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Gamified Islamic Dance Learning Media for *Pesantren*: An Android-Based Development Study

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Abstract

Islamic dance learning at *Pesantren* (Islamic boarding schools) experiences problems because of insufficient learning materials, a teacher-centered teaching style, and the difficulty in delivering information about physical activities through conventional instruction. This study's objective is to create an Android app to be used as instructional media for Islamic dance learning with gamification and social learning features. This study employed a Research and Development (R&D) methodology, utilizing a simplified Borg and Gall model (stages 1–5), encompassing needs analysis, product design and development, expert validation, product revision, and finalization. Data were gathered via observation, interviews, focus group discussions, and structured Likert scale questionnaires were administered to media, material, and language validator. The results show a consistent increase in the media aspect from 3.60 to 4.85, the material aspect from 3.75 to 4.95, and the language aspect from 3.80 to 5.00, all reaching the Very good category. This study produces the one of the first validated Android-based media by integrating gamification, the operationalization of Social Learning Theory, and Islamic dance content in the pedagogical tradition of *Pesantren*. This study confirms that Android-based Islamic dance learning media with gamification through a social learning model with interactive features is offers a novel approach for the Islamic boarding school environment. This study contributes to establishing that gamification elements must be culturally embedded in Islamic values in order to help student participation and motivation.

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INTRODUCTION

The rise of popular culture, technological disruption, and the influence of globalization have posed significant challenges for Islamic educational institutions such as *Pesantren* (Bahij & Anshory, 2023; Manan, 2017). Amid this wave of modernization, *Pesantren* are required to adapt to remain relevant, without losing their identity as centers for the development of religious knowledge, the dissemination of Islamic culture, and character education (Faruq et al., 2022; Febriyani et al., 2024). Islamic dance education in *Pesantren* is highly vulnerable to lack of student interest, and its teaching infrastructure has not kept pace (Mainuddin et al., 2024). Teaching relies almost entirely on live demonstrations by specialist teachers using episodic, non-reproducible methods, and is limited by the chronic scarcity of educators with formal dance pedagogical competencies (Mackey,

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2022). The result is a learning system that is not scalable, cannot be accessed independently by students between learning sessions, and cannot survive without the presence of a single qualified teacher, a structural vulnerability that cannot be overcome by any motivation or institutional commitment without specialized learning media. As part of efforts to achieve Sustainable Development Goal (SDG 4) on inclusive and quality education, as well as Indonesia's National Research Priorities (PRN) in developing digital educational technology for character strengthening and religious moderation, the development of contextual Islamic arts learning media has become an urgent, unmet need.

The Islamic dance holds a unique position within the educational curriculum of the Indonesian *Pesantren* system apart from its artistic role because it serves as an effective vehicle for conveying Islamic teachings, building spirituality, and expressing Islamic identity using physical actions (Hanafi et al., 2021; Sauri et al., 2022; Siregar et al., 2025). However, there is no adequate and relevant instructional resource in terms of educational materials that can support the learning process of Islamic dance in the *Pesantren* environment (Hastasari et al., 2022; Krisdiyanto et al., 2019).

The teaching of Islamic dance in a conventional way can only be multimodal in nature (Oyebamiji & Olutayo, 2025). Being an expert in any form of activity involves clear visualization of the movements, understanding them philosophically and spiritually, and persevering despite all difficulties encountered (Bellous, 2021). It cannot be accomplished using only textbook materials or oral instructions since the latter fails to provide enough knowledge of kinesiological aspects of such activities (Adib, 2021; Shahid et al., 2022). In-person demonstration from experienced instructors is not common and cannot be repeated, which means that learners do not get sufficient chances to revisit, repeat, and manage their pace of learning. Research in arts education reveals that the lack of visual and interactive tools severely restricts students' involvement and learning experience (Aloizou et al., 2025; Said, 2023; Son, 2025; Utomo, 2023). This problem is further complicated by the lack of teachers who have specific expertise in teaching dance. In such a scenario, the process of learning becomes heavily dependent upon the human element rather than the media, which can be shared among many individuals. While traditional teaching of dance in an Islamic boarding school context has traditionally depended on the presence of a teacher and the cadence of working together as a group to motivate the students during the repeated cycles of movement, gamification fills this void perfectly (Faqih et al., 2021; Son, 2025; Srimuliyani, 2023; Suparmini et al., 2024; Zulfikar et al., 2022).

Research by Oktaviana et al (2022) examined the need for Android-based gamification in Indonesian language learning, and the results indicate significant potential for enhancing motivation and learning outcomes. However, studies on gamification in Islamic education remain limited, particularly regarding Islamic arts in *Pesantren*. This research gap presents an opportunity to design Android-based gamified Islamic dance learning media as a new, more contextual approach. Studies on gamification in Indonesian education confirm that game elements increase student motivation and engagement (Oktaviana et al., 2022; Srimuliyani, 2023; Suparmini et al., 2024; Wibowo & Saliman, 2021), and Android-based applications in Islamic education have demonstrated technical feasibility and user acceptance in Islamic boarding education (Anam et al., 2021). Previous studies have addressed gamification in terms of cognitive and linguistic content, while digital learning media developed in Islamic education encompass textual and doctrinal subjects in general Islamic studies (Hosaini et al., 2024), the teaching of classical texts (Adib, 2021), and language learning (Firmansyah & Saepuloh, 2022; Galang et al., 2025; Shofiyah et al., 2025).

In contrast, limited attention has been given to movement-based learning domains such as Islamic dance, particularly in relation to the integration of social observation and imitation processes that are central to its pedagogy. As a result, current gamification designs for movement-based Islamic arts lack empirical grounding and often rely on frameworks developed for non-kinesthetic learning contexts. Furthermore, the scarcity of specialist dance teachers in *Pesantren* creates a structural challenge, as there is no scalable medium to support independent learning. This study addresses this gap by developing and validating an Android-based Islamic dance learning medium that integrates gamification elements within the framework of Social Learning Theory and Islamic cultural design principles. The novelty of this research lies in proposing a design framework for movement-based Islamic arts learning that integrates kinesthetic content, spiritual meaning,

and cultural relevance into a unified instructional model. Therefore, this study aims to design an Android-based gamified Islamic dance learning medium that aligns with Islamic values, aesthetic principles, and the learning needs of students in *Pesantren*.

METHOD

Research Design

This study employs a Research and Development (R&D) framework, a systematic approach for the design, development, and validation of educational products based on empirical data (Borg & Gall, 1984). The development process has 5 steps: needs analysis, designing the product, making the product, getting expert approval, making changes, and finalizing the product. Borg and Gall's 5 steps were used in this study because they are in line with the study's stated objectives to produce and validate learning media that are appropriate and approved by experts. This research developed a gamified Islamic dance educational application for Android.

Participants

Participants in this study were selected through purposive sampling because of their relevance to the research objectives (Creswell & Creswell, 2017). Two groups of participants, students and teachers from three *Pesantren* were Cipasung, Nurud Da'wah Minda, and Al-Mubarokah. The distribution of participants in this study is shown in Table 1.

Table 1. Distribution of Participants by Institution

Pesantren	**Teacher (n)**	**Student (n)**
Cipasung	4	18
Nurud Da'wah Minda	3	15
Al-Mubarokah	3	14
Total	**10**	**47**

The needs analysis involved a total of 10 teachers and 47 students across the three *Pesantren*. All students were enrolled in grade VIII-IX, aged 14–16, and had prior experience with Islamic dance within the Islamic boarding school curriculum. Participants of this study were chosen based on their involvement in teaching arts in Islam. External experts not connected with the research were brought in to evaluate the media. Evaluation of the media took place through the assistance of three experts; one being an expert in teaching of Islamic dance, the other one being an expert in educational media as well as information technology, and lastly, another expert in the Indonesian language.

Data Collection

The data gathering procedures involved systematic stages, which were completed within a period of about twelve months, using different tools of data gathering appropriate for needs assessment in research and development and evaluation of products (Creswell & Creswell, 2017). Data Gathering Procedures during Needs Assessment Stage (Months 1-2): The following data gathering procedures were used to collect data during the needs assessment stage (months 1-2): (a) Direct observation of Islamic dance learning sessions at participating *Pesantren*, recording the approaches used, media available, and students' participation levels; (b) Semi-structured interviews with resources as well as practical barriers in daily teaching; and (c) Focus Group Discussions with students to understand their learning preferences, technology usage habits, and expectations regarding digital learning media. The recording of Islamic dances was done, learning resources based on the principles of social learning were developed, narrative education resources were also developed using Islamic principles, as well as gamification and the user interface for the app. In the validation stage (months 9-10), Table 2 presents the expert validation framework.

Table 2. Expert Validation Framework

Validator Type	Evaluation Aspects
Media Expert	Clarity of images, videos, and text Color selection and combination Ease of navigation and menu buttons Application access speed Application design appearance Layout consistency Media supporting interactive learning Audio-visual integration Appropriateness of icons/symbols Overall appeal of media
Material Expert	Relevance of material to learning objectives Accuracy of material content (accurate and conceptually appropriate) Material supports the development of Islamic values Depth and breadth of material Integration of material with interactive features Clarity of material presentation Material supports social learning (social learning) Relevance of material to everyday life Consistency of presentation (text, images, video) Material encourages student creativity
Language Expert	Spelling accuracy (EYD/PUEBI) Sentence structure accuracy Clarity of language use Text readability Simplicity of language (easy to understand) Accuracy of diction/terminology use in the media Politeness of language Appropriateness of language in an Islamic context Consistency of terminology use Clarity of instructions in the media

Data Analysis

The qualitative data generated through the processes of observation, interview, and FGDs were analyzed using the interactive approach of Miles. Miles' framework involves three components namely data reduction, where raw data obtained during field work is condensed to identify the most significant aspects of users' learning needs and media requirements; data display, where reduced data is presented in descriptive narratives and concept matrices of user needs, learning flow, and design considerations; and conclusion drawing and verification, whereby conclusions drawn from the two previous steps are aggregated to produce design guidelines for the development of the Android application (Miles et al., 2014; Wulansari et al., 2025). The analysis of quantitative data collected through the expert validation questionnaire employed descriptive statistics, whereby the average rating per dimension and overall feasibility rating across all validation rounds based on the Likert scale are shown. Each dimension was assessed based on the Likert scale with ratings of 1 for "very poor" and 5 for "very good".

Table 3. Score Interpretation Criteria

Score Range	Percentage (%)	Category
1.00 – 1.80	20 – 35	Very Poor
1.81 – 2.60	36– 51	Poor
2.61 – 3.40	52 – 67	Fair
3.41 – 4.20	68 – 83	Good
4.21 – 5.00	84 – 100	Very Good

RESULTS AND DISCUSSION

The outcome of this research is the creation of a game application for learning Islamic dance based on the Android platform, which is in line with Islamic values, aesthetics, and the educational needs of the students from *Pesantren*. Initial findings from the research involved observations made directly in the boarding schools, interviews with the school's teachers and educators, and FGDs among the students. It provided authentic information about the necessities of Islamic dance education, and this proved that the traditional method of teaching, such as lecture and demonstration, is still dominant but deemed ineffective in fulfilling the needs of the digital age. Lectures and demonstrations do not allow the learners to explore their creativity and cannot provide an enjoyable experience, which is why educators are unable to provide additional resources to supplement the lessons.

The main content to include within the media for the design of the instructional materials for the Islamic Dance performance involved recording the performances of Islamic dancers. The instructions were presented sequentially, showing how one could learn Islamic dances using social learning theory. The instructions created involve an outline of movements involved, philosophy behind each move, and Islamic values portrayed by each move. The user interface and functionality of the application developed for Android included education-based narratives that would help the children develop morals and spirituality. All of this design revolves around motivating the students in learning Islamic dances through the use of elements of gamification, such as earning points, various learning levels, and interactive feedback. Figure 1 shows an interface that is suitable for learning for the digital generation and is Islamic-themed.

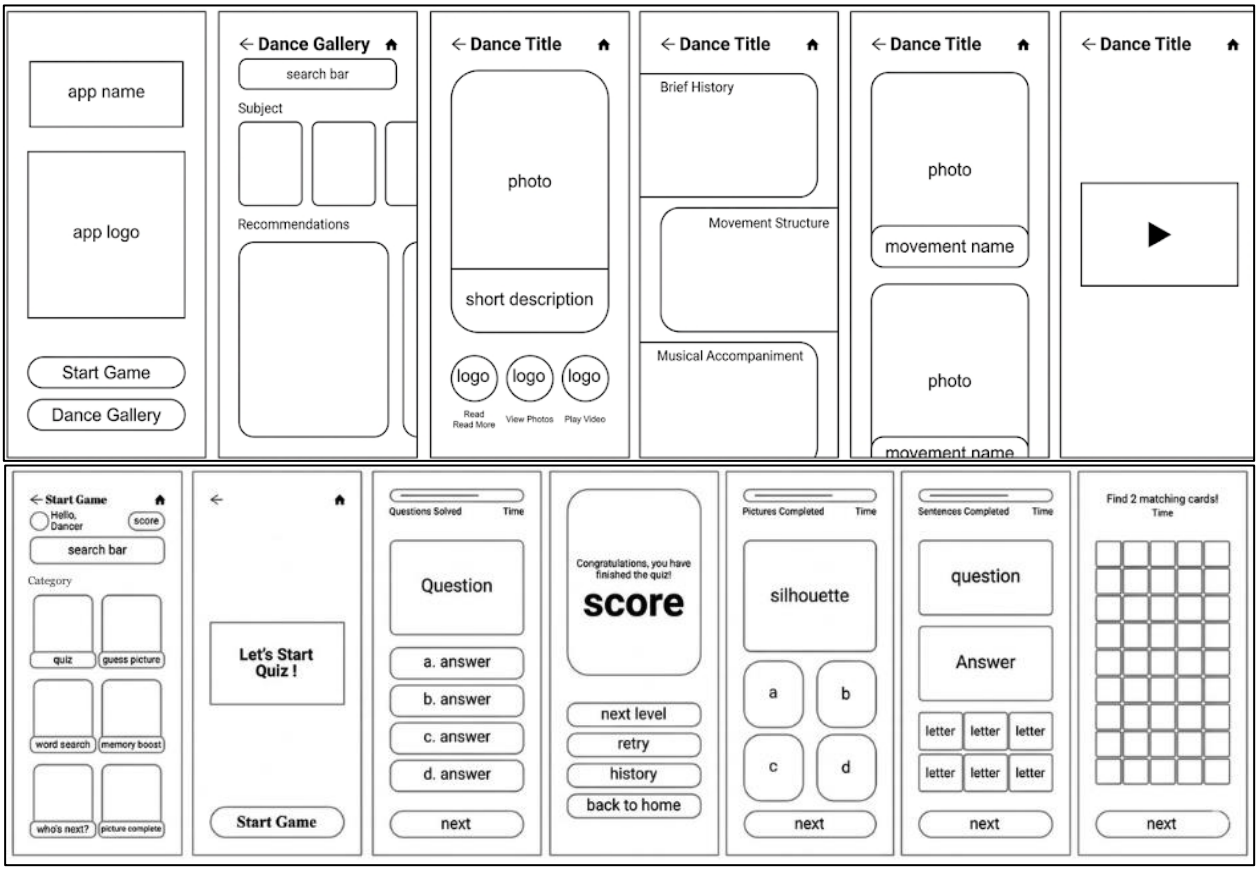

Figure 1. Storyboard for Learning Media Design

The validation phase included the participation of dance specialists, IT specialists, and linguists. The process of validation provided useful feedback concerning the appropriateness of the material, storyline, and interface design. Overall, the specialists found the design of the application to be representative of the requirements of Islamic madrasas; however, some changes had to be made in regard to language terms and dancing steps.

Media Expert Validation

Expert validation of the media examined ten categories regarding technical performance, aesthetics, and interactivity. Before modification, one of the weak points of the application's culture was the visual inconsistency of the application, as the color scheme and decorative features associated with Islam were used inconsistently. The gamification aspect of the application was overcrowded with unnecessary elements, including point counters, level indicators, and so on. This made it hard for students to find motivational feedback that should have been easy to find. There wasn't a clear way to move between the movement module and the gamification dashboard. This meant that students had to tap too many times to get to the learning and progress-monitoring functions that they needed to use over and over again during a session. The revision followed a single Islamic visual style guide, a consistent color palette, calligraphy border motifs, and Arabic typography that was used the same way on all screens to address each of these suggestions. We redesigned the gamification dashboard so that there is always a bottom navigation bar. This way, you can see your points, level status, and achievement badges from any screen without breaking the flow of learning. The navigation was set up so that the average tap depth needed to get to any content was lower. Figure 2 shows the differences in the media expert validation results before and after the revision.

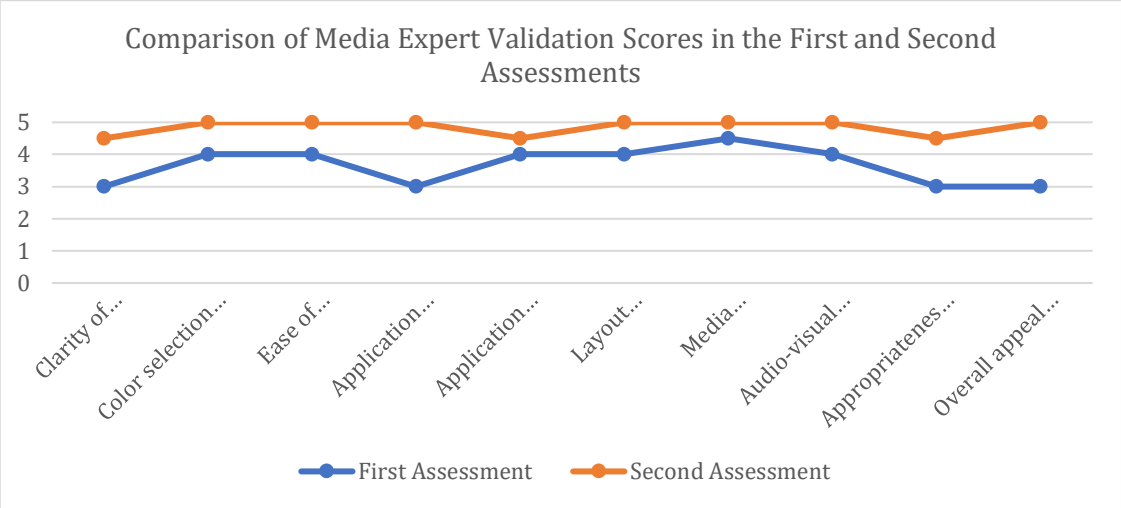

Figure 2. Comparison of Media Expert Validation Results Before and After Media Revision

Based on Figure 2, it can be concluded that the assessment score, which was initially relatively low, increased significantly after revision, so that all aspects reached the “highly feasible” category. This media could be introduced in the classroom as an educational innovation that is fascinating, readily available, and encourages the participation of the learners.

Material Expert Validation

The Material validation assessment concentrated on the degree of relevance of the content delivered by the application in relation to educational goals, accurate representation of the concepts, development of Islamic values, and creative ability among students. These validators pointed out the need for more detailed and comprehensive information, alignment with learning outcomes, appropriateness of the information, social learning, and how well the information fosters creativity among learners. After making the necessary changes in response to expert comments, the effectiveness of the assessment was greatly enhanced. In general, this learning resource on Islamic dance is extremely appropriate for learning situations. This application not only provides correct and useful information but also places emphasis on Islamic values, social learning, and an innovative approach to learning. Figure 3 shows a comparison of validation scores by experts.

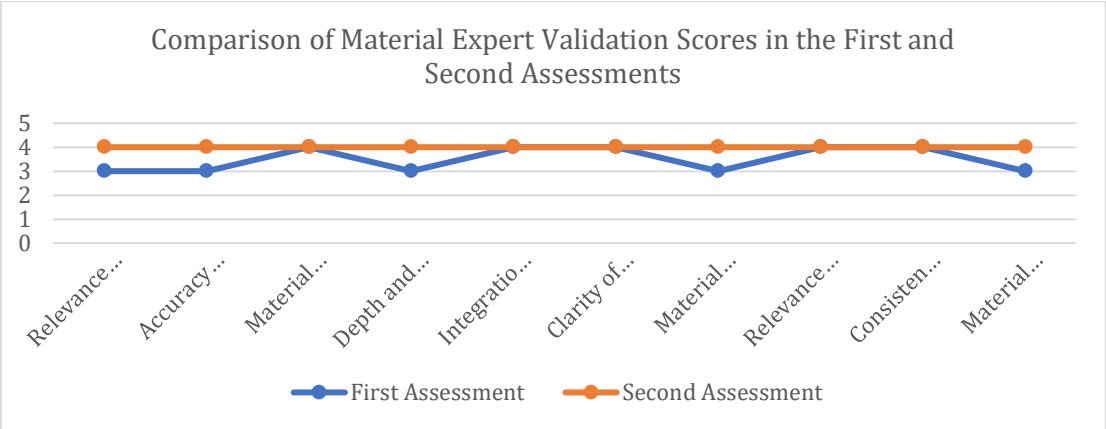

Figure 3. Comparison of Subject Material Validation Results Before and After Media Revision

As shown in Figure 3, validation recorded the most substantial improvement, with the mean score increasing from 3.75 to 4.95. This indicates that the concerns raised by the validators in the initial evaluation were effectively addressed, particularly in terms of instructional structure rather than content accuracy.

Language Expert Validation Results

The average rating of the language expert validation was 3.80 in the first trial, with the following two components being rated 3.00: accuracy of spelling (EYD/PUEBI) and uniformity in using terminology. Islamic dance terminology, which encompasses basic dance moves, formations, and counting, came out for the purpose of ensuring that the students would not come face-to-face with this terminology for the very first time. Revision entailed conducting an extensive review of the instructional materials according to the *Badan Pengembangan dan Pembinaan Bahasa* (2016) standards, standardization of all terminologies used in Islamic dance within the modules, and incorporation of the terminology glossary available on every movement page. Figure 4 depicts the pre- and post-validation scores of the language experts.

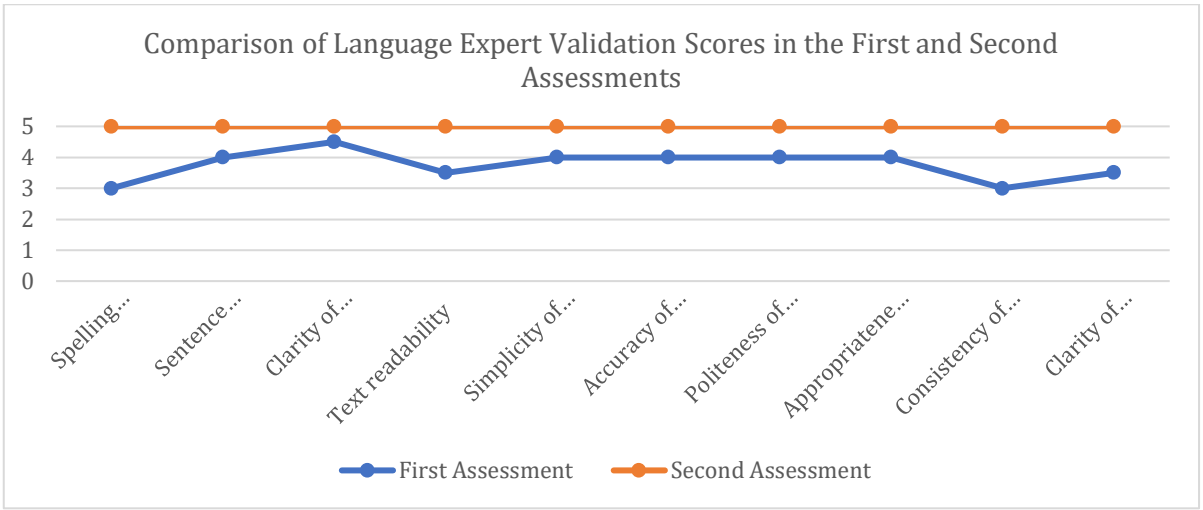

Figure 4. Comparison of Language Expert Validation Results Before and After Media Revision

The result illustrated in Figure 4 clearly depicts that each part of the validation domain was scored perfectly in this study. This suggests that all the linguistic problems were successfully resolved, and the language used in this process has been appropriately modified. That the two lowest-scoring aspects in the first round both achieved the highest scores after revision indicates that terminological inconsistencies, the more serious of the two weaknesses, have been fully

addressed, not merely superficially corrected. Table 4 explains the average scores of media, material, and language experts before and after the revision.

Table 4. Comparison of Test Results

Evaluation	Average First Test Score	Category	Average Score of Second Test	Category
Media Expert	3.60	Good	4.85	Very Good
Material Expert	3.75	Good	4.95	Very Good
Linguist	3.80	Good	5.0	Very Good

The final stage is research data processing, where all observations, interviews, FGDs, and expert validation are analyzed qualitatively. This analysis results in an Android-based Islamic dance learning media design that is ready for further testing on a limited scale. Figure 5 illustrates the Android-based Islamic dance learning media based on gamification.

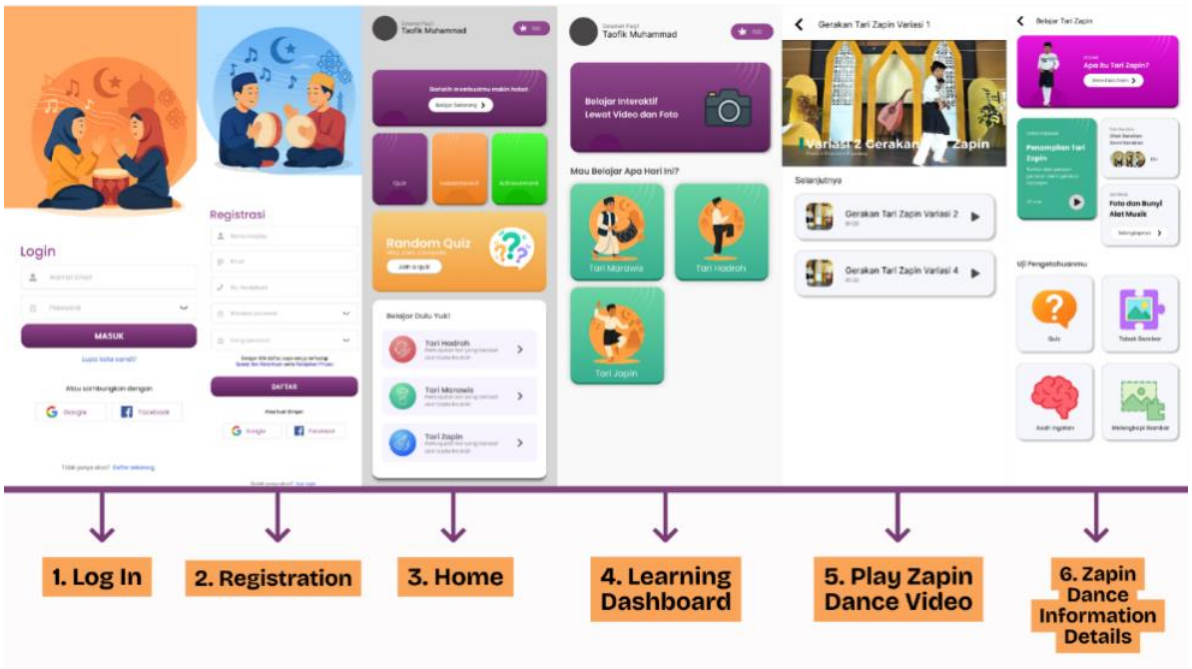

Figure 5. Android-Based Gamified Islamic Dance Learning Media

Discussion

A needs analysis conducted in three *Pesantren* confirmed that Islamic dance instruction operates under structural constraints that cannot be overcome by teachers' efforts without specialized media, using learning mechanisms that are entirely dependent on teacher presence, making them unrepeatable, non-extensible, and unavailable to students outside of scheduled sessions. Teachers reported an inability to provide supporting materials beyond live demonstrations, while students consistently identified the inability to independently review movement sequences as a major barrier to learning. The above-mentioned facts are supported by research conducted by Hastasari et al. (2022) and Krisdiyanto et al. (2019), indicating that systematic utilization of learning sources in various areas at *Pesantren* remains underdeveloped; their analysis has been applied in the domain of Islamic dance, which they did not consider in their research. Furthermore, another significant feature found by conducting a needs analysis includes a shortage of expert teachers of dance; thus, the problem does not lie in poor development of media but in the irreplaceability of rare experts. Anam et al. (2021) proved the effectiveness of the use of Android applications in the Islamic boarding school setting, hence proving the possibility of implementing the chosen tool. Nevertheless, their use pertained to the provision of textual information, where a lack of teachers did not play such a role. Thus, it can be concluded that the

needs analysis helped prove the necessity of creating a tool that could be used for teaching if expert teachers were unavailable.

These diagnoses informed the design phase of three architectural decisions based on specific theoretical criteria. First, multi-perspective video documentation of Islamic dancing techniques would be segmented into distinct modules that were independently accessible and organized according to three skill levels: *Mubtadi, Mutawassit*, and *Mutaqaddim*. This architectural decision reflects the operationalization of Bandura & Walters (1977) the attention stage in Social Learning Theory, where expert models are readily available and replicable at the learner's discretion, eliminating the episodic nature of demonstrations that the needs analysis revealed as a critical limitation. According to Schmidt & Wrisberg (2008) optimal motor learning involves distributed practice where learners revisit the same movements multiple times within the same session and reinforce their motor programs from one repetition to another. Secondly, each movement module will have a corresponding narrative explaining its philosophy and spirituality. This architectural decision is a direct response to Sauri et al. (2022) the discussion of the argument that Islamic dance at *Pesantren* serves as both a performance of aesthetics and a delivery of morals and spirituality. Information that presents the steps without any intrinsic significance produces an understanding that is easily duplicated yet culturally useless, making it inappropriate for educational environments where the spiritual nature of the steps cannot be separated from their educational function. Thirdly, the gamification layer consisted of the use of points awarded on completion of steps, quizzes that provided immediate feedback on particular components, and achievement badges for reaching Islamic cultural benchmarks. Traditional teaching methods in the context of dance classes in *Pesantren* rely on social processes such as the presence of teachers, observation by fellow students, and synchronization of the practice. However, this method is impossible with asynchronous digital media, and hence, gamification components take over the task. This aspect was completely ignored in previous literature on gamification within Indonesian education systems, where the application of gaming elements to cognitive and linguistic content made it unnecessary since there were no social replacement problems to address (Oktaviana et al., 2022; Suparmini et al., 2024; Srimuliyani 2023; Sari et al., 2025).

In round one, the score of 3.00 for spelling and term consistency revealed problems that have serious implications for motor learning for first-time learners of Islamic dance terminology. According to Schmidt & Wrisberg (2008) motor learning is contingent upon the creation of precise cognitive representations of movement schemes prior to their actual performance. Language inconsistencies would severely hinder the creation of these cognitive representations, rendering this problem more than just an editorial issue; instead, it is a necessary prerequisite for motor learning. An audit was conducted to bring all instructional materials in line with the *Badan Pengembangan dan Pembinaan Bahasa* (2016) guidelines, standardize the use of Islamic dance terminology throughout all units, and incorporate a glossary of terms that could be accessed from each movement interface. The score in round two, 5.00, reflected changes made based on recommendations and existing problems.

The expert validation findings provide a stark comparison between the current work and the existing literature in highlighting the unique contribution and limits of this research. The application of game-based curriculum design enhances teacher efficacy and learner acceptance towards ICT usage, but their approach relies on the teacher as the mediator. Given that *Pesantren* or *Pesantren* lack professional Islamic dancers as teachers, the implementation of such an approach through teachers would not be considered a key feasibility for this case since the app must operate independently in self-regulated learning – a factor overlooked in earlier research on gamification in Islamic art education. The validation proves that indeed, the app satisfies the experts' criteria of feasibility within all three quality factors in this independent implementation scenario.

One important implication drawn from the study is that for those *Pesantren* institutions that do not have specialized teachers in Islamic dance education, there are no standardized instruments by which their students can be taught through self-directed learning methods consistent with Islamic values. This app provides such tools for the first time in a validated form, directly addressing the scarcity constraint identified by the needs analysis as a fundamental barrier to Islamic dance education in these institutions. This study establishes design criteria for the cultural relevance of gamification elements to Islamic values, the integration of kinesthetic-spiritual

content, and the strengthening of skills modeled on the development of Islamic boarding school internships that can be applied to other Islamic performing arts, including *hadroh, qasidah*, and *Qur'an* recitation, which have similar instructional requirements and face the same teacher shortage constraints. Evidence of effectiveness is ultimately needed by this field, and this study produces a validated medium without which such evidence cannot be pursued responsibly.

LIMITATIONS

This study has limitations, such as the video-intensive content architecture creating a non-trivial connectivity dependency in *Pesantren* with limited internet infrastructure. Offline functionality includes text-based modules, but the multi-angle movement demonstrations that are the core instructional mechanism of the application require stable data access. Screen-based feedback cannot detect proprioceptive errors. Incorrect weight distribution, muscle tension, and postural deviations identified by physically present teachers through direct observation or tactile correction remain invisible to the current system. These two limitations together define the role of this application precisely: it is a high-quality teaching supplement whose application value is highest during self-study periods.

CONCLUSION

This research proved that the gamification-based learning media for Islamic dance using the social learning model is a significant breakthrough for education in *Pesantren* in the digital age. According to the findings of this study, the gamification-based media created is both technologically feasible, pedagogically sound, and culturally appropriate. This is based on validation by the media expert, subject matter expert, and language expert, who showed that the gamification-based learning media had indeed attained the standards required. This study shows that the integration of gamification into Islamic art learning can increase student motivation, engagement, and appreciation of art as part of religious values. The competitive, interactive, and visual elements offered by this application are an effective strategy to overcome the limitations of conventional methods that tend to be monotonous. This study combines Islamic art, gamification technology, and a social learning approach into a concrete and contextual learning medium. Further research is recommended to conduct field trials on a larger scale to quantitatively assess the application's impact on student learning outcomes, in terms of cognitive, affective, and psychomotor aspects. In addition, training modules for teachers and religious teachers need to be developed so that they can utilize this application optimally in the learning process and can also integrate augmented reality or virtual reality technology to enrich students' learning experiences.

AUTHOR CONTRIBUTIONS

ATL and JSM designed and developed this study. ATL, ASP, and MN conducted fieldwork, data collection, and analysis. TM developed the Android application and managed the technical implementation. ASP and MN contributed to the drafting of the manuscript. JSM provided supervision and critical review. All authors revised the final manuscript.

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REFERENCES

Adib, A. (2021). Metode pembelajaran kitab kuning di Pondok Pesantren. *Jurnal Mubtadiin*, *7*(01), 232–246.

Aloizou, V., Linardatou, S., Boloudakis, M., & Retalis, S. (2025). Integrating a movement-based learning platform as core curriculum tool in kindergarten classrooms. *British Journal of Educational Technology*, *56*(1), 339–365. https://doi.org/10.1111/bjet.13511

Anam, K., Mulasi, S., & Rohana, S. (2021). Efektifitas penggunaan media digital dalam proses belajar mengajar. *Genderang Asa: Journal of Primary Education*, *2*(2), 76–87. https://doi.org/10.47766/ga.v2i2.161

Badan Pengembangan dan Pembinaan Bahasa. (2016). *Pedoman umum ejaan bahasa Indonesia*. Kementerian Pendidikan dan Kebudayaan.

Bahij, M., & Anshory, M. (2023). Pesantren di tengah arus modernitas: Strategi pemeliharaan warisan islam di indonesia. *TSAQOFAH*, *4*, 879–894. https://doi.org/10.58578/tsaqofah.v4i2.2421

Bandura, A., & Walters, R. H. (1977). *Social learning theory* (Vol. 1, pp. 33-52). Englewood Cliffs, NJ: Prentice-hall.

Bellous, J. E. (2021). Spiritual care as the foundation for a child's religious education. *Religions*, *12*(11), 954. https://doi.org/10.3390/rel12110954

Borg, W. R., & Gall, M. D. (1984). Educational research: An introduction. *British Journal of Educational Studies*, *32*(3). https://doi.org/10.2307/3121583

Creswell, J. W., & Creswell, J. D. (2017). *Research design: Qualitative, quantitative, and mixed methods approach*. Sage publications.

Faqih, M. V. Al, Widiarni, A., Andini, N., Saregar, A., Sharov, S., & Faraj, B. M. (2021). Fisikawaii adventure: An effort to increase students' learning participation through gamification and virtual reality. *Online Learning in Educational Research*, *1*(1), 25–36. https://doi.org/10.58524/oler.v3i2.294

Faruq, A. K., Hepni, H., & Sujiwo, S. (2022). Technology and noble traditions in Pesantren. *Edukasi Islami: Jurnal Pendidikan Islam*, *11*(02). https://doi.org/10.30868/ei.v11i02.2385

Febriyani, F., Suherman, E., Noor, I. H., & A.s, D. F. P. (2024). Tradition in modern islamic education and the hermeneutics of education in the perspective of Buya Hamka. *Al-Misbah (Jurnal Islamic Studies)*, *12*(1), 62–82. https://doi.org/10.26555/almisbah.v12i1.10318

Firmansyah, D., & Saepuloh, D. (2022). Social learning theory: Cognitive and behavioral approaches. *Jurnal Ilmiah Pendidikan Holistik (JIPH)*, *1*(3), 297–324. https://doi.org/10.55927/jiph.v1i2.937

Galang, E. I. N. E., Bennett, E. M., Hickey, G. M., Baird, J., Harvey, B., & Sherren, K. (2025). Participatory scenario planning: A social learning approach to build systems thinking and trust for sustainable environmental governance. *Environmental Science & Policy*, *164*, 103997. https://doi.org/10.1016/j.envsci.2025.103997

Hanafi, Y., Taufiq, A., Saefi, M., Ikhsan, M. A., Diyana, T. N., Thoriquttyas, T., & Anam, F. K. (2021). The new identity of Indonesian Pesantren in the "new normal": The education leadership response to COVID-19. *Heliyon*, *7*(3). https://doi.org/10.1016/j.heliyon.2021.e06549

Hastasari, C., Setiawan, B., & Aw, S. (2022). Students' communication patterns of Pesantren: The case of Students in Muallimin Muhammadiyah Yogyakarta. *Heliyon*, *8*(1). https://doi.org/10.1016/j.heliyon.2022.e08824

Hosaini, H., Subaidi, S., Hamzah, M. Z., Simbolon, N. Y., & Sutiapermana, A. (2024). Tawheed-based pedagogy: Empowering Islamic education through community engagement and Pesantren tradition. *Journal Of Human and Education (JAHE)*, *4*(4), 353–360. https://doi.org/10.31004/jh.v4i4.1110

Krisdiyanto, G., Muflikha, M., Sahara, E. E., & Mahfud, C. (2019). Sistem pendidikan Pesantren dan tantangan modernitas. *Tarbawi: Jurnal Ilmu Pendidikan*, *15*(1), 11–21. https://doi.org/10.32939/tarbawi.v15i1.337

Mackey, M. (2022). Private readerly experiences of presence: Why they matter. *Journal of Literacy Research*, *54*(2), 137–157. https://doi.org/10.1177/1086296X221098068

Mainuddin, Ishomuddin, & Faridi. (2024). Sustainable Pesantren: Institutional reform in islamic education. *Jurnal Alwatzikhoebillah: Kajian Islam, Pendidikan, Ekonomi, Humaniora*, *10*(2), 427–438. https://doi.org/10.37567/alwatzikhoebillah.v10i2.2631

Manan, S. (2017). Pembinaan akhlak mulia melalui keteladanan dan pembiasaan. *Jurnal Pendidikan Agama Islam-Ta'lim*, *15*(1), 49–65.

Miles, M. B., Huberman, A. M., & Saldaña, J. (2014). *Qualitative data analysis*. Sage.

Oyebamiji, G. A., & Olutayo, G. O. (2025). A multimodal discourse analysis of the music video 'IBA.' *Multimodal Communication*, *14*(2), 137–160. https://doi.org/10.1515/mc-2024-0085

Oktaviana, D., Widya, P., & Diana, P. (2022). Analisis kebutuhan gamifikasi berbasis android pada pembelajaran bahasa Indonesia. In *Seminar Nasional SAGA* (Vol. 4, No. 4, p. 1).

Said, S. (2023). Peran teknologi digital sebagai media pembelajaran di era abad 21. *Jurnal PenKoMi: Kajian Pendidikan Dan Ekonomi*, *6*(2), 194–202.

Sari, I. M., Ghinatri, N., Saepuzaman, D., & Amsor, A. (2025). Gamification in learning newton's laws: enhancing students' problem-solving skills. *Jurnal Ilmiah Pendidikan Fisika Al-Biruni*, *14*(1), 21–31. https://doi.org/10.24042/jipfalbiruni.v14i1.24829

Sauri, S., Gunara, S., & Cipta, F. (2022). Establishing the identity of insan kamil generation through music learning activities in Pesantren. *Heliyon*, *8*(7). https://doi.org/10.1016/j.heliyon.2022.e09958

Schmidt, R. A., & Wrisberg, C. A. (2008). *Motor learning and performance: A situation-based learning approach*. Human kinetics.

Shahid, R., Shoker, M., Chu, L. M., Frehlick, R., Ward, H., & Pahwa, P. (2022). Impact of low health literacy on patients' health outcomes: A multicenter cohort study. *BMC Health Services Research*, *22*(1), 1148. https://doi.org/10.1186/s12913-022-08527-9

Shofiyah, R., Zuriah, R. A., & Harun, S. F. (2025). Meningkatkan kemampuan bahasa inggris santri melalui pembelajaran interaktif di musholla An-Nur, Gadingrejo Pasuruan. *Jurnal Kabar Masyarakat*, *3*(1), 285–292. https://doi.org/10.1016/j.heliyon.2022.e09958

Siregar, H. S., Nurhamzah, Munir, M., & Fikri, M. (2025). Enhancing Islamic education through technology integration: A study of teaching practices in Indonesia. *Jurnal Ilmiah Peuradeun*, *13*(2), 959–986. https://doi.org/10.26811/peuradeun.v13i2.1875

Son, H. (2025). The impact of movement-integrated instruction on physical literacy development in elementary students. *Education Sciences*, *15*(5). https://doi.org/10.3390/educsci15050545

Srimuliyani, S. (2023). Menggunakan teknik gamifikasi untuk meningkatkan pembelajaran dan keterlibatan siswa di kelas. *EDUCARE: Jurnal Pendidikan Dan Kesehatan*, *1*(1), 29–35. https://doi.org/10.70437/jedu.v1i1.2

Suparmini, K., Suwindia, I. G., & Winangun, I. M. A. (2024). Gamifikasi untuk meningkatkan motivasi belajar siswa di era digital. *Education and Social Sciences Review*, *5*(2), 145–148. https://doi.org/10.70437/jedu.v1i1.2

Utomo, F. T. S. (2023). Inovasi media pembelajaran interaktif untuk meningkatkan efektivitas pembelajaran era digital di sekolah dasar. *Pendas: Jurnal Ilmiah Pendidikan Dasar*, *8*(2), 3635–3645. https://doi.org/10.23969/jp.v8i2.10066

Wibowo, G. A., & Saliman. (2021). Gamification in online learning: A systematic review of engagement and learning outcomes in digital education. *Online Learning in Educational Research*, *5*(2), 351–367. https://doi.org/10.58524/oler.v5i2.733

Wulansari, O. D. E., Zaini, T. M., Bachry, B., & Nursiyanto, N. (2025). Augmented reality for 3D geometric shapes and nets combination for Android. *International Journal of Electronics and Communications Systems*, *5*(1), 69–79. https://doi.org/10.24042/ijecs.v5i1.27574

Zulfikar, M., Rahman, A., Hasyim, A. H., Haeril, & Faozi, F. (2022). Self-evaluation of physical education teacher. *Journal of Coaching and Sports Science*, *1*(2), 48–53. https://doi.org/10.58524/jcss.v1i2.131