

## MARI BELAJAR WUDHU': LEARNING WUDHU' THROUGH GAME-BASED LEARNING FOR CHILDREN

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### Article Info

### Abstract

Ablution ritual is a process to cleansing our body parts before performing prayer or other worship. The body parts which are washing face, washing both arms, wiping part of head and washing both feet. It is important for Muslim society especially for children to learn the ablution process in order to fulfill the needs before performing any worship especially for children. The children are prompted to learn the ablution process so that the children can perform prayer earlier. According to the study, most of the problems among children are lack of enjoyment in learning ablution by using traditional methods and lack of understanding of proper and correct procedure for ablution. This project aims to change that. This project intends to create a web-based desktop application that can help children understand more about ritual ablution process. The goal is to design a storyboard of a game-based learning application that teaches children about ablution, to develop a game-based learning application that teaches children about ablution through game-based learning to understand ablution and to evaluate the enjoyment of the game-based learning application that teaches children about ablution. This project uses Game Development Life Cycle methodology as its methodology is the most suitable for developing this application successfully and smoothen the developer progress. After making the application, the application was evaluated to see if people enjoyed it and if it really helped them understand the ablution process better through a questionnaire based on the scale of e-GameFlow. The results show that the project scores a high percentage of enjoyment, which is 75.60%. The finding suggests that the application needs to improve on increasing enjoyment while learning the ablution process. Future work can be applied to the project by providing the option of Multilanguage to the user.

Received: August 2024

Accepted: March 2025

Available Online: August 2025

Keywords: ablution, children, process, Muslim Society, application, enjoyment, game-based learning, Game Development Life Cycle, e-GameFlow

## INTRODUCTION

A religious ritual known as "ablution," or "wudhu" in Islam, entails ritually washing specific body regions to purify oneself. According to Widiartin & Azizah (2018) ablution is an activity that must be carried out by Muslims as a form of worship to be clean. Muslims usually practice ablution before engaging in certain acts of worship, such as touching the Quran, attending the five daily prayers, or entering a mosque. It is a significant component of Islamic hygiene. It is crucial to introduce ablution to primary school pupils in a delicate and age-appropriate way, focusing on the educational and cultural components rather than imposing religious ideas. This can support the development of tolerance and understanding within the school community by establishing an atmosphere where kids from various backgrounds feel valued and at ease.

At religious primary school, children build a strong foundation in social, pre-academic, and general life skills that will give them a leg up in school and beyond. Research shows that children who graduate from religious primary school have improved learning of basic Islamic education, academic readiness, lower incarceration rates, and higher earnings. Teachers provide a range of pre literacy-building games and activities for kids. This process occurs between teachers and students, between students and other students and between students and the surrounding environment (Wulandari et al., 2019). Children play with magnetic alphabet letters, sing alphabet songs, and learn rhymes that help them distinguish between sounds. In addition to learning these foundations, children often develop a sense of excitement and motivation to continue learning.

Consequently, the purpose of this study is to tackle this problem by assessing knowledge by emphasizing fun as a crucial component of a more successful strategy. By examining how young children engage with this game based learning, the research also aims to create educational experiences that stimulate their curiosity and inspire a sincere interest in learning. Additionally, the concept offers a different approach to ablution education. In the end, the goal of this proposed game is to create and customize learning experiences that increase children's motivation and improve their ablution act.

## OBJECTIVES

The project aims to design and develop a game-based learning application that enjoyably teaches about the ablution process. Game-based learning changes regular learning material into games, so learning happens while playing. The following specific objectives must be accomplish to achieve the primary goal: 1) To design a storyboard of a game-based learning application that teaches children about ablution. 2) To develop a game-based learning application that teaches children about ablution through game-based learning to understand ablution. 3) To evaluate enjoyment of the game-based learning application that teaches children about ablution.

## SIGNIFICANCE

The significance of this project is to provide an enjoyable experience for learning ablution by allowing the user to engage with educational materials in a playful and dynamic way. This project also can improve student understanding of the proper and correct way of performing ablution. It also can be a tool for educators especially who are teaching this topic.

## LITERATURE REVIEW

### History of Ablution

The word “ablution” comes from Latin, formed by ab- meaning “away, off,” and “lavere” meaning “to wash”. It made its way through Middle French and Middle English. Initially used in alchemy and chemistry, the term started to refer to religious washing in Thomas More's work “The Apologye Made by Hym” in 1533 (Webster, 2023). Many religions have washing rituals for purification or dedication. The word “ablution” specifically for washing without religious meaning gained popularity in English around the mid-18th century. In British English, “ablutions” can also mean the buildings with bathing and toilet facilities on a military base (Webster, 2023). Ritual ablutions are also use in many religious cultures throughout history, including ancient Egypt, Mesopotamia, Anatolia and Greece (Hellholm et al., 2011).

## **Process in Ritual Ablution**

Ablution process has two types of process which are compulsory process and optional process. The compulsory process is the process of step by step that every muslim society need to follow in order to complete the process of ablution. Muslim people who already completed the ablution process, only then muslim people can do prayer and other worships. According to Lestari et al., (2023), people who want to pray, must first do wudhu' because wudhu' is a condition for the validity of prayer. The process that start with washing the face, arms up to the elbows, wiping a portion of the head and washing both feet is a few processes that compulsory to do before performing prayer. This process is vital as it fulfills command and maintains the cleanliness required for worship and closer to Allah.

Other than compulsory process, the optional process or called sunnah involved additional action in the process of ablution. This sunnah process is not mandatory and if added to the action in the ablution process, the overall ablution process will enhance and bring extra rewards (pahala) for muslim society. For example, rinsing the mouth, cleaning the nostrils and washing the ears. In addition, according to Nasution et al., (2023), rinsing the mouth can wash inner cleanliness on humans in the form of cleansing from mistakes and sins committed by body members. This optional process can be done based on individual choice, but performing the optional process demonstrates a higher level of devotion and adherence to the sunnah.

## **Game-based Learning**

Game based learning transforms a non-game activity into a play activity, and it is the process of adding game elements to a non-game situation. According to Ab Rahman et al., (2017), the term "game-based learning" was created to describe the process of turning some knowledge using a game. Game based learning is a technique that integrates game aspects into a subject to produce an engaging playing experience. The researchers have offered numerous descriptions of this technique, most of which touch on the same idea, which includes game adaptation. According to Jamar & Che Noh (2020), gamification through game-based learning has some specific steps that will make it perfect: 1. Setting the goals and rules of the game, 2. The design of how to play, 3. The design of the feedback, 4. The design of the game space. 5. The design of the game story.

Game element is important to build a game, there are many games element that can be used to this project, but this project is focus on objective, level, and progression because according to research had been done by Santos et al., (2021), most researchers regarded Objective, Level, and Progression as the most important components. It is notable that a lack of goals and a sense of forward motion lowers students' motivation and involvement in learning environments. Therefore, this project's game element is objective, levels, time, and progress.

### **Benefit of Game-based Learning**

In general, game-based learning offers a lot of benefits to enhance student's learning experience and also promotes active interaction and communication between students and educators. (Anastasiadis et al., 2018). However, digital game-based learning possesses significant potential for increasing student's learning motivation and engagement, enhancing thus their learning efficiency, cultivating their minds and spirits (Woo, 2014).

According to Brezovszky et al., (2019) the researchers have experimented with fourth to sixth grade primary school students from four urban and suburban areas in the southwest and middle of Finland. The students played the Number Navigation 21 Game as part of mathematical teaching and completed the pre- and post-tests as part of their regular school work. The results showed that many students were able to answer all arithmetic questions provided, which obviously proved the effectiveness of game-based learning. Based on all mentioned facts above, there are some more benefits that game-based learning promotes and offers (Anastasiadis et al., 2018): 1. Cognitive growth and digital literacy. 2. Social-emotional growth and soft skills development. 3. Enhanced decision making and problem-solving skills, as well as critical thinking. 4. Improved collaboration and communication environment. 5. Positively competitive environment. 6. High self-esteem and autonomy. 7. Progressive learning through experience. 8. Rewarding feelings of progression and achievement. 9. Feedback driven and student-centered learning.

Game-based Learning is not just about using games for review and reinforcement. It is also an important and useful component which makes people really excited to play. It can be used for primary learning of hard subjects, difficult-to-learn software, complex financial products, intricate social interactions and others. (Al-Azawi et al., 2016).

## Game Genre

“Game” comes from the Latin word “Ludus”, meaning both learning and entertainment. Games are associated with problem-solving activities that are fun and endogenous systems that are structured by game mechanics or called as game rules. On behalf of that, “Play” comes from the Latin word “Paidia”, meaning (childish) amusement, creativity and freedom to improvise (Agrawal et al., 2020). Games are also a system that sets formal elements like set in motion and create a dynamic experience in which the players engage. However, it is not the goal of a game to create a product, perform a task or simplify a process. The goal of a game is to entertain its participants (Tracy, 2019). Game genre refers to the storytelling aspects of a game, but it can also mean a particular type or style of game.

## METHODOLOGY

Game Development Life Cycle known as GDLC is an approach that serves as a guideline for developers for the game process development. This model comes from the Software Development Life Cycle (SDLC) that has been sorted out to be a game development approach. The objective of this methodology is to make the development easier. Which it means to allow you to create game applications, or sequences without having to worry about the details of programming for gaming. The development process consists of three main tasks: design and prototyping, production and testing. Other than that, it is designed to be used for a creator with limited skills.

However, GDLC methodology is adapted in this project because of its flexibility to change. Each level can be changed to another position that suits the level of the research needs. In addition, GDLC is a simple expansion model and it is sequential that makes it easy to apply in the development process of game application. According to Hawari & Dwika Putra (2022) GDLC method has a more detailed level and it is very clear compared to other methods.

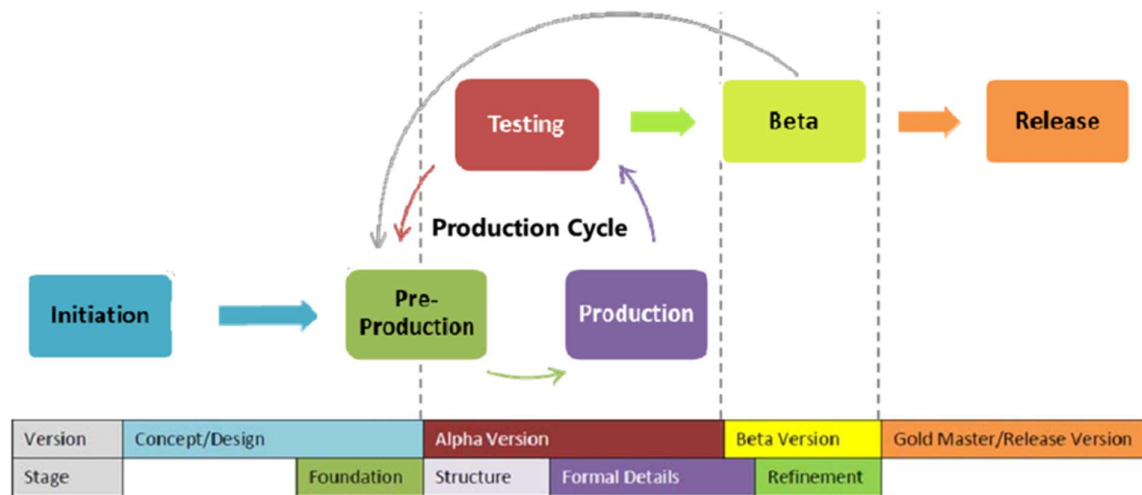


Figure 1: The phases of the GDLC methodology

Game Development Life Cycle model process consists of six phases. The first phase is initiation. In this phase, the objective for the project is to create a concept and idea of the game. The second phase in GDLC methodology is pre-production. During this phase, need to decide in detail what will be in the project and how it will be presented. The third phase is production. The software to develop the game is selected and focuses on actual development of the game in alpha version. Next, the fourth phase is testing. In this phase, the overall structure of the game is built, presentations are assembled and any interactive features are built in. The fifth phase is beta. In the beta phase, the application is run and tested by users to confirm that it does exactly what the developer intended. Lastly is the release phase. Where in this phase, the application is launched to the public.

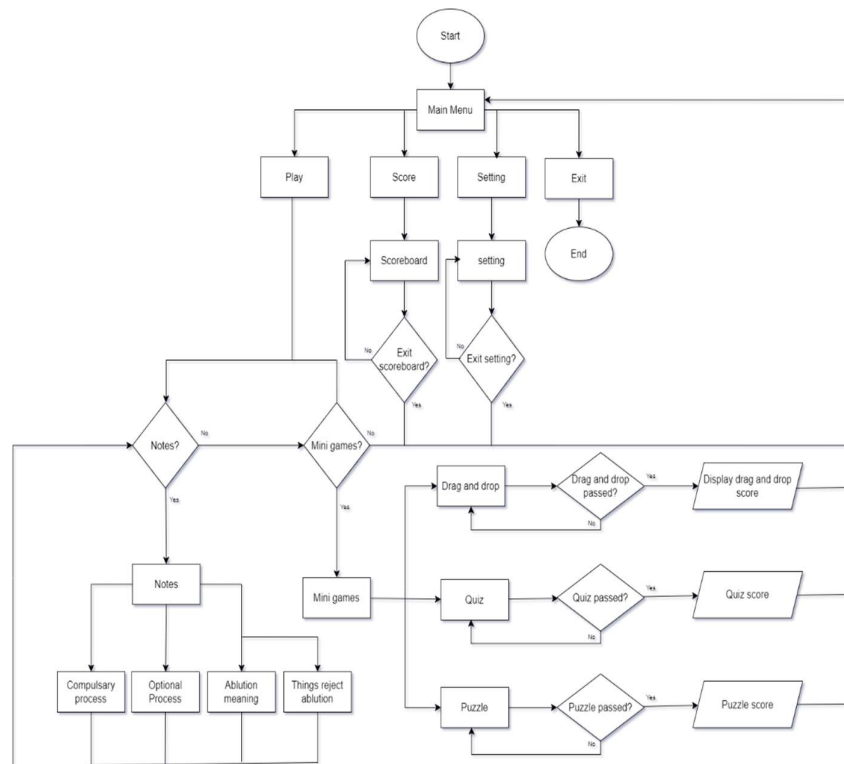


Figure 2: Flowchart of Mari Belajar Wudhu'

However, a flowchart diagram is also more useful when doing this project. It is to define what the learners can do in these games from start to finish. In this flowchart diagram, several symbols are used such as diamond, rectangle, parallelogram, line and oval. Each symbol has its own function and name. The oval symbol represents a start or end point. A line is a connector that shows relationships between the representative shapes known as arrows. A parallelogram represents input or output. A rectangle represents a process. Lastly, a diamond indicates a decision.

First, the game starts with the main menu where when players click the “Mula” button to start, the notes and mini games will be shown to the players. If the players click the “Settings” button, players can set the volume of sound, and untick the background music button. After that, the player can start the game and choose which one user wants to start first. The user is suggested to learn the note on process of ablution before proceeding to minigames to test the knowledge user just had learned. Choosing the main menu will navigate you back to the main menu screen.



Figure 3: Part of the user interface for Mari Belajar Wudhu'

The game application introduces players to game ablution, providing a different type of approach in learning ablution process through interactive learning. With two lessons to choose from, players follow step-by-step process to complete the ritual ablution process and test the knowledge through mini games, enhancing their understanding of the ablution process. This application approaches different techniques on teaching ablution through game-based learning, creating an interactive tool for acquiring proper steps of ablution process despite promoting game elements to boost enjoyment.

## RESULT AND DISCUSSION

This evaluation's purpose is to examine the user's enjoyment with 'Mari Belajar Wudhu'', which represents the third objective of this project. Collecting user feedback is crucial in order to make sure that this game-based learning successfully achieves the project's objectives or not. This project focused on measuring the level of enjoyment when playing this game. The e-GameFlow questionnaire served as a suitable tool to measure the enjoyment experienced by all participating users. This questionnaire categorizes enjoyment into various

factors, which are concentration goal clarity, feedback, challenge, autonomy, immersion and knowledge improvement.

## Enjoyment Instrument

e-GameFlow has been used to be a guideline for this questionnaire. e-GameFlow provided 8 factors with 56 items as mentioned in Chapter 3 subtopic of Testing. But only 7 factors were chosen. One of the factors that are not covered is social interaction. This is because ‘Mari Belajar Wudhu’ is not a feature of social interaction such as chatting rooms. So, there is no interaction with other people as the game is only provided for single players. The contents were presented in Likert-type scales, with 1 to 5 respectively representing the lowest and highest degree to which respondents agree with the contents.

Table 1: e-GameFlow scale

| Factors and items                                                    | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |
|----------------------------------------------------------------------|-------------------|----------|---------|-------|----------------|
|                                                                      | 1                 | 2        | 3       | 4     | 5              |
| <b>Concentration</b>                                                 |                   |          |         |       |                |
| The game grabs my attention                                          |                   |          |         |       |                |
| The game provides content that stimulates my attention               |                   |          |         |       |                |
| Generally speaking, I can remain concentrated in the game            |                   |          |         |       |                |
| <b>Goal Clarity</b>                                                  |                   |          |         |       |                |
| Overall game goals were presented in the beginning of the game       |                   |          |         |       |                |
| Overall game goals were presented clearly                            |                   |          |         |       |                |
| <b>Feedback</b>                                                      |                   |          |         |       |                |
| I received information on status, such as score or level             |                   |          |         |       |                |
| <b>Challenge</b>                                                     |                   |          |         |       |                |
| I enjoy the game without feeling bored or anxious                    |                   |          |         |       |                |
| The challenge is adequate neither too difficult nor too easy         |                   |          |         |       |                |
| <b>Autonomy</b>                                                      |                   |          |         |       |                |
| I feel a sense of control the menu (such as start, stop, save, etc.) |                   |          |         |       |                |
| I feel that I can use strategies freely                              |                   |          |         |       |                |
| <b>Immersion</b>                                                     |                   |          |         |       |                |
| I forgot about time passing while playing the game                   |                   |          |         |       |                |
| <b>Knowledge Improvement</b>                                         |                   |          |         |       |                |
| The game increases my knowledge                                      |                   |          |         |       |                |
| I catch the basic ideas of the knowledge taught                      |                   |          |         |       |                |
| I want to know more about the knowledge taught                       |                   |          |         |       |                |

## Overall Findings

From the overall results above, each criterion has its own value on mean. The data derived from the Google Form responses is calculated to get the average and the mean. The cumulative mean for this game enjoyment evaluation reflects the level of agreement for each factor. The questionnaire is rated on a scale from 1 to 5, where 1 means “Strongly Disagree”, 2 “Disagree”, 3 “Neutral”, 4 “Agree” and 5 “Strongly Agree”. By using the Microsoft Excel program, the mean for each factor and overall percentage were determined.

Table 2: Total Average Mean and Overall Percentage of User Enjoyment Evaluation

| Factors               | Mean  |
|-----------------------|-------|
| Concentration         | 3.59  |
| Goal Clarity          | 3.68  |
| Feedback              | 4.23  |
| Challenge             | 3.65  |
| Autonomy              | 3.79  |
| Immersion             | 3.47  |
| Knowledge Improvement | 4.04  |
| Total Average Mean    | 3.78  |
| Overall Percentage    | 75.6% |

The overall total average mean value for each factor and overall percentage indicating the level of enjoyment for the ‘Mari Belajar Wudhu’ game. The total average mean for all factors is 3.78 while the overall enjoyment percentage for ‘Mari Belajar Wudhu’ game is reaching 75.6%. It can be concluded that ‘Mari Belajar Wudhu’ is considered reaching the goal based on the average mean of each factor and it fulfilled the third objective of this project which is to evaluate the enjoyment of the game-based learning application that teaches children about ablution.

## CONCLUSION

In conclusion, the *Mari Belajar Wudhu*’ successfully provides an enjoyable and easy-to-understand way for children to learn about ablution. The objectives and problems

identified in chapter one have been addressed. The game serves as an effective learning tool and an alternative to traditional methods. Using the e-GameFlow model, the evaluation showed that the game increases enjoyment and understanding of proper ablution procedures. It enhances knowledge and goal clarity for players. While the project has a few limitations, these can be improved in future work.

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