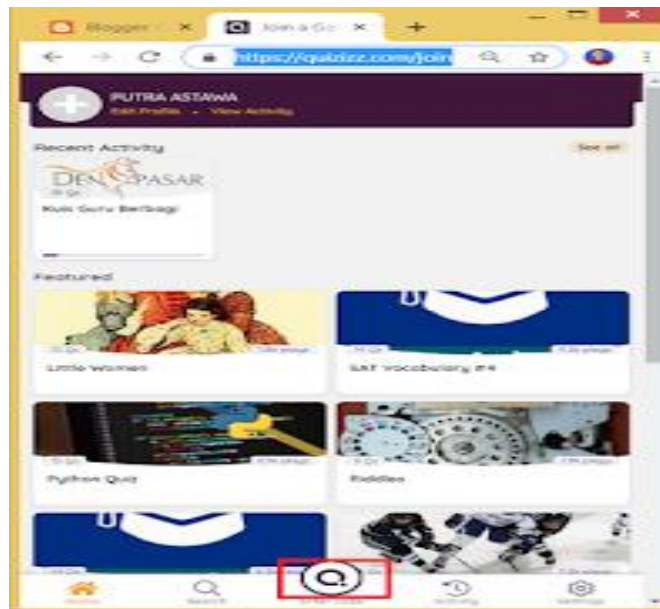 6. Leave it green

Step 3   : When finished, press proceed, then the quiz is ready to be given to students. Ask students to type join.quizizz.com in their mobile browser.
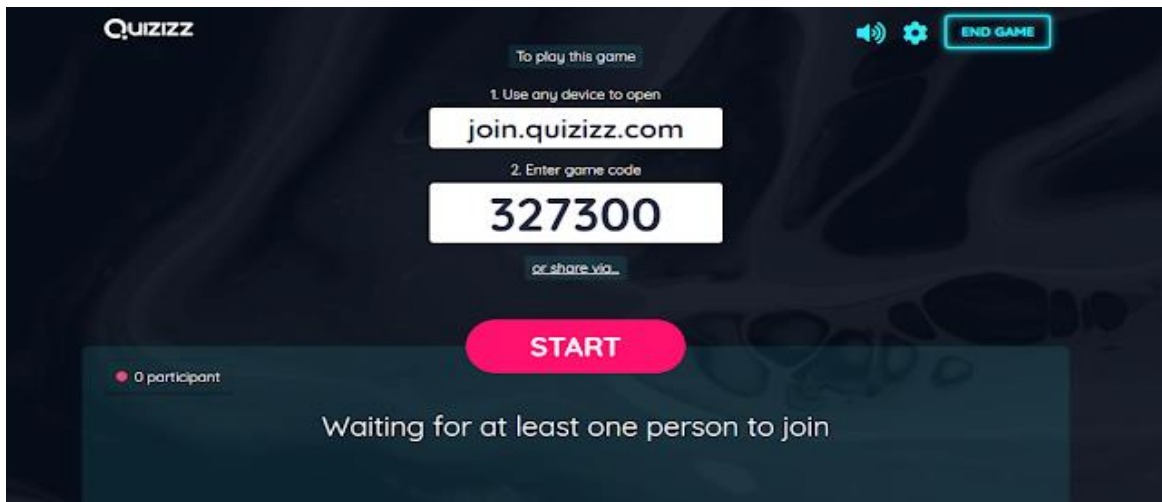
d. How to join quizizzizz.com online quiz

This tutorial is for students who want to take quizizzizz.com online quiz.

Step 1   : Go to join.quizizz.com, then click the join icon. Take a look at the picture below!
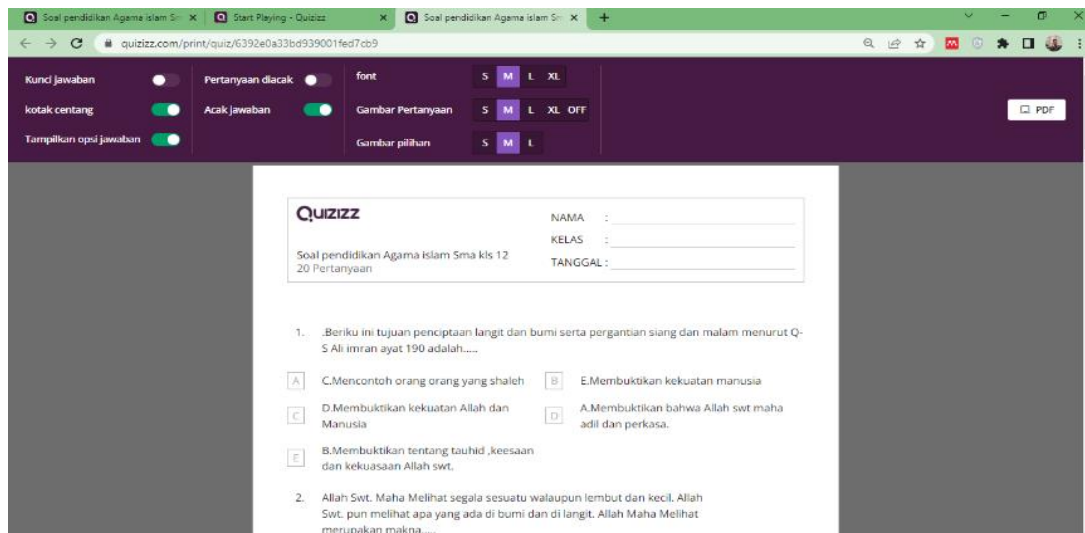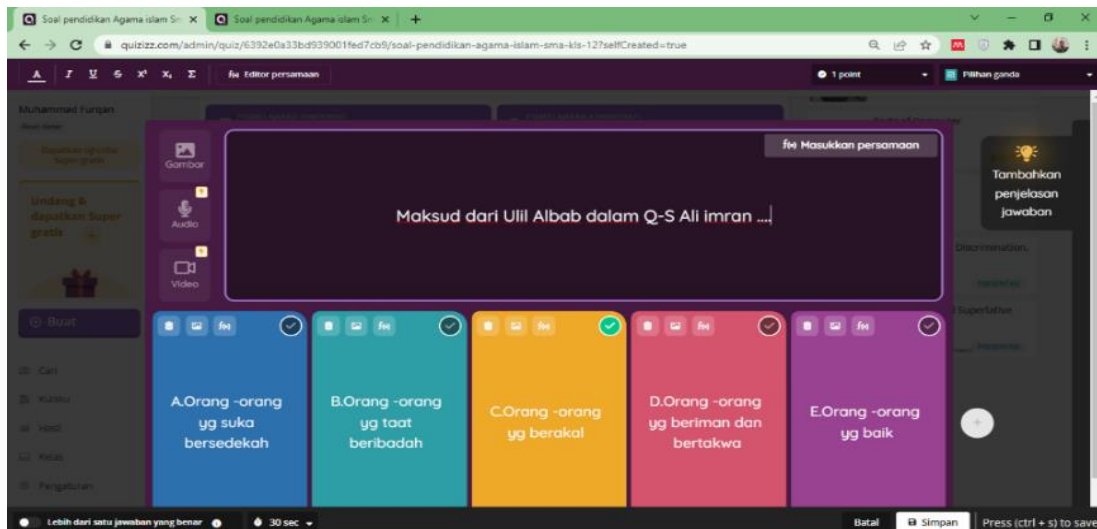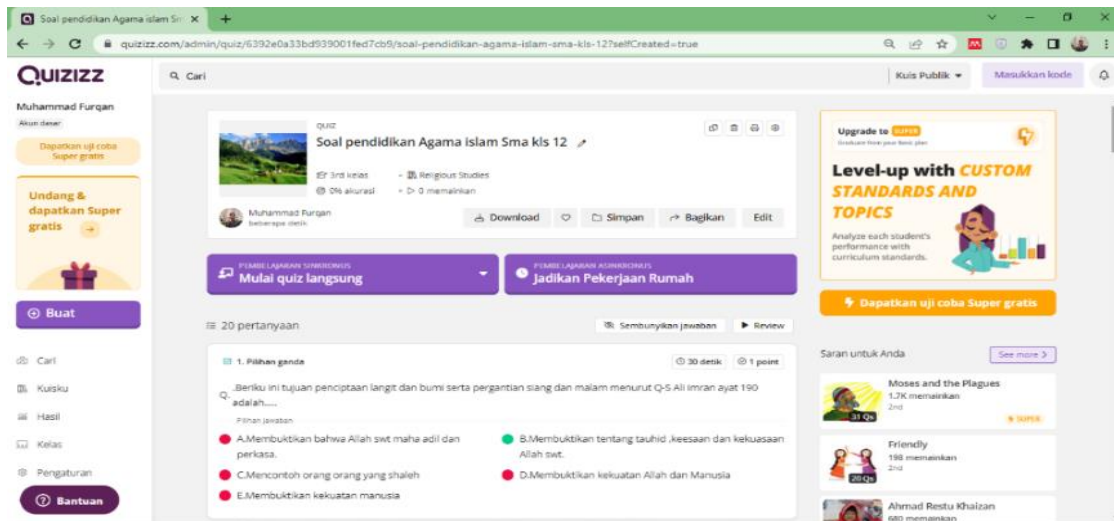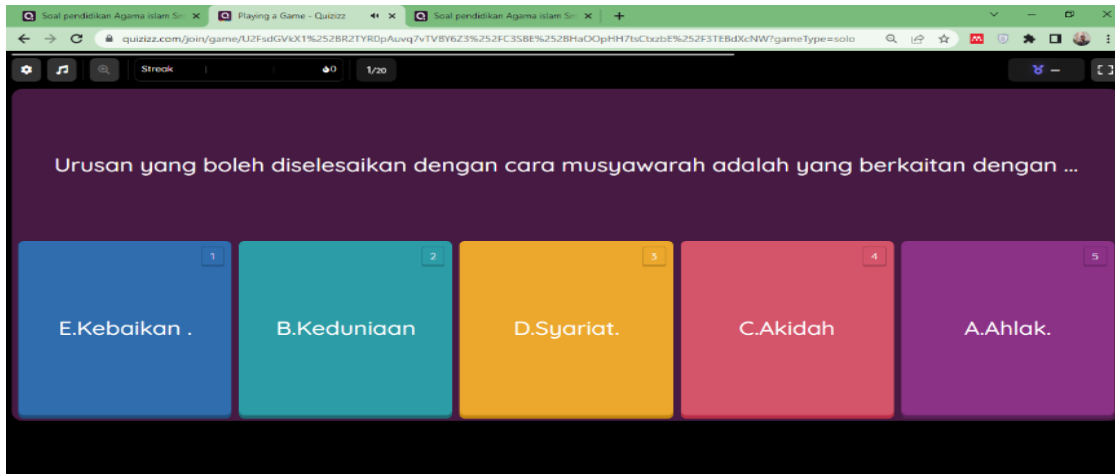

Step 2   : Ask students to enter the game code, then enter their names. Students who have joined will be visible on the teacher's laptop screen.
The quiz can be started once all students have joined the quiz. The teacher just needs to click start.

Example of learning media on quizizz application in Islamic religious education and character subject
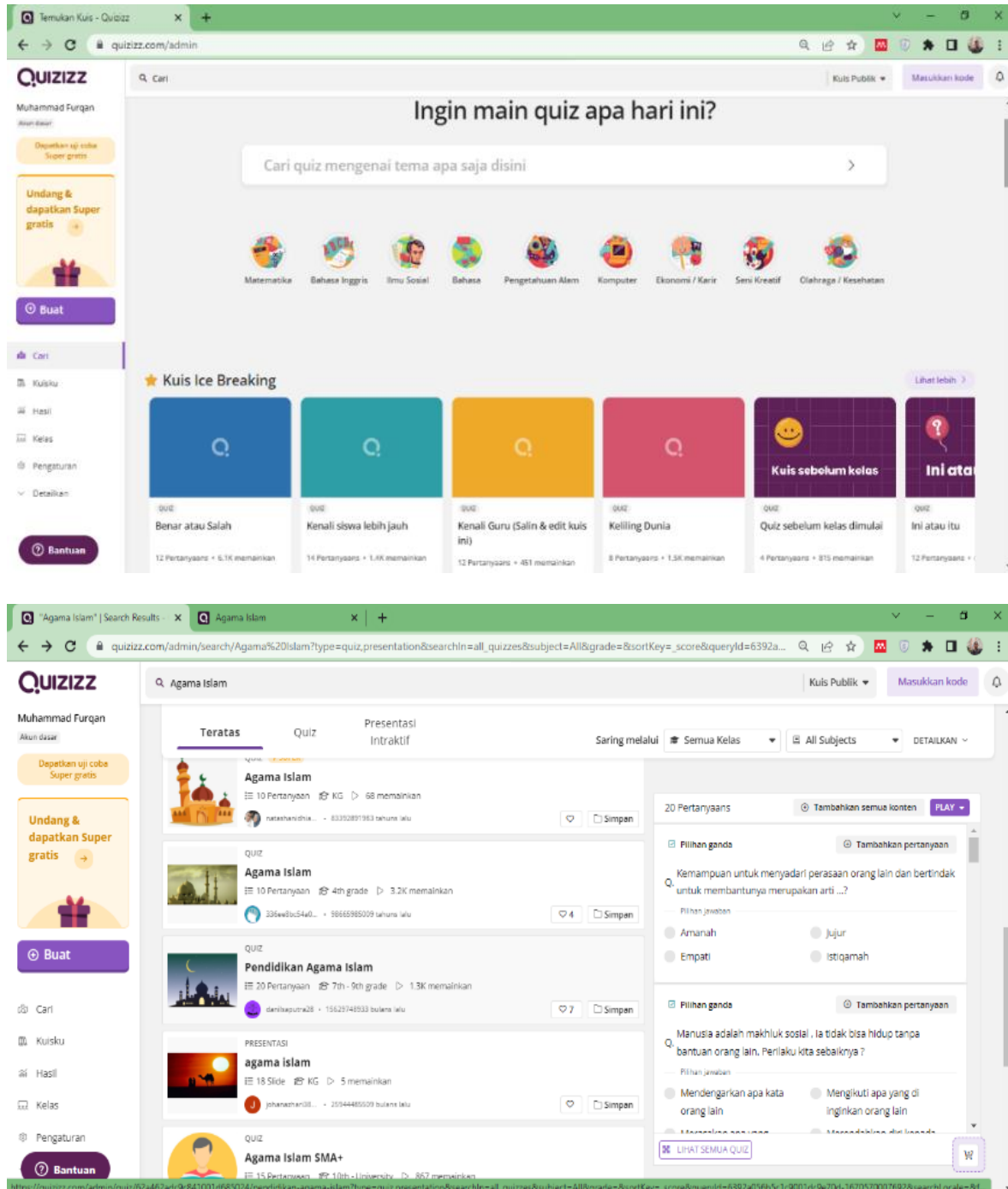
Discussion

Gamification integration in Islamic education learning: study of impact, learner response, and strengthening of Islamic values

This research produces gamification-based Islamic Religious Education and Character subject learning media that uses the Quizizz application as the main platform. This media is designed to answer the challenges of learning in the post-pandemic era, especially in terms of low student motivation and participation in learning activities. Quizizz as a gamification platform allows the incorporation of game elements such as point systems, leaderboards, avatars, and digital awards (badges), which can significantly increase student interaction and engagement in the learning process (Zichermann & Cunningham, 2011).

The media development process starts from analyzing the needs of teachers and students, designing contextualized teaching content, to implementation and field trials. This media has been validated by experts with 87% results from material experts and 86% from media experts, which indicates a very high level of feasibility. The limited trial conducted in the experimental class showed that 92% of students felt more enthusiastic, focused, and not bored in participating in learning using Quizizz. They felt more challenged because of the competitive and dynamic learning atmosphere.

The application of Quizizz in Islamic Religious Education and Character subject learning is proven to have a positive impact on student learning engagement. This engagement not only occurs in the cognitive aspect, but also affective, where students become more excited and confident in following the learning process. Students not only actively answer questions, but also consciously read and understand the learning material in order to obtain a high score. This shows that gamification can change the pattern of student learning behavior from passive to active.

In line with the Self-Determination Theory (SDT) theory proposed by Deci & Ryan (2000), the application of gamification designed by considering basic psychological needs - competence, autonomy, and social connectedness - can foster students' intrinsic motivation (Hamari et al., 2014). In addition, the real-time feedback feature in Quizizz is also very useful in the learning process. According to Nicol & Macfarlane-Dick (2006), quick and relevant feedback can help students understand their mistakes directly and correct them quickly, which ultimately improves their learning outcomes.

The effectiveness of the developed learning media is measured through two main indicators: improvement in learning outcomes and student satisfaction with the learning process. The formative evaluation results showed that the average score of students in the experimental class increased by 14.2 points compared to the control class that used conventional learning methods. In addition, the questionnaire results showed that more than 85% of students felt that learning using Quizizz was more fun, challenging and made it easier for them to understand the material. Theoretically, these results are in line with the behavioristic view, particularly the reinforcement theory by Skinner (2011). In this context, the points and ranking system in Quizizz acts as a form of positive reinforcement that motivates students to continue to excel (Huang & Soman, 2013). This reinforcement proved effective in improving engagement and overall learning outcomes.

Interviews with teachers showed that the use of Quizizz was very helpful in creating an active and conducive learning atmosphere. Teachers find it helpful in delivering material, managing the class, and evaluating learning outcomes efficiently. One teacher stated that Quizizz facilitates the formative assessment process, because the results can be seen directly and used as a basis for determining the next learning steps. Student responses were also very positive. They feel challenged and motivated to learn because the material is presented in an interesting and competitive quiz format. Students who were previously less active became more engaged due to the element of competition and reward. This finding supports Domínguez et al.'s (2013) research which states that the use of gamification-based learning systems can increase engagement, concept understanding, and satisfaction with the learning process.

In addition to the impact on cognitive aspects, the use of gamification also contributes to the formation of students' character and spiritual values. Through Quizizz, teachers can insert questions that contain moral messages and Islamic values such as honesty, responsibility, and tolerance. Thus, students not only learn academic aspects, but also experience the process of internalizing religious values in a fun and contextual way. This approach is in line with the holistic learning paradigm in Islamic Religious Education and Character subject which includes cognitive, affective, and psychomotor aspects. According to Majid (2019), successful learning is learning that is able to shape students into intellectually intelligent and spiritually mature individuals. In this case, gamification can be an alternative media that bridges Islamic values with students' learning habits in the digital era.

Potential and challenges of gamification implementation in islamic education learning using quizizz

Every learner has a different way to foster a spirit of learning, especially in learning Islamic Religious Education and Character subject. This spirit is called motivation. According to KBBI, motivation is an impulse that arises in a person consciously or unconsciously to take an action with a specific purpose. Motivation is an internal state of the organism that encourages it to do something. Learning motivation is a power motivation, driving force or tool to build willingness, and a strong desire in students to learn actively, creatively, effectively, innovatively, and fun in behavior change. Both in cognitive, affective, and psychomotor aspects. The overall driving force both from within and from outside the learner that ensures continuity and gives direction to learning activities, so that learning objectives are achieved.

As a Islamic Religious Education and Character subject teacher in a school environment, you will certainly face students with plural conditions. Both in terms of children's potential, intelligence, environment, family background and so on. For this reason, the author concludes that through the development of learning through game manipulation (gamification) is able to motivate students to be

more enthusiastic and enthusiastic in participating in the learning process so that learning objectives can be realized. The steps of applying gamification in learning include: 1). Identify the learning objectives; 2). Determine the big idea; 3). Create game scenario; 4) Create learning activity design; 5) Build groups; 6) Apply game dynamics. In this case, the meaning of gamification is directed at changing negative thinking towards games in education and wants to manipulate and package games towards learning to be more useful by using innovation and development in the learning process itself.

Although gamification has proven to be effective, its implementation still faces various challenges. One of them is the limited technological infrastructure in some schools, such as unstable internet connections and the availability of digital devices. In addition, the digital literacy of teachers and students is also an obstacle. Not all teachers have the ability to design gamified and engaging learning content. To overcome these barriers, support from the school and government is needed in the form of providing adequate ICT facilities and continuous training for teachers. UNESCO (2020) also emphasizes the importance of digital transformation in education which not only focuses on the provision of technology, but also on increasing the capacity of human resources in managing and utilizing it effectively.

Overall, the results of this study show that gamification, especially through the Quizizz application, has great potential to revolutionize Islamic Religious Education and Character subject learning in schools. If implemented systematically and supported by adequate policies and infrastructure, this approach can be a strategic solution in improving the quality of Islamic education that is adaptive, contextual, and relevant to the needs of today's digital generation.

Conclusion and Implications

Based on the results of the research conducted, it can be concluded that the application of gamification as a learning media through the Quizizz application in Islamic Religious Education and Character subject has a significant positive impact on increasing student motivation, participation, and learning outcomes. These findings align with the analysis presented previously, where the implementation of game elements such as points, awards, and competition succeeded in creating a more fun, interactive, and engaging learning atmosphere. The use of Quizizz was proven to enhance student engagement both cognitively and affectively, while providing immediate feedback that accelerated understanding and improved evaluation processes. Thus, this research confirms that gamification effectively addresses the main research question regarding how the use of Quizizz affects learning motivation, participation, and achievement in Islamic Religious Education and Character subject.

Specifically, the use of the Quizizz app resulted in an increase in formative test scores and heightened student participation levels, demonstrating its effectiveness as an innovative alternative to overcome boredom associated with traditional lecture-based methods. Moreover, this approach strengthens the role of teachers as facilitators who foster a more dynamic and supportive learning environment by integrating technology in a purposeful manner. The integration of Islamic values into gamification content further supports the affective development of students, ensuring that learning remains character-based and spiritually meaningful.

In a broader context, this study suggests that the application of gamification-based learning technology should be expanded and strategically supported by various stakeholders. Teachers are encouraged to be more innovative in designing learning activities that incorporate technology, while schools must provide sufficient infrastructure to sustain digital learning initiatives. Application

developers, such as Quizizz, are also expected to adapt their platforms to better support religious education, particularly by offering features and content that reinforce Islamic values.

For future research, it is recommended to conduct wider-scale studies involving different educational levels and various cultural contexts to further validate the effectiveness of gamification in religious education. Researchers could also explore the long-term impact of gamified learning on students' religious character formation, critical thinking skills, and emotional engagement. In addition, further investigation into the challenges and best practices of integrating gamification in Islamic Religious Education and Character subject learning could provide valuable insights for maximizing its benefits.

Disclosure statement

No potential conflict of interest was reported by the authors.

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