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## **Integrating Puzzle-Based Learning Activities into Arabic Reading Skills Instruction: A Development Study**

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### **Abstract**

This study aimed to develop a *broken text puzzle* learning media to support Arabic reading skill learning on the *at-ta'aruf* topic for seventh-grade students at MTs Ar-Rois Cendekia Semarang. A research and development approach using the ADDIE model was employed, consisting of analysis, design, development, implementation, and evaluation stages. The media was validated by material, language, and media experts to assess its feasibility, while student responses were used to determine practicality and acceptance. Expert validation indicated that the media met the "very feasible" criteria in terms of content, language, and visual design. Student responses demonstrated a very positive perception of the media across the measured aspects, with an overall score of 87.95% (Very Good category). The *broken text puzzle* integrates cooperative, game-based learning, encouraging students to arrange fragmented texts into coherent passages. The findings suggest that this interactive media can support reading comprehension and engagement, and provide a model for future research on innovative Arabic learning approaches.

**Keywords:** *Broken Text Puzzle, Maharah Qira'ah, Arabic, Learning Media Development*

## Abstrak

Penelitian ini bertujuan untuk mengembangkan media pembelajaran *broken text puzzle* untuk mendukung pembelajaran keterampilan membaca bahasa Arab pada topik *at-ta'aruf* bagi siswa kelas tujuh di MTs Ar-Rois Cendekia Semarang. Pendekatan penelitian dan pengembangan menggunakan model ADDIE digunakan, yang terdiri dari tahap analisis, desain, pengembangan, implementasi, dan evaluasi. Media tersebut divalidasi oleh ahli materi, bahasa, dan media untuk menilai kelayakannya, sementara respons siswa digunakan untuk menentukan kepraktisan dan penerimaan. Validasi ahli menunjukkan bahwa media tersebut memenuhi kriteria "sangat layak" dalam hal konten, bahasa, dan desain visual. Respons siswa menunjukkan persepsi yang sangat positif terhadap media di seluruh aspek yang diukur, dengan skor keseluruhan 87,95% (kategori Sangat Baik). *Broken text puzzle* mengintegrasikan pembelajaran kooperatif berbasis permainan, mendorong siswa untuk menyusun teks yang terfragmentasi menjadi bagian yang koheren. Temuan ini menunjukkan bahwa media interaktif ini dapat mendukung pemahaman dan keterlibatan membaca, serta memberikan model untuk penelitian masa depan tentang pendekatan pembelajaran bahasa Arab yang inovatif.

**Kata Kunci:** *Broken Text Puzzle*, *Maharab Qira'ah*, Bahasa Arab, Pengembangan Media Pembelajaran

## Introduction

Today, teaching Arabic is part of 21st-century education, with students falling into the Generation Z and Alpha categories.<sup>1</sup> Arabic is a language that plays a significant role in the world of education,<sup>2</sup> particularly in Islamic religious education.<sup>3</sup> Mastery of Arabic is not only

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<sup>1</sup> Sujai, Sujai et al., " (بالتطبيق) في الكتاب المتقدم لسلسلة اللسان (بالنظر إلى) " *Proceedings of International Conference on Islamic Civilization and Humanities* 1 (2023): 523–39; Aini Inayah, I. T. Q., "Tathbiq Namudzaj Al-Ta'allum Al-Qaim'ala Al-Musykilah Bi-Wasithah Video Li-Tarqiyah Maharah Al-Qira'ah Li-Thullab Al-I'dadiyyah," *Perkumpulan Program Studi Pendidikan Bahasa Arab Indonesia* 1 (n.d.): 516–31.

<sup>2</sup> Mohamad Abdalla, "Exploring Tarbiyah in Islamic Education: A Critical Review of the English- and Arabic-Language Literature," *Education Sciences* 15, no. 5 (April 2025): 559, <https://doi.org/10.3390/educsci15050559>.

<sup>3</sup> Inayah Inayah and Muhammad Ahsanul Husna, "The Problem of Narrative Term on Research in Scientific Journals and the Application of Its Use in Silent Reading Among University Students: إشكالية مصطلح سردي عن البحوث في المجالات العلمية و تطبيق استخدامها في القراءة الصامتة لدى الطلاب الجامعية," *Proceeding of Saizu International*

a requirement for understanding religious texts such as the *Qur'an* and *Hadiths*, but also as a means of developing modern language competencies that support various academic and social needs.<sup>4</sup> In this context, learning Arabic at the MTs level should prioritize reading skills as one of the main competencies that students must master.<sup>5</sup> Reading skills focus on students' ability to read Arabic texts fluently, precisely, and correctly, and understand the content of the reading.<sup>6</sup> This skill is an important foundation for MTs students in understanding Arabic language material comprehensively.<sup>7</sup> However, the reality of Arabic reading skill learning at MTs Ar-Rois Cendekia Semarang presents various challenges. Monotonous learning methods and limited use of interactive media often reduce students' engagement and active participation in Arabic reading skill learning lessons.<sup>8</sup>

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*Conference on Transdisciplinary Religious Studies*, September 1, 2023, 43–58, <https://doi.org/10.24090/icontrees.2023.284>.

<sup>4</sup> Inayah Inayah, Waesama-ae Waemamu, and Elina Novitasar, "Contribution Of Vygotskian-Language-Environment To Enhancement Of Speaking Skills Among The Students Of Fadl Al-Fadhlan," *Tadris Al-'Arabiyyah: Jurnal Pendidikan Bahasa Arab dan Kebahasaaraban* 3, no. 1 (n.d.); Inayah Inayah et al., "Development of Curriculum and Learning Management in Training and Intensive Courses of Arabic Language Program I Tatwir Al-Manahij Wa Idarah al-Ta'lim Fi-Baramij al-Tadrib Wa al-Tatwir Wa al-Daurat al-Mukassafah Li-Lugah al-'Arabiyyah," *Jurnal Al Bayan: Jurnal Jurusan Pendidikan Bahasa Arab* 15, no. 2 (December 2023): 526, <https://doi.org/10.24042/albayan.v15i2.19089>.

<sup>5</sup> Bambang Irawan, "Developing Arabic Teaching Materials Based on Local Culture to Enhance Reading Skills And Its Implications on Self-Regulated Learning," *IJIE International Journal of Islamic Education* 2, no. 2 (December 2023): 57–72, <https://doi.org/10.35719/ijie.v2i2.1895>.

<sup>6</sup> Muhammad Ahsanul Husna and Inayah Inayah, "Taqyim Ta'lim Al-Qira'ah Al-Jahriyah Bi Kitab Mubtadi Fi Silsilah Al-Lisan Ala Asas Tahlil Ihtiyajat Al-Manhaj Al-Mustaqil," *An Nabighoh* 25, no. 2 (December 2023): 197, <https://doi.org/10.32332/an-nabighoh.v25i2.7734>; Inayah, Inayah et al., "Efficacy of Role Play Method Through Communication and Critical Thinking Approach in Arabic Reading Skills," *Mantiqutayr: Journal of Arabic Language* 6, no. 1 (2026): 65–88, <https://doi.org/10.25217/mantiqutayr.v6i1.7070>; Yelia dkk, *Faktor Peningkat Keterampilan Literasi Bahasa* (2024; Akademia Pustaka, 2024).

<sup>7</sup> Dedi Abdillah, Zainal Abidin Arief, and Widyasari Widyasari, "Development of Video Based Interactive Learning Computer Assist Language Learning (CALL) to Improve Arabic Language Proficiency for Class IX MTsN 4 Bogor," *Educational Researcher Journal* 2, no. 1 (March 2025): 27–39, <https://doi.org/10.71288/educationalresearcherjournal.v2i1.135>.

<sup>8</sup> Bilal Ahmed et al., "Escaping the Boredom Trap: Enhancing Usability With 3D Games in Monotonous Subjects," *IEEE Access* 12 (2024): 180361–84, <https://doi.org/10.1109/ACCESS.2024.3434673>.

Innovation in learning media is an urgent need to improve learning outcomes, including in Arabic reading skill learning.<sup>9</sup> One innovation to address this is the use of puzzle media, such as *a broken text puzzle*. This media is an educational game that invites students to be active in arranging pieces of Arabic text into complete and correct sentences or paragraphs.<sup>10</sup> According to Kristensen and Burelli, puzzle games have strong potential as a medium that supports challenge-based learning, intrinsic motivation, and individual adjustment.<sup>11</sup> Also, according to Altiner, puzzle games provide a concrete, interactive, and adaptive learning experience for children's abilities.<sup>12</sup>

Similarly, a study by Mayer revealed that educational computer games, particularly spatial puzzle games, have the potential to improve certain cognitive skills such as mental rotation.<sup>13</sup> Similar findings were also put forward by Isaksen et al. and Butler et al., who stated that puzzle games stimulate strategic thinking skills, problem-solving, and decision-making through challenge-based play activities.<sup>14</sup> Research by Kristianti et al. shows that multimedia-based puzzle games in early childhood

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<sup>9</sup> Aan Nurhasanah et al., "Digital-Based Learning Media Innovation: Improving Motivation and Science Learning Outcomes," *International Journal on Social and Education Sciences* 7, no. 2 (April 2025): 185–94, <https://doi.org/10.46328/ijonses.723>.

<sup>10</sup> Ohood Swar and Mohammed Mohsen, "Students' Cognitive Processes in L1 and L2 Translation: Evidence from a Keystroke Logging Program," *Interactive Learning Environments* 31, no. 10 (December 2023): 6696–711, <https://doi.org/10.1080/10494820.2022.2043386>.

<sup>11</sup> Jeppe Theiss Kristensen and Paolo Burelli, "Difficulty Modelling in Mobile Puzzle Games: An Empirical Study on Different Methods to Combine Player Analytics and Simulated Data," *International Journal of Computer Games Technology* 2024, no. 1 (January 2024): 5592373, <https://doi.org/10.1155/2024/5592373>.

<sup>12</sup> Emel Çilingir Altiner, "Relationship between Spatial Thinking and Puzzle Games of Elementary School Students," *International Online Journal of Educational Sciences*, ahead of print, 2018, <https://doi.org/10.15345/iojes.2018.01.008>.

<sup>13</sup> Richard E. Mayer, "Computer Games in Education," *Annual Review of Psychology* 70, no. 1 (January 2019): 531–49, <https://doi.org/10.1146/annurev-psych-010418-102744>.

<sup>14</sup> Aaron Isaksen et al., "Simulating Strategy and Dexterity for Puzzle Games," *2017 IEEE Conference on Computational Intelligence and Games (CIG)*, August 2017, 142–49, <https://doi.org/10.1109/CIG.2017.8080427>; Eric Butler, Emina Torlak, and Zoran Popović, "Synthesizing Interpretable Strategies for Solving Puzzle Games," *Proceedings of the 12th International Conference on the Foundations of Digital Games*, August 14, 2017, 1–10, <https://doi.org/10.1145/3102071.3102084>.

education can help children become more relaxed and adaptive to aggressive and non-aggressive conditions.<sup>15</sup>

Although various studies have explored the use of educational games in learning, research focusing on *broken text puzzle* media in Arabic reading skill learning instruction at the junior high school level remains limited. This study presents the development of a *broken text puzzle* learning medium designed to support Arabic reading skill learning through a creative and interactive approach, in line with the Independent Curriculum implemented at MTs Ar-Rois Cendekia Semarang. The novelty of this research lies in integrating text-based puzzle activities into Arabic reading skill learning, which in many madrasah contexts is still dominated by conventional, textbook-based methods. Preliminary observations indicate that students often experience difficulties in understanding introductory Arabic reading texts, highlighting the need for alternative learning media that can better support reading comprehension. One potential solution is the *broken text puzzle*, a cooperative learning-based activity in which students arrange fragmented sentences into coherent texts, encouraging attention to sentence structure and contextual meaning.

Therefore, this study aims to develop a *broken text puzzle* learning medium for seventh-grade students at MTs Ar-Rois Cendekia Semarang. Specifically, the objectives of this study are to: (1) Describe the development process of the *broken text puzzle* media, (2) Explain its implementation for seventh-grade students at MTs Ar-Rois Cendekia Semarang, and (3) Analyze students' responses to the use of the media in Arabic reading skills learning. The study is expected to contribute to Arabic language learning innovation by integrating game-based methods to create a more interactive and engaging learning experience for junior secondary students.

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<sup>15</sup> Novera Kristianti, Niwayan Purnawati, and Suyoto Suyoto, "Virtual Education with Puzzle Games for Early Childhood – A Study of Indonesia," *International Journal of Engineering Pedagogy (iJEP)* 8, no. 2 (May 2018): 14–22, <https://doi.org/10.3991/ijep.v8i2.7943>.

## Method

This research uses the *R&D (Research and Development)* method by adapting the ADDIE development model.<sup>16</sup> The ADDIE model was chosen for its systematic and structured approach to developing relevant and practical learning media.

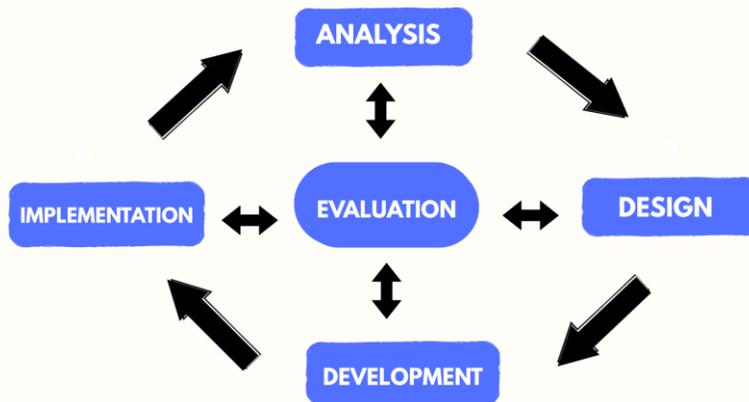


Figure 1. ADDIE Model

Figure 1 illustrates the five stages of the ADDIE model: Analysis, Design, Development, Implementation, and Evaluation. This study adopted the ADDIE model as a systematic framework for developing learning media through sequential and iterative stages. The process began with the analysis stage, which involved identifying learning needs through interviews, classroom observations, and curriculum review. The analysis revealed that students tended to respond positively to group-based and challenge-oriented learning activities. Based on these findings, the *broken text puzzle* media was designed to integrate game elements with cognitive reading tasks.

In the design stage, *at-ta'āruf* reading materials were selected, and the structure of the puzzle, student worksheets (LKPD), usage guidelines, and research instruments were prepared. The development stage focused on refining the media design and content, followed by validation by material, language, and media experts. The implementation and evaluation stages involved classroom use with seventh-grade students at MTs Ar-Rois Cendekia Semarang and the analysis of student

<sup>16</sup> E Widyastuti and Susiana, "Using the ADDIE Model to Develop Learning Material for Actuarial Mathematics," *Journal of Physics: Conference Series* 1188 (March 2019): 012052, <https://doi.org/10.1088/1742-6596/1188/1/012052>.

responses to assess the feasibility and practicality of the developed media for Arabic reading skill learning.

The research was conducted at MTs Ar-Rois Cendekia Semarang during the 2025/2026 academic year, from August 11<sup>th</sup> to October 25<sup>th</sup>, 2025. The participants consisted of 23 seventh-grade students, with the Arabic language teacher serving as the primary informant. The research site and participants were selected purposively based on preliminary observations indicating low engagement in Arabic reading skill learning. In addition, classroom learning was still predominantly textbook-based, and the use of learning media was limited and not yet optimally integrated to support students' Arabic reading skill learning.

Table 1. Research Stages and Schedule

No.	Research Stage	Main Activities	Time Frame
1.	Preliminary Study	Observation and interview with Arabic teacher to identify learning needs in <i>Mahārah Qirā'ah</i> .	Aug 11 <sup>th</sup> - 16 <sup>th</sup> , 2025
2.	Analyze	Analyzing curriculum, learning objectives, and student characteristics for the <i>at-Ta'āruf</i> topic.	Aug 18 <sup>th</sup> - 23 <sup>rd</sup> , 2025
3.	Design	Designing <i>Broken Text Puzzle</i> layout, preparing materials, and validation instruments.	Aug 25 <sup>th</sup> - Sept 6 <sup>th</sup> , 2025
4.	Develop	Producing and revising media based on expert validation (content, language, and design).	Sept 8 <sup>th</sup> - 20 <sup>th</sup> , 2025
5.	Implementation Stage	Classroom trial with 7th-grade students; data collection via observation and questionnaires.	Sept 22 <sup>nd</sup> - Oct 11 <sup>th</sup> , 2025
6.	Evaluation	Data analysis, interpretation of findings, and final product refinement.	Oct 13 <sup>th</sup> - 25 <sup>th</sup> , 2025

Table 1 presents the research timeline conducted using the ADDIE model, consisting of Analysis, Design, Development, Implementation, and Evaluation stages. The process involved identifying learning needs, designing and validating the *broken text puzzle* media,

implementing it with seventh-grade students, and collecting student responses to assess the media's practicality and acceptance.

Data were collected through observations, interviews, questionnaires, and expert validation. Observations focused on the use of the *broken text puzzle* media in Arabic reading skill learning, while interviews with the teacher explored its implementation and classroom challenges. The results of expert validation were analyzed descriptively using a Likert scale to determine the feasibility of the learning media.<sup>17</sup> Questionnaires were administered to measure students' perceptions of the media's attractiveness, usability, and learning support using a five-point Likert scale.<sup>18</sup> The questionnaire consisted of 15 statement items aimed at measuring students' responses to the *broken text puzzle* media in terms of material suitability, language accuracy, media display, and good feeling. The validity and reliability of the student response questionnaire were examined using data obtained from the actual research respondents, as no separate pilot testing was conducted before data collection.

$$r_{xy} = \frac{N \sum XY - (\sum X)(\sum Y)}{\sqrt{[N \sum X^2 - (\sum X)^2][N \sum Y^2 - (\sum Y)^2]}}$$

Statement:

$r_{xy}$  : correlation coefficient of variable x and variable y.

$\sum XY$  : sum of the products of variable x and variable y.

$X$  : sum of each item.

$Y$  : fixed sum.

$N$  : number of research samples.

The validity of the questionnaire items was tested using the product-moment correlation technique, with calculations performed using Microsoft Excel. The obtained correlation coefficients ( $r_{\text{count}}$ ) were then compared with the  $r_{\text{table}}$  value at a significance level of 0.05 with  $df = 21$  ( $r_{\text{table}} = 0.413$ ) to determine the validity of each item.

The reliability test in this study was conducted to examine the consistency of the questionnaire instrument in measuring students' responses to the *broken text puzzle* media. An instrument is considered

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<sup>17</sup> Sugiyono, *Metode Penelitian Kuantitatif, Kualitatif, Dan R&D* (Alfabeta, Bandung).

<sup>18</sup> Leonor Dazón-Ledesma and Jesús Izquierdo, "Language Learning Investment in Higher Education: Validation and Implementation of a Likert-Scale Questionnaire in the Context of Compulsory EFL Learning," *Education Sciences* 13, no. 4 (April 2023): 370, <https://doi.org/10.3390/educsci13040370>.

reliable if the Cronbach's Alpha coefficient is greater than 0.60. Conversely, if the coefficient is below 0.60, the instrument is regarded as unreliable. The reliability analysis employed the Cronbach's Alpha formula as follows:

$$r_{11} = \left( \frac{n}{n-1} \right) \left( 1 - \frac{\sum \sigma_i^2}{\sigma_t^2} \right); \quad \sigma^2 = \frac{-\sum x^2 - \left( \frac{\sum x^2}{N} \right)}{N}$$

Statement:

$r_{11}$  : reliability coefficient of the instrument

$n$  : number of questionnaire items

$\sum \sigma_i^2$  : total variance of each item

$\sigma_t^2$  : total variance

The questionnaire, which had been tested for validity and reliability, was distributed to several respondents (23 students). The questionnaire results were analysed descriptively with percentages and qualitatively using Spradley's model<sup>19</sup>, with four lines of analysis. Data analysis in this study was strengthened using Spradley's qualitative analysis model to interpret students' learning experiences and responses to the *broken text puzzle* media. The analysis consisted of four stages. *First*, domain analysis was conducted to identify general patterns of students' participation and responses during Arabic reading activities using the *broken text puzzle* media.

*Second*, taxonomy analysis was applied by categorizing students' responses into more specific aspects, namely material suitability, language accuracy, media display, and good feeling, based on questionnaire indicators and classroom observations. *Third*, componential analysis examined variations and contrasts in students' engagement, such as differences in participation, ease of arranging text fragments, and interaction during group work. Finally, cultural theme analysis was used to identify overarching patterns of meaning related to students' acceptance of collaborative, game-based reading activities in the MTs classroom context. This analysis helped position the study as a formative and developmental evaluation of the *broken text puzzle* media rather than a measurement of learning outcomes.

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<sup>19</sup> Inayah Inayah et al., "Ikhtibār Mi'yār al-Kafā'ah Fī al-Lughah al-'Arabiyyah Bi-Mutaṣaffih al-Imtiḥān al-Āmin Fī Jāmi'ah Walisongo al-Islāmiyyah al-Ḥukūmiyyah Semarang," *LISANIA: Journal of Arabic Education and Literature* 7, no. 2 (December 2023): 198–216, <https://doi.org/10.18326/lisania.v7i2.198-216>.

## Results and Discussion

### The Process of Developing the Broken Text Puzzle Media

This research adapts the ADDIE development model to design and implement the *broken text puzzle* learning media for the subject of *at-ta'aruf* (introduction) in the Arabic reading skill learning process. This model is used to ensure that each stage of media development is carried out systematically and purposefully. The following are the results of each stage of the media development process. The analysis phase aims to identify learning needs, student characteristics, and targeted competencies in Arabic language learning. Based on interviews with Arabic language teachers at MTs Ar-Rois Cendekia Semarang, learning follows the Independent Curriculum combined with the Islamic boarding school approach. The *at-ta'aruf* material emphasizes reading simple texts to recognize basic vocabulary and sentence patterns. This media accommodates these traits by allowing students to collaboratively compose text fragments, fostering active participation and understanding in learning Arabic reading skills.

After the analysis stage, the research continues to the design stage. At this stage, it is necessary to design several elements needed in making this learning media, including: The initial page containing learning objectives and how to play the *broken text puzzle*, the student worksheet page (LKPD), and designing the puzzle pieces. The third stage is the development stage, where researchers create learning media according to the previously established plan. Factors to consider when creating learning media include the media's appearance, language, and user benefits. This ADDIE model of learning media development product was developed using the Canva application for the 7th-grade *at-ta'aruf* material. After the media creation process was complete, validation was conducted by media experts, language experts, and material experts.

The next step in developing the learning media is the implementation stage. At this stage, the media has been refined according to the suggestions of media experts, language experts, and material experts before being tested on students. The trial was conducted in class 7B at MTs Ar-Rois Cendekia Semarang. In this evaluation stage, the researcher conducted final revisions to the developed product based on suggestions and comments from experts and student feedback. The goal was to ensure that the *broken text puzzle* learning media product for Grade 7 Arabic was suitable and feasible for use in learning.

At this stage, the researcher also developed research instruments to evaluate the feasibility of the *broken text puzzle* before classroom use. These included validation sheets for media, material, and language experts, as well as a student response questionnaire. Expert validations assessed visual design, content relevance, and language accuracy, while the student questionnaire used a Likert scale to measure interest and learning ease.

**Table 2. Likert Scale**

Criteria	Score
Very good (SB)	5
Good (B)	4
Fair (C)	3
Less (K)	2
Very poor (SK)	1

The development phase focused on producing the *broken text puzzle* based on the finalized visual design, followed by expert validation to ensure content accuracy, usability, and alignment with learning objectives. The validated product, ready for classroom use, is an Arabic learning media for Chapter 1: *at-ta'aruf*, targeting reading skills. Designed with Canva for an attractive and user-friendly layout, the media is printed on A4 paper (29.7 × 21 cm) and consists of sentence fragments from the *at-ta'aruf* text used in MTs Ar-Rois Cendekia Semarang's textbook.



Figure 2. View of the Puzzle Pieces

Figure 2 presents sentence fragments from an Arabic paragraph arranged as a *broken text puzzle*. Each fragment represents part of a sentence that students must reorder to form a coherent paragraph. To add

challenge and interactivity, the fragments are randomly placed in envelopes before distribution. This activity trains students to understand sentence structure, context, and logical sequencing in Arabic texts while fostering accuracy and teamwork. Through this activity, students actively construct meaning from sentence fragments rather than reading passively, thereby enhancing their reading skills engagingly and interactively. LKPD to form coherent sentences, while the back of the worksheet provides game instructions and learning objectives to guide students in understanding the activity.



Figure 3. Front and back view of the *broken text puzzle*

Figure 3 presents the LKPD used with the *broken text puzzle* media. The first section outlines learning objectives, and it also includes a gameplay guide detailing the steps for arranging sentence fragments, game rules, and assessment criteria for students' performance. During the activity, students arrange fragmented Arabic sentences in the correct order and attach them to designated spaces on the worksheet using glue or double-sided tape. This process strengthens their reading skills, sentence structure understanding, and teamwork skills. The LKPD provides clear instructions and an engaging layout to encourage active participation, resulting in a coherent Arabic paragraph that reinforces mastery of reading and text organization.



5.	Understandability and user instructions	24
6.	Manual interactivity and collaboration	19
7.	Evaluative and functional aspects	25
<b>Total</b>		159
<b>Percentage</b>		90.9%

Table 4. Score Interpretation Criteria

Score Interval %	Criteria
86%-100%	very worthy
71%-85%	worthy
56%-70%	quite worthy
≤ 55%	less worthy

Table 3 shows the media expert validation results for the *broken text puzzle*, with a total score of 159 out of 175 (90.9%), categorized as “very worthy” based on Table 4 criteria. This confirms that the media meets excellent feasibility standards in visual design, practicality, implementation, clarity, interactivity, and functionality. The expert suggested adding lamination to the puzzle components to enhance durability, enable repeated classroom use, reduce paper waste, and maintain material quality over time.

Material validation was carried out by Ms. NH an Arabic teacher at MTs Ar-Rois Cendekia Semarang, to evaluate the relevance of the content to learning objectives and students’ proficiency levels. The results of this validation for the *broken text puzzle* media are presented below.

Table 5. Material Expert Validation Results

No.	Assessment Aspect	Score
1.	Material content used	15
2.	Grammar used	13
3.	Illustrations used	13
<b>Total</b>		41
<b>Percentage</b>		91.1%

Based on the data obtained in Table 5, the average validator assessment of the material in the *broken text puzzle* learning media was categorized as "very worthy" with a percentage of 91.1%. The validator provided notes urging researchers to be more careful in writing the vowels (*harakat*) for each word to ensure they conform to correct Arabic

grammar. Therefore, this media is deemed suitable for use in learning, requiring only minor revisions to the aspect of vowel accuracy.

Language validation was conducted by Arabic Language lecturers from the Arabic Language Education Department, Faculty of Tarbiyah and Teacher Training (FTIK), Walisongo State Islamic University, Semarang. This validation process aimed to assess linguistic aspects, including grammatical accuracy according to rules, spelling accuracy, simplicity of word choice, and appropriate sentence usage in the *broken text puzzle* media. The following are the results of the language validation of the developed learning media.

Table 6. Results of Language Expert Validation

No.	Assessment Aspect	Score
1.	Grammar according to the rules	10
2.	Spelling accuracy	8
3.	Simple word choice	10
4.	Accuracy of sentence usage	9
<b>Total</b>		37
<b>Percentage</b>		92.5%

Based on the assessment results, the average validator score for the accuracy of the language used in the *broken text puzzle* learning media was categorized as "very worthy" with a percentage of 92.5%. Therefore, this media is deemed suitable for use in Arabic language learning because it meets the criteria for good language and conforms to the rules.

#### Implementation of the Broken Text Puzzle Media

In the implementation phase, the researcher applied the *broken text puzzle* media in the reading skills lesson on the topic of *at-ta'aruf* in class 7B of MTs Ar-Rois Cendekia Semarang. The trial involved 23 seventh-grade students. The lesson began with the teacher explaining the rules of the game and the learning objectives. The teacher then divided the class into small teams of four to five students, and each team received an envelope containing jumbled pieces of Arabic sentences. It contains simple strategy elements and lasts about 20 to 30 minutes. Their task was to arrange the fragments into a coherent paragraph based on the *at-ta'aruf* text, in a competitive yet collaborative setting.



Figure 5. Students put together a puzzle

Figure 5 shows students actively working in groups to assemble the *broken text puzzle*. This activity reflects students' engagement, collaboration, and involvement in arranging Arabic sentences, indicating active participation during the reading activity. The teacher facilitated learning by guiding vocabulary and structure challenges, while group discussions promoted participation, idea exchange, and problem-solving. The task also enhanced students' logical and analytical thinking related to sentence sequencing, and the completed works were reviewed collectively to provide feedback and reinforce reading comprehension. Overall, the *broken text puzzle* media was feasible and positively received by students. Students showed high enthusiasm, collaborated actively, and focused on understanding the reading material. Observations and responses indicated that this game-based approach creates a student-centered and engaging learning environment.

#### Students' Response to the Use of Broken Text Puzzle Media

After the implementation of the *broken text puzzle* media in Arabic reading skills learning for seventh-grade students at MTs Ar-Rois Cendekia Semarang, an evaluation stage was conducted to assess students' responses to the developed media. Data were collected using a questionnaire distributed to students at the end of the learning session. The questionnaire used in this study was a closed-ended questionnaire consisting of 15 statements related to students' perceptions of the *broken text puzzle* media. The statements were developed based on four indicators, namely material suitability, language accuracy, media

display, and good feelings. Students responded to each statement using a five-point Likert scale: Strongly Agree (SA), Agree (A), Neutral (N), Disagree (DA), and Strongly Disagree (SDA).

The questionnaire data were used to describe students' acceptance and practicality of the *broken text puzzle* media in supporting Arabic reading learning. Through these responses, the study obtained descriptive information regarding how students perceived the use of the media during the learning process, as well as its role in creating an engaging and interactive reading activity.

Table 7. Results of The Validity Questionnaire Items

Questions Number	Score of $R_{\text{Account}}$ ( $R_{\text{table}}$ DF=21;n=23;0.413)	Validity
1	0,329427	Invalid
2	0,453746	Valid
3	0,717781	Valid
4	0,64165	Valid
5	0,715241	Valid
6	0,624387	Valid
7	0,597142	Valid
8	0,453959	Valid
9	0,712192	Valid
10	0,671934	Valid
11	0,669335	Valid
12	0,514053	Valid
13	0,754114	Valid
14	0,721563	Valid
15	0,842703	Valid

Based on the results presented in Table 7, the validity testing of the student response questionnaire items showed that 14 out of 15 statements had r-count values higher than the r-table value ( $r = 0.413$ ,  $DF = 21$ ,  $n = 23$ ) and were therefore declared valid. Only one item, item number 1, had an r-count value below the r-table threshold ( $0.329 < 0.413$ ) and was categorized as invalid. Consequently, this item was not used in the data analysis.

The reliability test of the questionnaire instrument was subsequently conducted using Cronbach's Alpha to examine the internal consistency of the valid items.

Table 8. Results of the Reliability Questionnaire Items

$$r_{11} = \left( \frac{n}{n-1} \right) \left( 1 - \frac{\sum \sigma_i^2}{\sigma_t^2} \right) \quad r_{11} = \left( \frac{14}{14-1} \right) \left( 1 - \frac{8,525692}{50,63241} \right) \quad r_{11} = 0,895586$$

Based on Table 8, the reliability testing of the questionnaire items was conducted using the Cronbach's Alpha formula after excluding one invalid item. The calculation yielded a reliability coefficient ( $r_{11}$ ) of 0.895586. According to reliability criteria, an instrument is considered reliable if the Cronbach's Alpha value exceeds 0.60 or 0.70.<sup>20</sup> Since the obtained coefficient ( $\alpha = 0.896$ ) is higher than both threshold values, the questionnaire instrument is categorized as highly reliable. This indicates that the remaining 14 questionnaire items demonstrate strong internal consistency and are appropriate for measuring students' responses to the use of the *broken text puzzle* media in Arabic reading skill learning.

Student perceptions of the *broken text puzzle* media were collected from 23 seventh-grade students using a 15-item questionnaire covering material suitability, language accuracy, media display, and good feelings. Overall, students' responses tended to be positive, with 56% of responses categorized as *Strongly Agree* and 29% as *Agree*, while 13% were *Neutral* and only 2% were *Disagree*. No responses fell into the *Strongly Disagree* category, indicating that the media was generally well received across the assessed indicators.

Based on individual scores, 17 students were classified into Category A (very positive) and the remaining 6 into Category B (positive), with no students falling into the less positive or negative categories. These results indicate that the *broken text puzzle* media were positively perceived in terms of material relevance, language clarity, visual presentation, and learning experience, reflecting students' acceptance and engagement within a development-oriented and formative evaluation context.

Student responses to the *broken text puzzle* media were analyzed based on four indicators: material suitability, language accuracy, media display, and good feelings. The distribution of responses across these indicators showed that material suitability (26.65) and language accuracy (21.96) contributed the largest proportions to the overall score, followed

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<sup>20</sup> Sören Möller et al., "An Extension of the Bland–Altman Plot for Analyzing the Agreement of More than Two Raters," *Diagnostics* 11, no. 1 (January 2021): 54, <https://doi.org/10.3390/diagnostics11010054>; Julie Pallant, *SPSS Survival Manual: A Step by Step Guide to Data Analysis Using IBM SPSS*, 7th ed. (Routledge, 2020), <https://doi.org/10.4324/9781003117452>.

by good feelings (8.96) and media display (8.39). This pattern indicates that students primarily perceived the media as relevant to the learning material and clear in its linguistic presentation, while also finding the visual appearance and learning experience acceptable.

Overall, the aggregated student response score reached 87.95%, which falls into the *Very Good* category based on the established score interpretation criteria. This result reflects students' positive perceptions of the *broken text puzzle* media in terms of appropriateness, clarity, visual presentation, and enjoyment. Within the context of this development-oriented and formative evaluation, the findings indicate that the media were well accepted by students and feasible for use in Arabic reading skills learning activities.

## Discussion

The discussion of this study focuses on interpreting students' responses to the *broken text puzzle* media as part of a formative evaluation of Arabic reading skill learning at MTs Ar-Rois Cendekia Semarang. The student response questionnaire, which had been tested for validity and reliability, demonstrated strong measurement quality, with 14 valid items and a high reliability coefficient ( $\alpha = 0.892$ ). This indicates that the instrument consistently captured students' perceptions regarding the practicality and acceptance of the developed media. Therefore, the discussion emphasizes students' learning experiences and responses rather than measuring instructional effectiveness.

Based on descriptive analysis, the questionnaire results show a predominance of positive responses. A total of 56% of responses fell into the Strongly Agree category and 29% into the Agree category, while only 2% were Disagree and none were Strongly Disagree. Further interviews with students who expressed disagreement revealed that their responses were mainly influenced by technical and learning preference factors. Some students experienced difficulty in arranging text fragments within the allotted time and felt that the puzzle format required more individual guidance to fully understand the reading content. These findings indicate that the limited negative responses were not related to the content or objectives of the learning media, but rather to individual learning styles and technical adjustment during implementation.

This pattern indicates that students generally perceived the *broken text puzzle* media as suitable, understandable, visually engaging, and enjoyable. Furthermore, individual response scores showed that 17 out of 23 students were classified into Category A (very positive), with

scores ranging from 61 to 75, while the remaining 6 students fell into Category B (positive). No students were categorized as less positive or negative, suggesting a high level of acceptance of the media. Supported by research by Zulfa et al., Sabilla et al., and Fitriyani et al., Ulfa et al. have reported that the use of interesting media contributes to low interest in reading.<sup>21</sup>

To strengthen the interpretation of these findings, the analysis was supported by Spradley's qualitative analysis model. In the domain analysis stage, students' overall responses reflected active participation and positive engagement during Arabic reading activities using the *broken text puzzle* media. Students demonstrated enthusiasm in arranging text fragments collaboratively, indicating that the media supported interactive reading practices rather than passive text consumption. The findings of this study are consistent with studies by Dehghanzadeh et al., Chowdhury et al., Chen, and Dindar et al., who have emphasized that gamified and collaborative learning environments can foster positive learning experiences, engagement, and learner interaction.<sup>22</sup>

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<sup>21</sup> Annida Zulfa et al., "Developing an Innovative Board Game Using a Cooperative Learning Approach to Foster Interest in Learning Arabic," *Alibbaa': Jurnal Pendidikan Bahasa Arab* 6, no. 1 (January 2025): 99–119, <https://doi.org/10.19105/ajpba.v6i1.17834>; Tiara Sabilla et al., "Tathwîr Al-Rusûm al-Hazliyyah al-Raqmiyyah 'alâ Tathbîq Canva Li Ta'limi Mahârati al-Qirâah Ladâ Thullâbi al-Madrasati al-Ibtidâ'iyyah al-Islâmiyyah Bi Indonesia," *Alibbaa': Jurnal Pendidikan Bahasa Arab* 6, no. 1 (January 2025): 65–98, <https://doi.org/10.19105/ajpba.v6i1.17624>; Nur Fitriyani et al., "The Application of the Loud Reading Strategy (Al Qira'ah Al Jahriyyah) Based on Pop-Up Books in Enhancing Arabic Reading Skills," *Alibbaa': Jurnal Pendidikan Bahasa Arab* 6, no. 1 (January 2025): 23–41, <https://doi.org/10.19105/ajpba.v6i1.15978>; Annida Zulfa et al., "Developing an Innovative Board Game Using a Cooperative Learning Approach to Foster Interest in Learning Arabic."

<sup>22</sup> Hojjat Dehghanzadeh et al., "Using Gamification to Support Learning English as a Second Language: A Systematic Review," *Computer Assisted Language Learning* 34, no. 7 (September 2021): 934–57, <https://doi.org/10.1080/09588221.2019.1648298>; Mahjabin Chowdhury et al., "Digital Game-Based Language Learning for Vocabulary Development," *Computers and Education Open* 6 (June 2024): 100160, <https://doi.org/10.1016/j.caeo.2024.100160>; Chih-Ming Chen, Huimei Liu, and Hong-Bin Huang, "Effects of a Mobile Game-Based English Vocabulary Learning App on Learners' Perceptions and Learning Performance: A Case Study of Taiwanese EFL Learners," *ReCALL* 31, no. 2 (May 2019): 170–88, <https://doi.org/10.1017/S0958344018000228>; Muhterem Dindar, Lei Ren, and Hanna Järvenoja, "An Experimental Study on the Effects of Gamified Cooperation and Competition on English Vocabulary Learning," *British Journal of*

In the taxonomy analysis, students' responses were organized into four specific domains corresponding to the questionnaire indicators: material suitability, language accuracy, media display, and good feelings. The consistently high scores across these indicators suggest that students perceived the learning content as aligned with learning objectives, linguistically clear, visually accessible, and enjoyable. The componential analysis further revealed variations in students' engagement, such as differences in ease of organizing sentence fragments and levels of participation during group work, but these variations did not diminish the overall positive perception of the media.

Finally, cultural theme analysis identified a broader pattern of acceptance toward cooperative and game-based learning activities within the MTs classroom context. The *broken text puzzle* media was perceived as supporting a collaborative learning culture that encourages interaction, discussion, and shared problem-solving in Arabic reading lessons. This positions the findings of the study as a developmental and contextual evaluation of learning media feasibility, highlighting how text-based puzzle activities can support meaningful engagement in Arabic reading instruction rather than serving as a direct measure of learning outcomes.

## Conclusion

Based on the results of this study, it can be concluded that the *broken text puzzle* learning media developed for seventh-grade students at MTs Ar-Rois Cendekia Semarang is feasible, practical, and well-received in Arabic reading skill learning. Expert validation indicates that the media meets the "very feasible" criteria in terms of content, language, and visual design, requiring only minor revisions in durability. Student response data show a high level of engagement and positive acceptance, with 17 out of 23 students categorized as very positive (Category A) and the remaining 6 as positive (Category B), reflecting an overall response rate of 87.95% ("Very Good"). The media practicality integrates cooperative, game-based learning, encouraging students to collaboratively arrange fragmented sentences into coherent paragraphs, thereby enhancing understanding of sentence structure, contextual meaning, and interactive reading practices. Practically, this study provides guidance for Arabic language teachers and instructional

designers in developing interactive, engaging, and contextually relevant learning media for junior secondary madrasah students. Theoretically, the findings contribute to the understanding of how game-based cooperative learning activities can support reading comprehension, learner engagement, and text organization skills, offering a model for integrating interactive media into Arabic language learning theory. Future research can examine the long-term effectiveness of *broken text puzzle* media on students' reading comprehension and retention to further validate its impact on learning outcomes.

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