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Integrating Kahoot to Improve Reading Skills through HOTS-Based and Religious Moderation-Oriented Materials

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ABSTRACT

This study designs Arabic reading materials that integrate Higher-Order Thinking Skills (HOTS) with principles of religious moderation to address the cognitive and moral demands of 21st-century education. An integrative pedagogical model employing Kahoot! was implemented to enhance learners' critical literacy, analytical reasoning, and intercultural awareness. Adopting a descriptive qualitative approach, data were obtained from 15 students through diagnostic assessments and perception surveys. Results revealed promising outcomes, with mean performance scores of 78.6 (range 73–83). Most participants (93.1%) rated the materials as "Highly Suitable" or "Suitable" for developing analytical and evaluative reading skills, while 91.4% agreed they effectively promoted tolerance and inclusivity. Additionally, 62.2% reported heightened motivation and engagement through the gamified environment. The integration of HOTS-oriented questions, multimedia resources, and value-laden texts strengthened both cognitive and affective learning dimensions. However, further enhancement is needed by incorporating synthesis and argumentation tasks and embedding moderation themes in more contextualized narratives. Future development should emphasize adaptive learning, cross-disciplinary integration, and formative feedback to foster autonomy and holistic growth in Arabic language education.

1. INTRODUCTION

In the era of globalization and accelerating information technology, critical and analytical thinking skills have become indispensable competencies for navigating the overwhelming flow of information. Higher Order Thinking Skills (HOTS) provide a comprehensive framework for cultivating deep, analytical, and reflective thinking, enabling individuals to process complex information effectively and meaningfully (Dewi et al., 2024). The integration of HOTS into teaching materials and daily life practices is widely recognized as a fundamental requirement for achieving educational success in the 21st century (Ariyana et al., 2018). As technological developments increasingly expose society to vast and often contradictory information, critical thinking becomes a vital capacity that allows students to make informed decisions through systematic reasoning rather than relying on emotion or superficial understanding.

HOTS is therefore positioned as an essential pedagogical solution for addressing these contemporary challenges. It extends beyond the mere comprehension of information to include the cultivation of cognitive awareness, intellectual independence, and moral reasoning key elements of a balanced and harmonious life. By integrating critical, analytical, synthetic, and evaluative dimensions of cognition, HOTS prepares learners to approach complex problems with intellectual precision and discernment (Erlina, 2018). Analytical thinking enables learners to deconstruct information, identify patterns, and connect seemingly unrelated ideas (Bayani et al., 2025), fostering their ability to perceive macro relationships, detect trends, and make data-based predictions. Likewise, synthesis skills facilitate the integration of information from multiple sources to produce new, original insights (Ichsan et al., 2019). Within an educational framework, the use of HOTS-based questions in reading materials encourages learners not merely to absorb knowledge but to question, analyze, and apply it across diverse contexts (Novita et al., 2023).

Reading comprehension, as a core component of literacy and learning, plays a crucial role in developing these higher-order cognitive abilities. Compelling reading enables the construction of meaning, the evaluation of arguments, and the formulation of independent judgments (Shendy, 2019; Firmansyah et al., 2024). It involves identifying main ideas, recognizing the author's reasoning, and understanding textual organization (Stewart et al., 2007). Learners with advanced analytical skills can assess the validity and reliability of textual information more effectively, thereby strengthening their critical literacy. Reading comprehension designed through HOTS-based frameworks further enhances learners' ability to evaluate the credibility and bias of information (Silalahi et al., 2022). Such engagement not only improves literacy but also reinforces critical thinking as a transversal skill applicable across disciplines (Andriyani & Saputra, 2020). Consequently, learners who master these competencies tend to perform better academically, participate more actively in discussions, and demonstrate greater creativity and problem-solving ability (Asfiah, 2021).

In contemporary, multicultural societies, the younger generation increasingly interacts with individuals from diverse religious and cultural backgrounds. This spiritual and cultural plurality is a defining characteristic of modern global civilization (Ardhy, 2024). Accordingly,

education must prepare students to understand, appreciate, and respect such diversity a principle that aligns with the concept of religious moderation. Embedding religious moderation into learning materials is a strategic way to foster tolerance, intercultural dialogue, and peaceful coexistence. Religious moderation promotes a balanced, non-extremist worldview, enabling individuals to coexist harmoniously with people of different faiths and beliefs (Hamdi et al., 2021). However, recent studies indicate a growing conservative turn among younger generations, reflecting a shift toward more rigid ideological tendencies (Sirry, 2023). This trend highlights the urgent need for innovative educational interventions that counter polarization by integrating cognitive development with value-based learning. Teaching materials must therefore not only cultivate higher-order thinking but also instill respect for pluralism and religious diversity.

Several efforts have been made to enhance students' critical reading skills across educational levels, from primary to tertiary institutions (Qomariyah & Bahrodin, 2024). For example, extensive reading approaches have been shown to improve learners' critical thinking and comprehension (Fergina et al., 2024). Similarly, Daris developed a critical reading literacy program through a comprehensive literacy partnership framework, while Hadianto (2022) demonstrated how structured learning interventions can strengthen scientific reasoning. Despite these contributions, the majority of existing research remains confined to practical literacy development, with few studies such as Dafit and Mustika (2021) addressing the integration of HOTS-based reading with value education. To date, studies exploring HOTS-based critical reading materials explicitly linked to religious moderation remain scarce, particularly within higher education contexts.

Addressing this research gap, integrating HOTS and religious moderation into Arabic teaching materials represents a timely and strategic response to the challenges of 21st-century education. As argued by Fahri and Zainuri (2019), developing students' cognitive capacities alongside intercultural awareness is essential to fostering peaceful coexistence in plural societies such as Indonesia. Embedding the principles of religious moderation within HOTS-oriented Arabic reading materials provides a dual pedagogical function: enhancing critical and analytical literacy while cultivating empathy, tolerance, and social harmony.

Recent works have highlighted various innovative approaches to Arabic language education, including technological integration and contextual pedagogy. Said and Ulwan (2023) examined the use of the Mumtaz Method textbook enhanced with interactive PowerPoint features, demonstrating how digital tools improve learner engagement and outcomes. Similarly, Syarifuddin et al. (2025) emphasized the importance of contextual learning in rhetoric textbooks, demonstrating that contextually grounded materials promote deeper comprehension and critical thinking. Complementing these perspectives, Yusuf et al. (2025) underscored the Arabic language's potential to cultivate tolerance and intercultural understanding in pesantren education. Together, these studies emphasize the importance of integrating interactive technology, contextual learning, and value-based education. This framework directly supports the development of HOTS-oriented Arabic reading materials infused with principles of religious moderation.

Building upon this framework, the present study seeks to develop Arabic reading instruction materials grounded in HOTS and infused with religious moderation principles, designed for students in the Arabic Language Education Study Program at UIN Syarif Hidayatullah Jakarta a pioneering institution in Arabic language scholarship in Indonesia. This research introduces an integrative pedagogical model that leverages interactive digital platforms, specifically Kahoot, to enhance learners' critical literacy, analytical reasoning, and intercultural sensitivity. Employing a descriptive qualitative methodology, the study engages students through diagnostic assessments and perception surveys to evaluate the effectiveness of these materials.

This study aims to examine the effectiveness of integrating the digital learning platform Kahoot into Arabic reading instruction designed on the principles of Higher Order Thinking Skills (HOTS) and religious moderation. Through this integration, the research seeks to determine how interactive, gamified learning can enhance students' critical and analytical reading abilities while simultaneously fostering balanced, tolerant, and inclusive perspectives in accordance with the values of religious moderation. By testing this approach within the Arabic Language Education Study Program at UIN Syarif Hidayatullah Jakarta, the study intends to provide empirical evidence on how technology-enhanced, value-oriented pedagogy can strengthen both cognitive depth and moral awareness contributing to the development of intellectually reflective and socially responsible learners capable of engaging constructively in pluralistic academic and cultural contexts.

2. METHODS

This study adopted a Research and Development (R&D) design integrating both qualitative and quantitative approaches to ensure comprehensive validation of the developed instructional product. As Song (2023) explains, R&D inherently combines qualitative inquiry focusing on contextual and pedagogical needs with quantitative measurement to verify the effectiveness of the resulting innovation. Within this framework, qualitative methods were employed to explore students' and lecturers' needs for Arabic reading materials that integrate Higher-Order Thinking Skills (HOTS) and religious moderation values. At the same time, quantitative procedures were used to assess learning outcomes and the material's feasibility (Obeidat et al., 1987).

Conceptual Framework: R&D and the ADDIE Model

Educational R&D is an iterative process for developing and validating instructional materials that are theoretically grounded, pedagogically sound, and practically applicable. This study employed the ADDIE model comprising Analysis, Design, Development, Implementation, and Evaluation as its guiding framework. The model was selected for its systematic and cyclical nature, which allows each stage to inform the next through continuous revision, ensuring both validity and instructional coherence. The goal of this process was to produce Arabic reading instruction materials that cultivate critical literacy and intercultural understanding through HOTS-oriented content and the integration of religious moderation principles.

Procedural Implementation

Analysis: A Needs analysis was carried out through diagnostic surveys, interviews, and document reviews involving students and lecturers in the Arabic Language Education Study Program at UIN Syarif Hidayatullah Jakarta. This phase identified learners' comprehension challenges, their exposure to HOTS-based learning, and their perceptions of religious moderation in education.

Design: Learning objectives, content scope, and digital delivery strategies were formulated. The design integrated interactive, gamified components via Kahoot, a platform that enhances motivation and cognitive engagement.

Development: Draft instructional materials were developed by embedding HOTS-based reading passages and reflective prompts on religious moderation. Expert validators three for content and language, three for design, and three for media reviewed the materials for accuracy, relevance, and pedagogical soundness.

Implementation: The validated materials were tested in a pilot study involving 15 undergraduate students. Instructional sessions employed Kahoot as a digital assessment tool to measure critical and analytical comprehension while maintaining learner engagement.

Evaluation: Both qualitative and quantitative data were collected to assess the feasibility, practicality, and effectiveness of the developed materials.

Data Collection and Analysis

Data collection included interviews, questionnaires, and documentation review. The feasibility analysis adopted a mixed-method design, combining quantitative validation scores from expert evaluators with qualitative feedback obtained from teacher and student responses. Quantitative data were analyzed descriptively using percentage scores and mean values to assess feasibility and practicality. Interpretation followed de Winter and Dodou's (2010) Likert-scale-based criteria:

Table 1. Likert Scale-Based Eligibility Criteria

Criteria	Percentage Range (%)	Value Scale	Interpretation
Very Eligible	85 - 100	5	The test is very adequate and effective
Eligible	70 - 84.99	4	The test is adequate, but some minor improvements are needed
Quite Eligible	55 - 69.99	3	The test is adequate but needs some significant improvements
Less Eligible	40 - 54.99	2	The test is inadequate and needs major revision
Not Eligible	0 - 39.99	1	The test is inadequate, not suitable for use

The following is a table related to the practicality test criteria based on the average score, criteria, and information based on the Likert scale:

Table 2. Practicality Test Criteria Based on Likert Scale-Based Scores, Criteria, and Information

Average Score	Criteria	Information
4.21 - 5.00	Very Practical	It is very easy to use and efficient, and needs no further improvements.
3.41 - 4.20	Practical	Easy to use but may need minor improvements.
2.61 - 3.40	Quite Practical	It is usable but needs some significant improvements.
1.81 - 2.60	Less Practical	It is not easy to use and requires significant revisions to be usable.
1.00 - 1.80	Not Practical	It is not worth using because it is very difficult or inefficient.

Both testing procedures generated quantitative data. The feasibility analysis was conducted by calculating percentage scores derived from expert validators' evaluations and students' questionnaire responses. After the instructional design product was developed, a practicality test was conducted to assess its pedagogical effectiveness among students in the Arabic Language Education program. The product obtained a “Highly Feasible” rating ($\geq 85\%$) from expert reviewers, indicating intense theoretical rigor and pedagogical coherence. This outcome was further substantiated by the practicality test, which produced an average score of 78.6 from student respondents classified as “Practical.” Collectively, these results demonstrate that the developed instructional product is not only conceptually robust and pedagogically sound but also highly accessible and practical for real-world classroom implementation.

3. RESULTS AND DISCUSSION

3.1 Results

Product development in this study is based on a previously established model, which serves as a guide in developing a systematic framework. During this stage, the instructional design process follows five fundamental phases, namely analysis, design, development, implementation, and evaluation, which collectively form the systematic framework for developing educational materials, as shown in the following illustration:



Figure 1. Addie Model Development Stages

Analysis Stages

This stage of analysis encompasses three major dimensions: learning needs, learner characteristics, and curriculum content. The needs analysis aims to determine the most relevant instructional materials and pedagogical approaches to strengthen students' higher-order thinking skills (HOTS) in reading. This analysis includes a study of students' needs in developing analytical, evaluative, and creative skills through reading that promotes religious moderation values. The goal is to ensure that teaching materials meet the demands of high-level thinking while fostering tolerance and diversity.

Second, characteristic analysis. This analysis aims to identify the characteristics of the teaching materials to be developed, including e-modules that support HOTS-based reading skills and incorporate religious moderation values. The module is designed to be interactive, support multimedia elements, and be easily accessible via digital devices to meet modern students' needs. With this approach, teaching materials can help students understand texts profoundly and critically while applying the values of moderation in everyday life.

Third, curriculum analysis examines the curriculum in force at the research location to determine whether reading skills have become the primary focus and whether there is room to integrate HOTS and religious moderation values. The ideal curriculum includes the development of language skills; listening, speaking, writing, and reading with an emphasis on critical thinking. If the curriculum already includes reading skills, e-modules can be developed in depth, with a structured approach to improve learning quality.

Table 3. Acquisition of curriculum needs, characteristics, and analysis

Aspects	Ideal Conditions	Factual Conditions	Needs
Needs	Teaching materials that integrate HOTS-based reading skills and religious moderation.	The teaching materials are still conventional and do not emphasize HOTS values and moderation.	Learning resources designed to foster the development of students' critical, analytical, and creative thinking skills through reading texts that contain the values of religious moderation.
	Interactive teaching methods oriented towards developing critical reading skills.	The learning method is more dominant in memorization and less on student interaction with the text.	A method guide that supports critical reading activities, such as text discussion, content analysis, and argument-based conclusion-making.
Characteristics	Interactive teaching materials that utilize digital technology, such as e-modules or applications.	Teaching materials tend to be print-based, with limited access to interactive digital media.	The development of digital e-modules with multimedia features is easily accessible through advances in educational technology.
	Reading materials containing moderation values, such as tolerance, justice, and diversity.	Moderation values have not been explicitly included in teaching materials.	Preparation of reading texts that instill an understanding of religious moderation in the context of students' daily lives.
Curriculum Analysis	The curriculum integrates HOTS-based critical reading skills at all levels of learning.	The curriculum has not provided sufficient opportunities to develop HOTS-based reading skills.	Adjust the curriculum to include learning objectives focused on mastering HOTS and understanding religious moderation.
	Competency-based learning that supports reading skills as part of developing critical thinking skills.	Reading learning competencies are still predominantly focused on literal understanding rather than on analytical understanding.	Improving reading learning competencies by emphasizing mastery of analysis, evaluation, and synthesis of reading texts.

To produce products with the objectives of developing reading skill teaching materials based on higher-order thinking Skills (HOTS) and religious moderation, initial

observations are needed to analyze needs and ensure that the product is relevant and practical for Arabic language learning. Several main steps must be considered, including needs analysis, student characteristics, supporting facilities and infrastructure, and alignment with the applicable curriculum. The needs analysis aims to avoid mismatches between the materials and students' needs and ensure relevance to the existing curriculum.

In addition, analyzing student characteristics is essential for educators to recognize students' abilities and learning tendencies in the context of reading skill development. This analysis aims to formulate learning objectives based on students' ability levels and develop materials that facilitate the development of reading skills with a HOTS approach, which encourages students to think critically, analytically, and creatively.

Given students' characteristics, the developed Arabic textbooks are expected to serve as interactive learning media that integrate multimedia, such as video, audio, and animation. This approach can create a more enjoyable and dynamic learning atmosphere. In addition, this textbook must also integrate the principles of religious moderation, which teach students to develop a tolerant, open attitude and respect for diversity in the context of Arabic language learning.

Finally, the curriculum analysis must align with the curriculum implemented at UIN Jakarta, which emphasizes the development of HOTS-based reading skills and religious moderation. Considering this curriculum, the Arabic language textbooks developed are expected to increase student motivation and learning outcomes and ensure that the learning implemented aligns with government policies in strengthening character education and tolerance.

Product Design Stages

During the design phase, several key activities are carried out, including determining the organization and sequence of the Arabic-language textbook's content. The instructional materials are sourced from multiple references, including existing Arabic textbooks, printed learning resources, student worksheets, and other supplementary materials that support the textbook development process. These materials are then carefully selected and adapted to align with the planned learning objectives, emphasizing the enhancement of higher-order thinking skills (HOTS) in reading and the integration of religious moderation principles.

The second step involves determining the design framework of the developed product. Its specifications are tailored to meet learners' needs, consider the accessibility of learning resources, and align with pedagogical orientations that promote students' critical, analytical, and creative thinking abilities in comprehending Arabic texts.

Third, the researchers designed an Arabic-language learning textbook using structured, easy-to-understand organizational techniques. In this step, the researchers also determined the appropriate presentation method to optimize the learning process, using selected printed materials and designing activities that develop students' high-level thinking skills and promote the values of religious moderation.

Experts evaluated the product after completing the Arabic-language textbook design, involving three validators. The trial process conducted by these expert validators aimed to assess the product's feasibility and suitability before it was applied in a student trial.



Figure 2. Textbook Design

Following the development of the textbook design, an evaluation process is conducted by a panel of validators comprising subject matter experts, media specialists, and professionals in Arabic language e-module design, as outlined below:

Subject Matter Expert Validation

The evaluation by three material experts employed a set of indicators encompassing the scientific validity and feasibility of the material, the organization and presentation of content, learner involvement, language accuracy, and the clarity of material explanations. Based on these indicators, the experts assigned a cumulative score of 132 out of 10 items, corresponding to 88%, and categorized it as Very Appropriate. The assessment summary is presented in the diagram below.

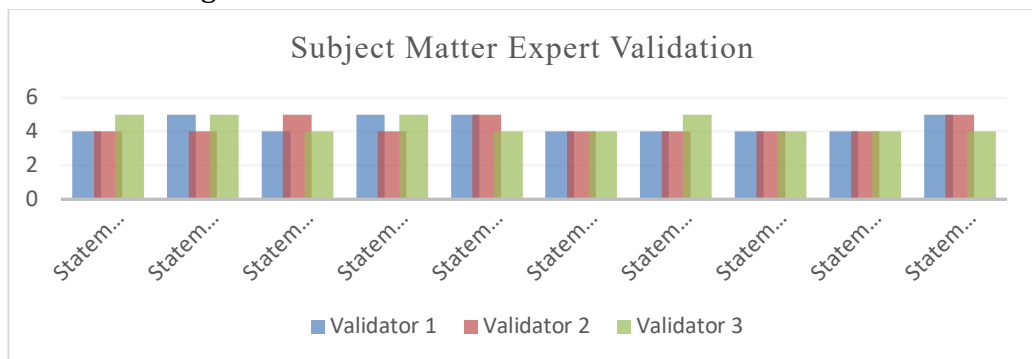


Figure 3. Material Expert Validation Results Diagram

Media Expert Validation

The evaluation conducted by the media experts encompassed indicators such as display aesthetics, font and writing consistency, and the media's interactivity level. Based on the analysis, a total score of 137 was obtained, corresponding to 91.33%, and the classification is Very Appropriate. The distribution of the assessment data from the media

expert validation is shown in the diagram below.

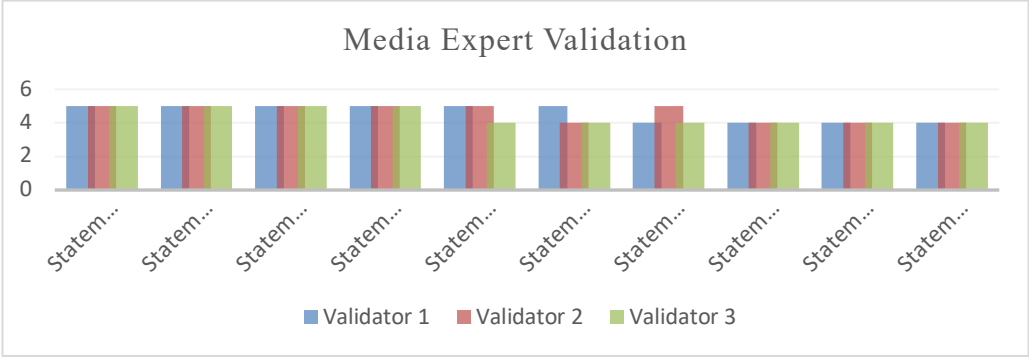


Figure 4. Media Expert Validation Results Diagram

Design Expert Validation

The assessment conducted by the design validation team covered various dimensions, including the precision of learning objectives and competencies, the alignment of instructional strategies, the technical soundness of the product design, the effectiveness of its use in both online and offline contexts, and the aesthetic quality and relevance of the design. The design experts provided a cumulative score of 131, corresponding to 87.33%, and classified the product as Very Appropriate. A detailed summary of these findings is presented in the following diagram.

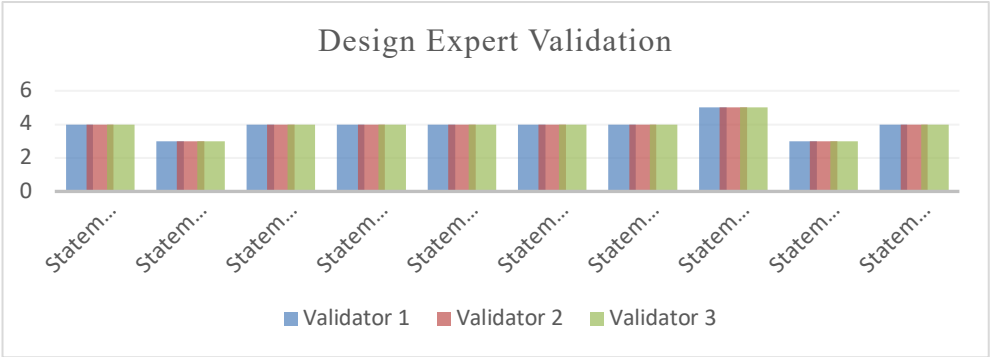


Figure 5. Design Expert Validation Results Diagram

Digital media increasingly dominate the world of education, including in reading instruction that aims to develop high-level thinking skills (HOTS) and moderate thinking. An effective learning media in this context is Kahoot, an interactive, game-based learning platform designed to enhance student engagement and motivation by using quizzes to increase student participation. Kahoot enables fun yet meaningful learning, increasing interaction through games and competitions. This media is relevant to learning reading skills because it encourages students to think critically and creatively in their responses to the information they read.

Using Kahoot to develop reading skills can improve high-level thinking skills (HOTS) because this media facilitates students in testing their understanding of the text they have read interactively. The quizzes presented in Kahoot test memory and encourage students

to think critically in choosing the most appropriate answer. Each question requires an in-depth analysis of the text, and often more than one answer may be considered correct, so students are trained to consider various points of view in solving problems..

In addition, the use of Kahoot. Promotes the development of moderate thinking skills, enabling students to evaluate diverse viewpoints critically and to incorporate contextual understanding into their decision-making processes. In the context of learning reading skills, Kahoot allows students to reflect on the text read by considering various interpretations and possible answers. Quizzes with varied questions will encourage students to think more openly, explore different perspectives, and recognize that there may be more than one way to understand the text.

Kahoot is essential in developing students' reading skills, especially in improving high-level and moderate thinking skills. Using Kahoot in learning not only makes the learning process more fun but also helps students hone their cognitive skills. By integrating Kahoot into reading instruction, educators can facilitate the development of learners' critical, creative, and moderate thinking skills while creating a dynamic, interactive classroom experience.

Effectiveness Test of Kahoot Usage in the Development Stage

During the third phase of development, the study was initiated through a small-group trial involving 15 students. This preliminary testing was conducted before the large-scale implementation of the Arabic language textbook design. The evaluation criteria included measures of effectiveness, visual and conceptual appeal, and student engagement with the product. A summary of the assessment findings is presented in the table below.

Table 4. Obtaining Small Group Test Student Samples

No.	Student Score	Total Score
1	Student 1	77
2	Student 2	74
3	Student 3	82
4	Student 4	73
5	Student 5	76
6	Student 6	74
7	Student 7	81
8	Student 8	78
9	Student 9	80
10	Student 10	78
11	Student 11	83
12	Student 12	76
13	Student 13	79
14	Student 14	75
15	Student 15	81

Based on assessment data from 15 students on the tested textbook, most students gave a relatively high rating. The total student scores ranged from 73 to 83, with most scoring between 74 and 83. These results indicate that most students found the tested e-module compelling and enjoyable. The average score was 78.6, indicating that the textbook positively impacted students' reading skills.

Most students scored above 75, indicating that the textbook engaged students and provided a good learning experience. Five students scored between 81 and 83, indicating a higher level of satisfaction and effectiveness with the product. These students tended to feel a positive impact from using the textbook regarding content and presentation. Meanwhile, several students gave slightly lower scores, ranging from 73 to 74, but this figure did not reduce the overall assessment, which still showed a positive response from most students.

It is important to note that the indicators assessed in this study include effectiveness, attractiveness, and student interest in the product. With an average score of 78.6, this textbook successfully engages students and provides a fun, valuable learning experience. Although there is variation in the scores, there is no significant difference between most students, indicating consistency in the product assessment. Lower scores in some students could be due to individual factors, such as different preferences or learning needs.

Implementation Stage

During this phase, a large-group trial was conducted to assess the implementation of HOTS-oriented reading materials integrated with religious moderation principles using Kahoot at the university level. The study engaged 140 students, and their responses were measured using a five-point effectiveness scale: (1) Very Effective, (2) Effective, (3) Moderately Effective, (4) Less Effective, and (5) Ineffective. The summary results of this assessment are presented in the table below.

Table 5. Percentage of Student Answers on the Effectiveness of Textbooks

No	Questions	Student Answers				
		TL	KL	CL	L	SL
1	The material contained in the reading skills textbook is contextually appropriate and structured to facilitate students' comprehension and engagement.	0%	0%	9%	49.7%	41.3%
2	The design of the reading skills textbook material is arranged systematically and is easy to display	0%	0%	11.8%	31.3%	56.9%
3	The instructional explanations and practice activities are	0%	0%	13.6%	64.6%	21.8%

	presented clearly and comprehensively, enabling students to grasp the material effectively.					
4	The comprehensive presentation of the material enhances students' motivation and fosters greater enthusiasm for the learning process.	0%	0%	10.3%	48.9%	40.8%
5	The choices of font style, color composition, visual animation, and imagery are appropriately aligned with the instructional content, thereby enhancing the material's coherence and visual appeal.	0%	0%	7.7%	42.1%	50.2%
6	The linguistic clarity and appropriate timing in the presentation of the material enhance students' accessibility to and comprehension of the learning content.	0%	0%	7.3%	34.5%	58.2%
7	The material in the reading skills textbook is designed to foster learners' critical thinking competencies.	0%	0%	6.9%	47.4%	45.7%
8	The content of the textbook material can improve the ability to moderate	0%	0%	8.6%	51.6%	39.8%
9	The content of the material presented in the reading skills textbook using Kahoot provides a lot of learning assistance	0%	0%	12.8%	25%	62.2%
10	The material incorporated into the developed reading skills textbook serves as a motivating factor, increasing learners' attraction and enthusiasm for learning.	0%	0%	6.2%	39.8%	54%
11	The product resulting from the development of the reading skills textbook demonstrates a positive influence on students' learning experiences and facilitates a more effective instructional process.	0%	0%	8.8%	49.2%	42%

Based on the data presented, most students responded positively to Kahoot's effectiveness in enhancing their enthusiasm for learning, critical thinking, and a moderate approach to religious studies. While some students provided lower ratings, the overall results indicate that Kahoot significantly impacted learning.

In the first question regarding material comprehension, 49.7% of students rated it as "Decent" (L), and 41.3% rated it as "Very Decent" (SL). These results suggest that the Kahoot-integrated reading skills textbook is reasonably practical in presenting materials that are accessible and easy to understand. However, 9% of students rated it "Quite Decent" (CL), indicating that a small proportion experienced some difficulty in grasping the content. This aspect could be improved by presenting the material more clearly and in a more structured manner.

Regarding material design (second question), the majority of students (56.9%) rated it as "Very Decent" (SL), while 31.3% selected "Decent" (L). A systematic, visually appealing design is crucial for capturing students' interest, particularly in technology-based learning environments. These findings suggest that Kahoot provides an engaging, well-organized learning experience; however, further optimization may be needed to ensure accessibility for all students.

Learning motivation was measured in the fourth question, where 40.8% of students rated Kahoot as "Very Appropriate" (SL) and 48.9% as "Appropriate" (L). These responses demonstrate that Kahoot successfully enhances students' enthusiasm for learning. However, 10.3% of students provided a lower rating, highlighting the need for additional strategies to sustain motivation further. The gamified elements of Kahoot have proven effective at fostering engagement, particularly in reading comprehension, which requires active participation and sustained attention.

Kahoot also yielded positive results in terms of critical thinking and religious moderation. In the seventh question, which assessed improvements in critical thinking, 45.7% of students rated it as "Very Appropriate" (SL) and 47.4% as "Appropriate" (L). These findings suggest that Kahoot effectively stimulates higher-order thinking skills, though 6.9% of students found it less beneficial.

Similarly, in the eighth question, which evaluated the development of moderate attitudes, 39.8% of students believed that the material contributed to fostering moderation, while 51.6% selected "Appropriate" (L). Although these results highlight Kahoot's effectiveness in promoting religious moderation, its impact could be further enhanced by explicitly integrating additional content on religious moderation.

Attractiveness and learning support also received highly positive responses. In the ninth question, 62.2% of students rated Kahoot as "Very Appropriate" (SL), indicating that the platform significantly aided the learning process by making it more interactive and enjoyable. In the tenth question, 54% of students found the material engaging, which contributed to greater student involvement and ultimately improved learning outcomes.

Evaluation Stage

This evaluation stage assesses key aspects, including material comprehension, design, learning motivation, development of critical thinking, and religious moderation. Each aspect was measured using a Likert scale to assess the extent to which Kahoot enhances student learning quality.

In the first evaluation stage, related to material comprehension, the data revealed that most students (49.7%) rated the material in the reading skills textbook as "Appropriate". In comparison, 41.3% rated it as "Very Appropriate". These results indicate that Kahoot is an effective tool for helping students understand the material. However, 9% of students reported difficulties grasping the content, suggesting that further refinement of material presentation and clarity should be a focus in future improvements.

Regarding material design, 56.9% of students rated it "Very Appropriate" and 31.3% rated it "Appropriate". These findings highlight that the systematic structure and visually clear textbook presentation significantly contribute to effective learning. Nevertheless, efforts to enhance accessibility and optimize the arrangement of materials can accommodate students with diverse backgrounds and learning needs.

The evaluation of learning motivation showed that 40.8% of students felt the material greatly motivated them, while 48.9% rated it as "Appropriate" in enhancing their enthusiasm for learning. This suggests that Kahoot effectively increases student engagement through its interactive and gamified approach. However, 10.3% of students provided lower ratings, indicating the need for further improvements to maximize the motivational impact of the learning process.

In terms of critical thinking skills and religious moderation, the results were highly positive. 45.7% of students reported that the material delivered through Kahoot enhanced their critical thinking abilities, while 47.4% rated it as "Appropriate". Similarly, 39.8% of students felt the material helped them develop a moderate perspective on religion. These findings demonstrate Kahoot's potential to foster higher-order thinking and balanced religious attitudes. However, some students did not fully appreciate these benefits, suggesting that enriching the content through deeper discussions could improve its effectiveness.

Evaluating learning assistance and Kahoot's appeal also yielded strongly positive responses. 62.2% of students rated Kahoot's learning assistance as "Very Adequate," while 54% found the material highly engaging. These results confirm that Kahoot effectively captures students' interest, enhances their understanding, and encourages active learning.

3.2 Discussion

Integrating Kahoot as an instructional medium has yielded substantial improvements in students' critical thinking skills and fostered the development of moderate, balanced attitudes. Through its interactive and game-based format, Kahoot has demonstrably enhanced the overall quality of learning across these two essential

domains.

Regarding critical thinking skills (Question 7), 45.7% of respondents rated the materials as “*Very Adequate*” (SL), while 47.4% selected “*Adequate*” (L), suggesting that most students perceived the Kahoot-based Arabic reading textbook as highly effective in stimulating analytical and evaluative thinking. The interactive quizzes and reflective discussions encouraged students to approach questions from multiple perspectives, construct reasoned arguments, and strengthen their inferential reasoning. Nevertheless, 6.9% of students rated the materials as “*Quite Adequate*” (CL), indicating that a small proportion found the activities insufficiently challenging. To address this, future iterations could include more complex, open-ended prompts and advanced analytical tasks that encourage deeper textual interpretation and higher-order reasoning.

In the domain of religious moderation (Question 8), 39.8% of students rated the materials as “*Very Appropriate*” (SL), and 51.6% as “*Appropriate*” (L). These findings underscore that the Kahoot-based textbook effectively heightened students’ awareness of religious moderation and nurtured tolerant attitudes. The platform’s dynamic and inclusive environment fostered openness to diverse viewpoints—an essential quality for cultivating balanced, pluralistic perspectives. However, 8.6% of students rated this aspect as “*Quite Adequate*” (CL), implying partial comprehension or limited exposure to the full spectrum of religious moderation principles. Future development should therefore reinforce key values such as tolerance, mutual respect, and anti-extremism by incorporating case studies, contextual dialogues, and real-world applications that anchor these values in authentic learning experiences.

A significant strength of Kahoot. Lies in its ability to offer real-time, practical learning support. In Question 9, 62.2% of respondents rated its learning assistance as “*Very Adequate*” (SL), indicating that students felt meaningfully supported through gamified, interactive engagement. Kahoot’s immediate feedback loop fosters self-reflection, continuous improvement, and sustained comprehension (Nurbayan & Sanusi, 2025). This iterative feedback process not only enhances reading proficiency but also reinforces students’ critical reasoning and moderate thinking dispositions.

The integration of Kahoot into HOTS-based Arabic reading instruction marks a pedagogical shift from traditional rote learning toward a dynamic, learner-centered paradigm. The findings reveal that students not only responded positively to the gamified experience but also demonstrated measurable gains in critical reasoning and awareness of religious moderation. These outcomes are congruent with the theoretical tenets of Higher Order Thinking Skills (HOTS), which emphasize analysis, synthesis, and evaluation as central cognitive processes (Dewi et al., 2024; Ichsan et al., 2019).

From a gamification perspective, Kahoot's interactive affordances such as immediate feedback, competition, and visual stimulation significantly enhanced learner motivation and engagement. This aligns with Göksün and Gürsoy's (2019) assertion that game-based learning transforms passive knowledge absorption into active cognitive participation. The high percentage of students rating the materials as “*Very Appropriate*”

in fostering critical thinking (45.7%) and religious moderation (39.8%) further validates the potential of gamified learning when strategically aligned with HOTS principles to catalyze deeper intellectual engagement.

Moreover, the study's findings resonate with the principles of critical pedagogy, which advocate for transformative education that empowers learners to question, reflect, and act upon social realities. By embedding religious moderation themes into reading materials, this instructional design transcended mere cognitive learning and entered the moral-ethical domain, promoting intercultural dialogue and ethical reasoning hallmarks of critical pedagogy (Fahri & Zainuri, 2019). Students were not merely passive recipients of information; they were active interpreters, critically engaging with texts, evaluating diverse perspectives, and internalizing values such as tolerance, empathy, and pluralism.

Despite these promising results, areas for refinement remain. Approximately 6.9% of students rated the critical thinking dimension as only *"Quite Adequate,"* and 8.6% expressed similar reservations regarding religious moderation. These findings suggest that, while the materials are conceptually sound, they could benefit from greater depth and greater contextual diversity. Future versions should integrate argumentation exercises, problem-based scenarios, and reflective writing tasks that require synthesis and evaluation, thereby deepening students' analytical and ethical reasoning capacities.

The platform's high engagement level also emerged as a critical factor in sustaining student motivation. In Question 10, 54% of respondents rated Kahoot's overall appeal as *"Very Appropriate"* (SL), reflecting the platform's effectiveness in maintaining learner interest and enthusiasm. Engagement of this kind is vital for cultivating both critical and moderate thinking, as it promotes active participation, perspective-taking, and critical analysis (Rojabi et al., 2022). The gamified, interactive design of the instructional materials thus enhanced students' receptivity to complex concepts, including those related to religious moderation.

Overall, this study reinforces the synergistic potential of HOTS, gamification, and critical pedagogy within Arabic language education. The integration of Kahoot as a digital learning tool has demonstrably enhanced students' analytical reasoning, evaluative judgment, and intercultural sensitivity key competencies within the HOTS framework.

The study offers meaningful pedagogical insights for Arabic language instruction by demonstrating how integrating Kahoot into HOTS-based reading activities can enhance both cognitive and moral dimensions of learning. This approach transforms conventional reading practice into an interactive, learner-centered process that cultivates analytical reasoning, reflective thinking, and intercultural awareness.

By aligning digital gamification with Higher Order Thinking Skills and the principles of religious moderation, educators can design lessons that simultaneously strengthen critical literacy and foster tolerance, empathy, and ethical judgment. The findings also suggest that Kahoot provides an effective medium for formative assessment allowing teachers to monitor comprehension, stimulate engagement, and adapt instruction in real time.

Ultimately, this pedagogical model promotes a holistic form of Arabic language learning that integrates intellectual depth, technological innovation, and moral awareness empowering students to become thoughtful, socially responsible participants in pluralistic societies.

4. CONCLUSION

This study examines the use of Kahoot media in HOTS-based reading skills and religious moderation textbooks, which have proven effective in improving students' critical thinking skills and moderate attitudes. Learning becomes more interactive and fun through Kahoot, motivating students to participate actively. The gamification elements offered by Kahoot help students understand the material more engagingly, while the questions presented can trigger critical and reflective thinking. The positive responses of most students indicate this approach's success in increasing motivation and engagement in learning. Although the results are positive, there are several shortcomings and limitations, such as a lack of in-depth understanding of some students regarding religious moderation material and the inability to deliver certain types of material in a quiz format fully. This study is limited to using the Kahoot platform and a specific student population, so the results cannot be generalized. For further development, it is essential to strengthen the topic of religious moderation and explore additional platforms to enhance the effectiveness of long-term learning. Overall, the use of Kahoot in this learning has significantly contributed to the development of critical and moderate thinking skills among students.

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