

## Development of Moral Journey Map Media to Improve Student Understanding Based on Design Thinking and User Experience in Madrasah Tsanawiyah

Durrotul Hikmah Yuliansih<sup>1</sup>, Roisna Kamila<sup>2</sup>, Abdul Khobir<sup>3</sup>, Nok Uzana,<sup>4</sup> Khaerun Umam<sup>5</sup>,  
Muhammad Ma'ruf<sup>6</sup>

Universitas Islam Negeri K.H. Abdurrahman Wahid Pekalongan<sup>1,2,3,4,5</sup>

Al Azhar University, Kairo, Mesir<sup>6</sup>

[durrotulhikmahyuliansih@mhs.uingusdur.ac.id](mailto:durrotulhikmahyuliansih@mhs.uingusdur.ac.id)<sup>1</sup>

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**Abstract :** This study was motivated by the low level of student engagement in the learning process due to the use of conventional methods and learning media that lack interactivity. The study aims to analyze user needs, design, and develop a “Character Development Roadmap” media based on Design Thinking and User Experience (UX) to enhance students' understanding. The study employs a Research and Development (R&D) approach with Design Thinking stages, including empathize, define, ideate, prototype, and test. The study subjects consisted of 40 students from MTs TMI Wonopringgo, Pekalongan, Jawa Tengah. Data collection techniques included observation, interviews, questionnaires, and pretest and posttest assessments. The results indicate that students require learning media that is more interactive, contextual, and game-based. The developed media consists of a visual treasure map and a game featuring a progressive challenge system that integrates elements of game-based learning and User Experience (UX). Descriptive statistics revealed an increase in the students' mean score from 39.28 on the pretest to 42.15 on the posttest. The results of the paired sample t-test yielded a significance value of  $0.048 < 0.05$ , indicating a significant difference between the pretest and posttest results. Thus, the Moral Journey Map media demonstrates good potential in helping students understand learning materials through a more interactive and contextual learning experience. This study contributes to the advancement of Islamic moral education by demonstrating that the integration of Design Thinking, User Experience (UX), and game-based physical learning media provides an innovative framework for creating more interactive, contextual, and student-centered learning experiences.

**Keywords :** moral journey map, design thinking, user experience (ux), game-based learning, student understanding

**Abstrak :** Penelitian ini dilatarbelakangi oleh rendahnya keterlibatan siswa dalam proses pembelajaran akibat penggunaan metode konvensional dan media pembelajaran yang kurang interaktif. Penelitian ini bertujuan untuk menganalisis kebutuhan pengguna, merancang, serta mengembangkan media Peta Perjalanan Akhlak berbasis Design Thinking dan User Experience (UX) guna meningkatkan pemahaman siswa.

*Penelitian menggunakan pendekatan Research and Development (R&D) dengan tahapan Design Thinking yang meliputi empathize, define, ideate, prototype, dan testing. Subjek penelitian berjumlah 40 siswa MTs TMI Wonopringgo. Teknik pengumpulan data dilakukan melalui observasi, wawancara, angket, serta tes pretest dan posttest. Hasil penelitian menunjukkan bahwa siswa membutuhkan media pembelajaran yang lebih interaktif, kontekstual, dan berbasis permainan. Media yang dikembangkan berupa treasure map berbasis visual dan permainan dengan sistem tantangan bertahap yang mengintegrasikan unsur game-based learning dan User Experience (UX). Hasil descriptive statistics menunjukkan peningkatan nilai mean siswa dari 39,28 pada pretest menjadi 42,15 pada posttest. Hasil uji paired sample t-test memperoleh nilai signifikansi sebesar  $0,048 < 0,05$  yang menunjukkan bahwa terdapat perbedaan signifikan antara hasil pretest dan posttest. Dengan demikian, media Peta Perjalanan Akhlak menunjukkan potensi yang baik dalam membantu siswa memahami materi pembelajaran melalui pengalaman belajar yang lebih interaktif dan kontekstual. Penelitian ini berkontribusi terhadap pengembangan pembelajaran akhlak Islam dengan menunjukkan bahwa integrasi Design Thinking, User Experience (UX), dan media pembelajaran fisik berbasis permainan (game-based learning) memberikan kerangka inovatif untuk menciptakan pengalaman belajar yang lebih interaktif, kontekstual, dan berpusat pada peserta didik.*

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**Kata kunci** : media peta perjalanan akhlak, design thinking, user experience (ux), game-based learning, pemahaman siswa

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## INTRODUCTION

The development of modern education demands learning innovations that can increase active student engagement. UNESCO (2024) emphasizes that effective learning must be student-centered and encourage meaningful learning experiences through interactive approaches. Consistently, studies show that active learning significantly improves student understanding and retention compared to traditional lecture methods (Tubagus et al., 2024). Therefore, the use of innovative learning media, including concrete, activity-based media, is crucial in supporting effective learning processes. In Indonesia, learning challenges remain related to low student engagement in the learning process.

Data from the Central Statistics Agency (BPS) shows that access to technology and information has continued to increase over the past five years, but this has not been fully accompanied by innovation in classroom learning practices. This is reinforced by a report from the Ministry of Education, Culture, Research, and Technology, which states that learning in schools is still dominated by conventional methods (TINGGI, 2021). Furthermore, other research confirms that student engagement is a key factor in successful learning, thus requiring media that can encourage active student participation (Utami et al., 2024).

Various studies have shown that the use of interactive learning media, particularly those incorporating game-based learning, can increase student motivation and

engagement. Research by Mahbubi (Mahbubi, 2025) indicates that game elements in learning can enhance students' intrinsic motivation. Furthermore, the Design Thinking approach is considered effective in designing user-centered learning solutions (Ashia & Putra, 2025). Meanwhile, previous research findings indicate that the User Experience concept also plays a crucial role in ensuring that learning media is easy to use and provides an optimal learning experience (Larasati et al., 2025).

However, based on initial field observations, the learning process still tends to use lecture methods with limited media. Questionnaire results indicated that most students found learning less engaging and monotonous and needed more interactive media. These findings align with research by Fajra et al. (2023), which states that learning that does not actively involve students tends to be less effective. Furthermore, interview results indicate that students are more interested in learning that involves hands-on activities and game elements, as also found in research on the effectiveness of gamification in education (Mahbubi, 2025). Furthermore, the needs analysis results indicate that students require interactive, game-based learning media with engaging visuals and ease of use. This aligns with research by Putri (Putri et al., 2025), which emphasizes the importance of user-centric design. Furthermore, studies show that ease of use is a crucial factor in the success of learning media (Pratiwi & Meilani, 2018). Therefore, the user experience aspect is a crucial element, even in the development of physical-based learning media.

Although various studies have examined interactive learning media, the development of visual activity-based media with adventure game concepts such as treasure maps remains limited. Furthermore, the integration of the Design Thinking approach and User Experience (UX) aspects has not been comprehensively studied. Research by Yuniarti (Yuniarti et al., 2023) focused primarily on digital media, rather than physical media. Therefore, there remains a research gap in the development of experiential learning media that integrates these various approaches. This gap is particularly relevant in the context of MTs TMI Wonopringgo, where classroom instruction is still predominantly lecture-based with limited use of interactive learning media. Preliminary observations and needs analysis revealed that students require more engaging, contextual, and game-based learning experiences, making the school an appropriate setting for developing and evaluating an innovative physical learning medium. Based on this description, this study aims to analyze user needs in learning, formulate media requirements, and design and develop a prototype of treasure map-based learning media using Design Thinking and User Experience (UX) approaches. This research is expected to contribute to the development of innovative, physical-based learning media that can support student engagement and learning experiences.

## **LITERATURE REVIEW**

Effective learning in the contemporary era demands a transformation from conventional methods to a more interactive, contextual, and student-centered approach.

Constructivism, as proposed by Piaget (1976) and Vygotsky and Cole (2018), emphasizes that knowledge cannot be passively transferred but must be actively constructed by students through direct experience and social interaction. In relation to character education, particularly regarding topics related to reprehensible morals such as *riya'* and *nifak* (non-religious behavior), the constructivist approach is crucial because moral values cannot be understood solely through memorization but require internalization through reflection and meaningful experiences. Consequently, game-based learning has emerged as an effective pedagogical approach to increasing student motivation and engagement. According to Ta'rifin et al (2025), the integration of game elements such as challenges, progression, and rewards into learning can create an immersive learning environment and encourage students to actively explore concepts. Fajra (2023) research further demonstrates that well-designed educational games can facilitate deep learning through problem-solving and experimentation. Although various studies have proven the effectiveness of game-based learning, its implementation in character education remains limited, particularly in the form of physical media that can provide tactile and spatial learning experiences.

The Design Thinking approach offers a systematic framework for developing innovative solutions oriented toward user needs. According to Liu et al (2024), Design Thinking is a methodology that places empathy as the primary foundation, followed by problem definition, ideation, prototyping, and testing. In the context of developing learning media, this approach enables designers to create not only aesthetically pleasing products, but also functional and relevant to student characteristics and needs. Safitri et al (2025) emphasizes that Design Thinking is iterative and collaborative, enabling continuous improvement based on user feedback. Research by Ashia and Putra (2025) shows that integrating Design Thinking into educational application development can significantly increase user engagement. However, most applications of Design Thinking still focus on digital media, while exploration in the development of physical learning media that integrate adventure game elements such as treasure maps remains very limited.

The concept of User Experience (UX) plays a crucial role in ensuring that learning media is not only visually appealing but also easy to use and provides an optimal learning experience. Hartson (2018) defines UX as the overall experience a user experiences when interacting with a product, system, or service, encompassing usability, accessibility, and emotional satisfaction. In the context of learning media, good UX means students can easily understand the learning flow, feel visually comfortable, and engage cognitively and affectively. Grant (2018) suggests that effective UX requires a balance between strategy, scope, structure, framework, and surface. Research by Larasati et al. (2025) shows that UX evaluations of e-learning platforms can identify significant areas of improvement to enhance user satisfaction. However, the application of UX principles is generally limited to digital products, while their application to physical learning media – which involve tactile and spatial interactions – remains underexplored.

Various previous studies have examined the effectiveness of interactive learning media and game-based learning in improving student motivation and learning outcomes.

Mahbubi (2025) found that gamification in learning can significantly increase students' intrinsic motivation. Fajra et al. (2023) showed that active learning methods that directly involve students are more effective in developing critical thinking skills than lecture methods. Putri et al. (2025) emphasized the importance of user-oriented design in the development of interactive animated media. Meanwhile, Yuniarti et al. (2023) compared the effectiveness of conventional and digital media, but did not specifically examine the integration of Design Thinking and UX in physical media. Based on this literature gap, this study aims to fill the void by developing a treasure map-based "Akhlak Journey Map" media that integrates the Design Thinking approach and User Experience (UX) principles. The novelty of this research lies in the transformation of the UX concept which is generally applied to digital media into interactive, contextual, and adventure-based physical learning media, so that it is able to present an immersive and reflective learning experience for students in internalizing Islamic moral values.

## METHOD

This study employed a Research and Development (R&D) approach, adopting the Design Thinking stages of empathize, define, ideate, prototype, and test. This approach was chosen because it is user-oriented and capable of producing innovative learning media tailored to student characteristics. Furthermore, this study integrated User Experience (UX) principles to ensure the developed media is easy to use, engaging, and provides a more active learning experience. The User Experience (UX) concept in this study focused on the user experience of using physical learning media, including ease of understanding game flow, visual comfort, and student engagement during the learning process. The study was conducted at MTs TMI Wonopringgo, Pekalongan, Central Java, as the learning process is still dominated by conventional methods with limited media use.

The population in this study was all MTs TMI Wonopringgo students, with a sample of 40 students selected using a purposive sampling technique. Data collection techniques included observation, interviews, questionnaires, and student comprehension tests in the form of pretests and posttests. Observations were conducted to determine classroom learning conditions, while interviews were used to obtain information regarding students' learning experiences. A questionnaire was used to analyze user needs for the *Akhlak Journey Map* media based on Design Thinking and User Experience. Meanwhile, a pretest and posttest were used to measure student understanding after the implementation of the learning media.

The research instrument consisted of a user needs questionnaire designed based on indicators of learning conditions, learning media needs, interest in game-based learning, the need for User Experience (UX)-based media design, and student expectations for the *Akhlak Journey Map* media. The questionnaire used a 1-5 Likert scale to measure respondents' level of agreement with each statement. In addition to the questionnaire, this study also used a student understanding test instrument based on material indicators on efforts to avoid the reprehensible morals of showing off and hypocrisy. All research instruments underwent content validity testing through expert judgment to ensure their suitability for the research objectives.

The research data were analyzed using quantitative descriptive techniques with the aid of Microsoft Excel. The analysis used percentage and frequency techniques to describe student needs for learning media, preferences for game-based learning, and the need for user experience-based media design. The validity test results showed that out of 20 statement items, 11 were declared valid because their calculated r-value was greater than the table r-value of 0.312. Meanwhile, the reliability test results obtained a Cronbach's Alpha value of 0.790, indicating that the instrument had a good level of internal consistency and was suitable for use in research.

The research stages were conducted systematically according to the Design Thinking process. The empathize stage was conducted through observation, interviews, and questionnaires to identify students' learning needs and challenges. The define stage involved formulating the primary user needs and determining the characteristics of appropriate learning media. Next, the ideate stage involved developing the concept for the Moral Journey Map media, based on games and contextual learning experiences. The prototype stage involved designing the Moral Journey Map media, while the testing stage involved implementing the media to determine the effect of its use on students' understanding of the reprehensible morals of showing off and hypocrisy.

## RESULT AND DISCUSSION

### *User Needs Analysis (Empathize and Define)*

The user needs analysis stage is a critical foundation in developing learning media. It aims to map real-world learning conditions, student preferences for media, level of interest in game-based approaches, and expectations for media design based on User Experience (UX) principles. Data was collected through triangulation through questionnaires, participant observation, and in-depth interviews involving 40 students from MTs TMI Wonopringgo as research subjects. The analysis revealed that classroom learning is still dominated by one-way lecture methods, resulting in suboptimal student engagement. Students consistently expressed a need for more interactive, visually engaging learning media that deliver reflective and contextual learning experiences. This situation indicates the urgency to develop innovative learning media that not only function as a means of delivering material but also as a stimulus that can increase active participation and deepen student understanding. A comprehensive summary of the results of the student needs analysis for various learning indicators and media design is presented in Table 1 below.

**Table 1.** Results of the Student Needs Analysis

| Indicator                                   | Mean | Category |
|---------------------------------------------|------|----------|
| Learning Is Engaging                        | 4.08 | High     |
| Need for Interactive Learning Media         | 3.38 | Moderate |
| Interest in Game-Based Learning             | 3.48 | High     |
| Media Display Helps Maintain Learning Focus | 3.83 | High     |
| Interest in the Level-Based Learning System | 3.93 | High     |

*Source: Research Data (2026).*

According to Table 1, students demonstrated a high level of interest in game-based learning and interactive media. The indicator for engaging learning achieved a mean score of 4.08, while the indicator for interest in the level or stage system of learning achieved a mean score of 3.93. Direct field observations confirmed these quantitative findings, showing that students appeared significantly more active and enthusiastic when the



learning process involved visual activities, challenges, and group discussions compared to monotonous conventional methods. Classroom dynamics demonstrated a significant increase in active participation, indicating that the experiential and game-based learning approach is well-suited to students' current learning characteristics and preferences (Widyasari et al., 2026).

The analysis also revealed that students have specific needs for user-friendly media with attractive visual displays. The indicator for needing interactive media achieved a mean score of 3.38, while the indicator for media displays that facilitate learning focus achieved a mean score of 3.83.

Based on in-depth interviews, students reported that they understand the material more easily when the learning is presented through visual media complemented by reflective activities, compared to purely theoretical explanations. These student perceptions confirm that visual elements and ease of navigation are crucial factors in helping them more effectively absorb learning concepts. Therefore, the findings of this needs analysis served as the primary foundation for developing the Moral Journey Map media, designed to be more interactive, reflective, and contextual.

Based on a synthesis of the needs analysis results and field observations, it was discovered that the primary learning challenge lies in students' poor understanding of the Moral Journey concept, which tends to be interpreted purely in materialistic and theoretical terms.

Furthermore, the use of less interactive learning media results in suboptimal student engagement in the reflective learning process. This creates a significant gap between the objectives of character learning and the reality of classroom practice. Therefore, an innovative learning medium is needed that can provide a more contextual, reflective, and engaging learning experience, while also aligning with student characteristics. These empirical findings were then crystallized into a concrete basis for developing the Moral Journey Map media, which integrates the Design Thinking approach and User Experience (UX) principles.

### ***Development of Moral Journey Map Media (Ideate and Prototype)***

Based on the analysis of questionnaires distributed to 40 students at MTs TMI Wonopringgo, a very high need for interactive learning media was identified. Specifically, in the media needs indicator, 30 students (75%) agreed or strongly agreed that they needed more interactive learning media compared to conventional media.

This finding was reinforced by the game-based learning indicator, where 29 students (72.5%) stated that learning would be more enjoyable when integrated with game elements. This quantitative data confirms students' strong preference for innovative, interactive, and fun learning media, which then became the main foundation for the ideation process.

These quantitative findings were further validated through direct observations in grades VII H and VII I at MTs TMI Wonopringgo. The observations indicated that learning remained conventional, with student engagement levels in the moderate category, with only 57% of the total students actively involved during the learning process. Although 77.5% of students stated that teachers had used a variety of media, the level of interactivity of these media was still not optimal in encouraging active participation.

Furthermore, 72.5% of students stated that visual media helped them understand the material, but they also emphasized that the media needed should not only be visual but also interactive, contextual, and based on direct learning experiences. Synthesizing the questionnaire data and observation results resulted in a very specific needs formulation: a learning medium capable of integrating engaging visual elements with interactive and reflective game mechanics.

Based on this needs synthesis, in the ideate stage, researchers developed the concept of the Islamic Moral Journey Map learning medium, which positions students as explorers in a game-based learning process. This concept was inspired by the treasure map mechanism, packaged as an educational game approach with a gradual challenge system. The main idea developed was to transform the previously passive learning process into a symbolic adventure, where each learning stage is represented as an imaginative location to be explored and conquered by students.

The ultimate goal of this adventure is the internalization of Islamic moral values, particularly the topic of avoiding reprehensible morals such as showing off and hypocrisy (Hanifah & Habibullah, 2026). This concept is designed to create a learning experience that is not only interactive, but also meaningful and contextual, so that students can feel the relevance of the material to their daily lives.

Next, in the prototype stage, the conceptualized concept is realized into a concrete, physical learning media product. The media prototype is realized in the form of a series of interconnected journey maps, where each map represents a different stage in the moral journey. This media is designed with attention to User Experience (UX) principles, such as ease of navigation, visual appeal, and clarity of gameplay.

Each map is equipped with a level-based challenge system designed in stages, ranging from basic understanding to in-depth analysis and reflection. This system ensures that students not only complete the game but also experience a progressive and reflective learning process. The developed media prototype consists of several main maps and a challenge system, which are presented in the following section.

**Figure 1.** Moral Journey Map 1



Depicts the initial journey from the Gate of Sincere Intentions (Classroom) as the starting point of the puzzle, to the Hidden Forest of Charity (School Garden), which represents the challenge of maintaining sincerity in charity, continuing to the Village of Sincerity (Dormitory) as a symbol of cultivating the value of sincerity, and ending at the Palace of Noble Morals (Mosque) as the final destination for character development.



Figure 2. Moral Journey Map 2



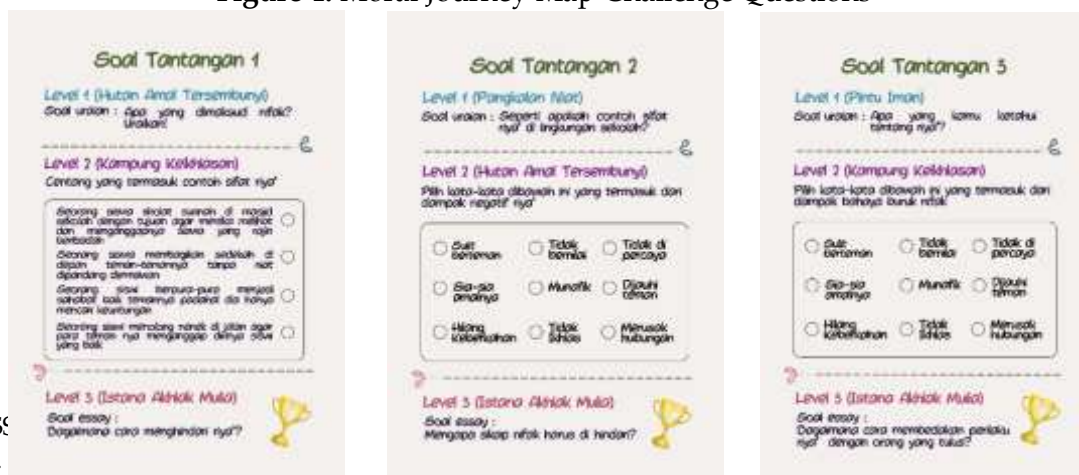
Displays an alternative adventure path that begins at the "Gate of Sincere Intentions," then proceeds to the "Pangkalan Iman" (school area) as a point for strengthening the concept of faith, continuing to the "Hidden Forest of Charity" as a space for reflection on charity, and returning to the "Palace of Noble Morals" as the final achievement. This map emphasizes that strengthening faith is a crucial part of the journey of moral development.

Figure 3. Moral Journey Map 3



Depicts the path from the "Gate of Faith" (School Gate) to the "Village of Sincerity," and finally to the "Palace of Noble Morals." This map reinforces the concept that the moral journey is an iterative process that requires consistency, not just a single stage. In addition to the journey map, the media also features a level-based challenge system.

Figure 4. Moral Journey Map Challenge Questions



Level 1 questions contain basic puzzles to understand the concepts of *riya'* and *nifak*. Level 2 questions challenge students to identify examples and the impacts of behavior in everyday life. Level 3 questions contain analysis and reflection questions that encourage students to think critically about these behaviors. This system is designed as an educational game, where students take on the role of explorers who must solve each puzzle to unlock the next path. Thus, learning is not passive, but rather an exploratory experience that combines elements of challenge, symbolic meaning, and character building. This integration makes the Moral Journey Map media an interactive, contextual, and meaningful learning innovation.

### ***Implementation and Results of the Moral Journey Map***

The implementation phase was conducted to determine the feasibility of using the Moral Journey Map, a treasure map-based medium, in teaching *Aqidah Akhlak* (Islamic Creed) on the topic of "*riya'* (*riya'*)" and "*nifak*" (denial). The medium was implemented with students in grades VII H and VII I of MTs TMI Wonopringgo using an adventure-based learning model, where the learning puzzles followed a pre-designed map path. In the initial phase, the teacher provided orientation on how to use the medium and explained the rules of the educational game. Students were then divided into small groups and began their journey from the Gate of Sincere Intentions as the starting point of the learning.

From this initial phase, students were guided along the adventure path to symbolic locations such as the Hidden Charity Forest, the Base of Faith, the Village of Sincerity, and the Palace of Noble Morals. Each location presented a question-based challenge that had to be completed before proceeding to the next stage. Observations during the implementation showed high student engagement, based on indicators of active discussion, participation in answering questions, and group collaboration. Students also demonstrated high enthusiasm for the medium, particularly the visual aspects of the map and the game system, which made learning more engaging and less boring.

**Figure 5.** Group discussion activity solving puzzles in the Hidden Charity Forest



Students' responses to the media were positive, as the learning process was perceived as more interactive and facilitated gradual understanding of the material on "*riya'*" and "*nifak*." Teachers also commented that the media increased student interaction and created a more active classroom atmosphere compared to conventional learning. In practice, the media was used according to the design, with a systematic flow from beginning to end. However, there were minor challenges in the initial stages; students needed time to understand the game's flow, but after additional explanation, they were able to follow along effectively. Overall, the media was implemented as designed and increased student engagement.

### Effectiveness of Improving Student Understanding

Measurement of media effectiveness was conducted using a comprehension test instrument that had undergone validity and reliability testing, with 11 items deemed suitable for use. The test was administered before (pretest) and after (posttest) the implementation of the learning media.

**Table 2.** Descriptive Statistics Results

| Data     | N  | Minimum | Maximum | Mean  | Std. Deviation |
|----------|----|---------|---------|-------|----------------|
| Pretest  | 40 | 28      | 52      | 39,28 | 5,953          |
| Posttest | 40 | 25      | 52      | 42,15 | 6,216          |

Based on Table 2, the descriptive statistics results show an increase in average student scores after using the *Akhlak* Journey Map media. The mean score in the pretest was 39.28, increasing to 42.15 in the posttest. These results indicate that the implementation of treasure map-based learning media has a positive impact on student understanding of the material on *riya'* and *nifak*. Furthermore, the standard deviation values for the pretest were 5.953 and the posttest was 6.216, indicating that the distribution of student data was relatively stable. Therefore, the *Akhlak* Journey Map media is considered capable of helping students better understand the learning material through an interactive and contextual learning experience.

**Table 3.** Normality Test Results

| Data     | Shapiro-Wilk Sig. | Interpretation       |
|----------|-------------------|----------------------|
| Pretest  | 0,722             | Normally Distributed |
| Posttest | 0,311             | Normally Distributed |

A normality test was conducted using the Shapiro-Wilk test to determine the distribution of pretest and posttest data before conducting the hypothesis testing. Based on the normality test results in Table 3, the significance value for the pretest was 0.722 and for the posttest was 0.311. Both data points were greater than 0.05, indicating that the data were normally distributed. Therefore, the analysis of media effectiveness could be continued using a paired sample t-test.

**Table 4.** Effectiveness Test

| Data                 | Mean Difference | T      | Sig. (2-tailed) | Interpretation |
|----------------------|-----------------|--------|-----------------|----------------|
| Pretest–<br>Posttest | -2,875          | -2,043 | 0,048           | Signifikan     |

The media effectiveness test was conducted using a paired sample t-test because the research data met the assumption of normality. Based on the test results in Table 4, a significance value (Sig. 2-tailed) of  $0.048 < 0.05$  was obtained. These results indicate a significant difference between the pretest and posttest scores after implementing the *Akhlak* Journey Map media. Thus, the developed media demonstrated an increase in student understanding of the material on *riya'* and *nifak* (showing off and showing off).

The increase in student understanding after using the *Akhlak* Journey Map media indicates that experiential and game-based learning can support a more active and reflective learning process. Through the treasure map system, students not only receive theoretical material but also directly engage in exploration, discussion, and problem-solving activities. This finding aligns with game-based learning theory, which states that

game elements such as challenges, levels, and exploration can increase student motivation, engagement, and focus on learning (Prasetya & Yidada, 2026). Furthermore, the User Experience (UX) approach to the media, which emphasizes ease of use, engaging visuals, and interactive gameplay, also supports students' understanding of the material on *riya'* and *nifak* in a more contextual and reflective manner. Thus, the integration of game-based learning and User Experience (UX) in the *Akhlak* Journey Map media shows potential in supporting improved student understanding.

## Discussion

The research findings from the entire Design Thinking-based development process in this study are the success of transforming the previously abstract and rote moral learning experience into an immersive and reflective physical adventure. The empathize and define stages revealed a critical gap: students needed interactive, contextual, and game-based media, but learning practices at MTs TMI Wonopringgo were still dominated by lecture methods with an activeness level of only 57%. This finding led to the ideate and prototype stages to create a Moral Journey Map media based on the treasure map concept that positions students as explorers in a symbolic adventure. The iterative development process resulted in a product that was highly responsive to user needs, evidenced by a significant increase in student understanding scores from a mean of 39.28 in the pretest to 42.15 in the posttest, with a significance value of 0.048 ( $<0.05$ ) in the paired sample t-test. This empirical evidence confirms that the systematic integration of the Design Thinking approach and User Experience (UX) principles in physical media effectively bridges the gap between the learning preferences of digital generation students and the need for internalization of moral values. Furthermore, the testing phase highlighted that the map's visual elements, gradual challenge system, and symbolic narratives were able to reduce cognitive barriers, allowing students to reflect more deeply on the concepts of *riya'* and *nifak* through a fun and meaningful exploratory experience.

The effectiveness of the Moral Journey Map can be comprehensively explained through a synthesis of several fundamental learning theories. These findings align with the constructivist theories of Piaget (1976) and Vygotsky and Cole (2018), which assert that knowledge is actively constructed through direct experience and social interaction—a principle embodied in the map's exploration and group discussion mechanisms. The game-based learning frameworks of Ryan and Rigby (2020) and Leonardou et al (2020) also validate the findings of this study, as game elements such as gradual challenges, level progression, and symbolic rewards within the map have been shown to enhance students' intrinsic motivation and deep learning. The Design Thinking approach developed by Amanda and Nadzijia (2026) provides a strong methodological foundation, where empathy for user needs underpins product iteration, ensuring that the resulting media is not only aesthetically pleasing but also functional and relevant. Furthermore, the User Experience (UX) principles of Hartson & Pyla (2018) and Albab et al (2025) explain why this media successfully creates an optimal learning experience: a balance between usability, visual appeal, and clarity of gameplay minimizes extraneous cognitive load and maximizes student engagement. This theoretical synthesis demonstrates that the *Akhlak*

Journey Map media is not simply a tool for delivering content, but rather a holistic learning ecosystem that combines knowledge construction, gameplay, user-oriented design, and tactile-spatial interaction to facilitate the in-depth internalization of moral values.

The novelty of this research lies in the radical transformation of the User Experience (UX) concept—conventionally applied to digital media—into a physical learning medium based on a treasure map, systematically developed through a Design Thinking approach for Islamic moral learning. This study significantly differs from and builds on five previous studies. First, Mahbubi's (2025) and Suwanto's (2025) study examined gamification to increase learning motivation, but did not integrate a Design Thinking approach or UX principles into its media design. Second, Fajra et al.'s (2023) study demonstrated the effectiveness of active learning for critical thinking, but still focused on conventional methods without exploring interactive physical media. Third, Putri et al.'s (2025) study developed a digital-based interactive animation media, which is fundamentally different from the physical-tactile approach offered in this study. Fourth, Yuniarti et al. (2023) compared conventional and digital media without comprehensively examining the integration of Design Thinking and UX. Fifth, Ashia and Putra (2025) and Larasati et al. (2025) applied UX to digital applications, not physical media. In contrast, this study fills this critical gap by utilizing a physical treasure map format that involves tactile, spatial, and kinesthetic interactions—dimensions that cannot be replicated by digital media. This specific methodological and contextual approach provides a novel empirical contribution, demonstrating that UX and Design Thinking principles, when adapted to adventure-based physical media, can be a highly effective intervention for reflective and contextual moral learning.

The findings of this study provide significant theoretical and practical implications for the field of education, particularly character education and the development of learning media. Theoretically, this study expands the literature on User Experience by demonstrating that UX principles—such as usability, visual appeal, and flow clarity—are not only relevant for digital products but can also be effectively adapted to physical learning media. This opens a new paradigm in UX studies, previously dominated by the digital realm, while validating the synthesis of Design Thinking, game-based learning, and constructivism in the context of Islamic morality learning. Practically, this study provides an innovative, cost-effective, and easily replicable framework for Islamic Religious Education teachers to transform morality learning from an abstract, rote approach to a contextual, exploratory experience. Teachers no longer rely solely on theoretical explanations but can utilize or modify the treasure map concept to create a simulation of a moral journey that directly resonates with students' lives. Furthermore, the implementation of this media empowers students to shift from passive recipients to active explorers who reflectively construct their understanding of moral values. Ultimately, this research implies that the future of moral learning in the contemporary era depends on



educators' ability to design immersive, tactile, and meaningful learning experiences – an approach that bridges traditional values with the learning preferences of the younger generation.

In response to the novelty and effectiveness of the Moral Journey Map media, several strategic policies need to be formulated at both the school and government levels. At the school level, madrasah principals and committees need to develop Standard Operating Procedures (SOPs) that regulate the integration of Design Thinking-based physical learning media into the Islamic Religious Education (IRE) curriculum, including allocating specific time for exploratory activities such as treasure maps (Hikmah et al., 2026). Schools should also prioritize continuous professional development through targeted training for teachers on Design Thinking methodology, UX principles, and interactive physical media design, so that teachers become not only media consumers but also innovative media producers. At the government level, the Ministry of Religious Affairs and the Ministry of Education need to integrate Design Thinking and User Experience approaches into national Islamic Religious Education (IRE) teacher training programs, both pre-service and in-service, and provide standardized implementation guidelines. Furthermore, the government should allocate a dedicated budget for the development of innovative physical learning media through research and development grant schemes, and facilitate the dissemination of good practices through national platforms. Equally important, policymakers need to establish quality standards for physical learning media that adopt UX principles, ensuring that the media used in schools is not only visually appealing but also functional, accessible, and impactful in character building. By implementing this comprehensive policy, the education ecosystem can systematically transform moral learning into a more meaningful, reflective, and relevant experience for the younger generation.

## CONCLUSION

Student understanding is not only influenced by theoretical delivery of material, but also by interactive, exploration-based learning experiences. This research shows that the treasure map-based Moral Journey Map (MAP *Akhlak*) supports student engagement in the learning process through a system of challenges and learning discussions. Thus, game-based learning can support a more active learning process and help students understand the reprehensible morals of *riya'* and *nifak* (showing off and being dishonest) more contextually.

This research contributes to the development of physical learning media that integrate Design Thinking, User Experience (UX), and game-based learning in teaching *Aqidah Akhlak* (*Aqidah Akhlak*). This research also demonstrates that the User Experience approach is not only relevant to digital media but can also be applied to physical learning media to support a more interactive learning experience for students. This research is limited to one educational level with a relatively limited sample size. Therefore, future research can expand the implementation of the media at a wider educational level and student engagement, and character development.



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