



Developing Gamification Media-Based on RADEC Model Using Genially to Enhance Elementary Students Reading Comprehension of Narrative Texts

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Abstract

This study aimed to create gamified learning media based on the RADEC model, using Genially to boost fifth-grade students' reading comprehension of narrative texts. Following a Research and Development (R&D) approach within the ADDIE framework, the research adhered to a structured process: analyze, design, develop, implement, and evaluate. The analysis phase unveiled key challenges, such as students' difficulties in identifying main ideas and their lack of engagement with narrative texts, highlighting the necessity for innovative, technology-driven learning tools. In the design phase, engaging gamified media rooted in the RADEC model was crafted on Genially.com, incorporating interactive and visually appealing activities aligned with the RADEC steps (Read, Answer, Discuss, Explain, Create). The development phase involved expert and educator reviews of the media, which yielded a feasibility rating exceeding 90% after refinements were made based on their feedback. During the implementation phase, both small- and large-group trials were conducted, leading to significant improvements in reading comprehension. Pretest-posttest comparisons, bolstered by N-Gain scores, classified the media as "quite effective," with paired sample t-tests confirming statistically significant progress. The study also highlighted high satisfaction levels among teachers and students, who lauded the media for its engaging and effective approach to enhancing comprehension. Ultimately, the study concluded that gamified media, when combined with the RADEC model, effectively boosts cognitive and motivational outcomes, demonstrating its value in real-world classrooms. While the research centered on narrative texts, it emphasizes the potential of interactive technology to cultivate meaningful and enjoyable learning experiences. Future studies should further explore this approach with various text types to enhance digital literacy in 21st-century education.



INTRODUCTION

Learning media plays a crucial role in achieving successful learning objectives, bridging abstract concepts and students' understanding. According to Gagne and Briggs, as cited in Kristanto (2016, p. 5), learning media is a tool to deliver instructional content effectively. More than just tools, learning media encompass both software and hardware designed to present information in a way that enhances clarity and engagement in the learning process (Iskandar, 2021, p. 9; Pagarra et al., 2022, p. 6; Rohima, 2023; Syarifuddin & Utari, 2022). This dual functionality underscores its adaptability to diverse educational contexts. Furthermore, media not only supports the tangible needs of students but also provides teachers with opportunities for innovation and customization to align with specific learning goals and student characteristics (Nurfadillah, 2021, p. 33).

The selection of appropriate learning media, however, requires thoughtful consideration. Teachers must ensure that the chosen media aligns with the intended learning objectives, complements the core material, accommodates various learning styles, and remains practical within the constraints of available school resources (Batubara & Ariani, 2019; Magdalena, 2021, p. 44). In the context of elementary education, where reading comprehension forms a foundational skill, traditional media may fail to engage students or cater to their diverse learning needs fully. This highlights the necessity for innovative approaches, such as gamification-based media integrated with pedagogical models like RADEC (Read, Answer, Discuss, Explain, and Create). Such approaches not only align with contemporary educational demands but also hold the potential to foster active participation, sustained engagement, and deeper comprehension among young learners.

Gamification is a learning medium that involves games to increase player engagement, critical thinking, aesthetics, and problem-solving (Ariani, 2020; Shaliha & Fakhzikril, 2022; Wangi et al., 2022, p. 33). The purpose of gamification in education is to increase student activeness in creating meaningful learning experiences (Mereuta & Nechifor, 2021). Gamification media supports learning optimization through aspects of gamefulness, namely quality, interaction, and interesting game design (H. Nurhikmah et al., 2023; Rosina Zahara et al., 2021). Teachers can innovate gamification components with challenges, quizzes, points, levels, and reward features to increase student engagement through technology-based learning media (Ariyanti Nurningtias & Majid, 2022; Fatharani et al., 2022).

Gamification has an urgency to present more rational and flexible learning content because digital media generally uses English as the language of instruction (Maisarah et al., 2022). Integrating game elements encourages practical understanding and critical thinking skills to solve problems (Novita Sari et al., 2023; Sheng Mei & Surat, 2021). Gamification creates fun learning and reduces the pressure that causes demotivation (Charlo et al., 2022; Gejandran & Abdullah, 2024;

Saleem et al., 2022). Alawiyah and Ahmadi's (2024) research supports effective quizzes and games to improve the learning outcomes of elementary school students. Therefore, students become motivated to collect as many points as possible by completing the level.

Gamification is an interesting learning media for elementary school students in the digital era to stimulate digital literacy competencies through games (Ahmadi et al., 2023; Charlo et al., 2022; Kaeophanuek & Chaisriya, 2022; Ricoy & Sánchez-Martínez, 2022). Meanwhile, digital literacy is related to language skills that require students to understand and produce reading content critically and creatively (Abidin et al., 2018, p. 5; Sahiruddin, 2021). However, the literacy skills of Indonesian students are not yet in line with the concept of the digital literacy era.

The results of the 2011 Progress in International Reading Literacy Studies (PIRLS) survey targeting fourth-grade elementary school students showed that Indonesia's literacy level was at the lower end of the performance with a ranking of 42 out of 45 countries (*Kementerian Koordinator Bidang Pembangunan Manusia dan Kebudayaan RI, 2023*). The 2022 Programme for International Student Assessment (PISA) survey results showed that Indonesian students' literacy skills were still low. Although there was an increase in ranking, the reading literacy score decreased by 12 points from the 2018 PISA results. In fact, around 25% of Indonesian students could only reach level two, so their literacy was still below the average of other countries (OECD, 2022). The same problem was experienced by Sedayu State Elementary School, Kendal Regency; there was no increase in Computer-Based National Assessment (ANBK) 2023. The Minimum Competency Assessment (AKM) results showed that only 4.6% of students could answer literacy questions correctly.

Based on interviews in the preliminary study, it was found that fifth-grade students have difficulty identifying intrinsic-extrinsic elements and telling or understanding narrative texts. This finding aligns with prior research indicating that students find it difficult to identify main ideas, differentiate explanatory sentences, summarize readings, and understand the information and messages presented in texts (Clarita et al., 2021; Ghazalah et al., 2023; Restiani et al., 2022; Oktavia et al., 2022). Additionally, many students read aloud without grasping the content (Muliawanti et al., 2022). Reading comprehension, a fundamental cognitive process, requires decoding written symbols to extract meaning (Meliyawati, 2016, pp. 1-3; Tarigan, 2021, pp. 7-9). Effective comprehension fosters focus and the ability to process and articulate ideas from texts (Nita & Naini, 2022; Oktrifianty, 2021). These skills are crucial for enhancing students' knowledge and aesthetic appreciation of narrative texts (Subhan et al., 2021). They must develop progressively through literal, interpretive, critical, and creative levels of understanding (Prihatin & Sari, 2020).

To address these challenges, this study aims to develop innovative solutions by integrating gamification media with the RADEC learning model. RADEC (Read, Answer, Discuss, Explain, Create) is a structured framework introduced by Sopandi et al. (2020) that emphasizes 21st-century skills, fostering active, creative, and responsible learners. The model's simplicity and memorability, encapsulated in its acronym, make it practical for classroom application (Octavia, 2020). Research highlights RADEC's effectiveness in enhancing critical thinking, creativity, and comprehension (Pohan et al., 2021; Nura & Hartati, 2022). Simultaneously, gamification, as explored by Novita Sari et al. (2023) and Maulidiyah et al. (2023), has been shown to boost student motivation, engagement, and critical thinking through interactive and competitive learning environments. Gamification media, particularly through platforms like Genially, supports interactive and effective learning in Indonesian language education (Ana & Prawijaya, 2023; Khoirun Ni'mah et al., 2022).

Despite existing research on gamification and RADEC individually, a significant gap exists in developing gamification-based media integrated with the RADEC model specifically for narrative text learning. The novelty of this study lies in developing a gamification platform that aligns with RADEC's structured syntax. This approach combines interactive and engaging media with a proven pedagogical framework, offering a meaningful learning experience that encourages critical thinking and problem-solving in a fun and stimulating environment.

The focus of this research is to describe the development, feasibility, and effectiveness of gamification media based on the RADEC model to enhance the reading comprehension skills of grade V students. This study aims to fill the identified gaps in the literature and provide practical solutions for enhancing narrative text comprehension in elementary education.

METHODS

The research methodology used is Research and Development (R&D) with the ADDIE model. This model is suitable for the development of instructional media in elementary schools. According to Branch (2010), the steps of ADDIE development research go through the stages of analysis, design, development, implementation, and evaluation. The following is a chart of ADDIE research.

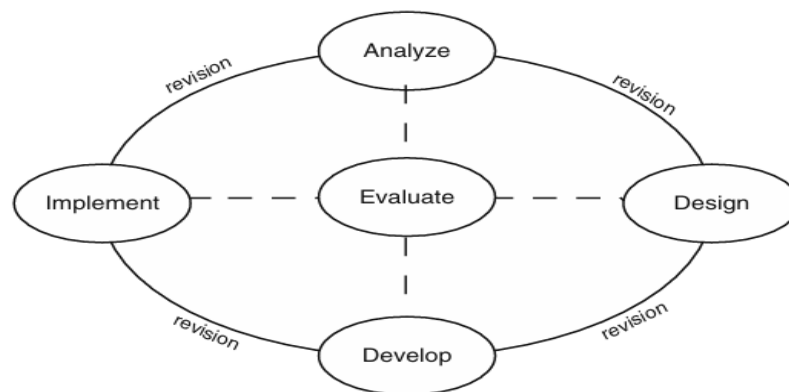


Figure 1. ADDIE Model Steps

Source: (Branch, 2010, p. 2)

The analysis stage is collecting information used as the basis for making a product. Researchers analyze learning needs and the learning environment. The design stage is carried out to develop the product by creating a flowchart and a design of data collection instruments. Researchers compile interview grids, validation sheets, and user response questionnaires. The development stage is to complete product components that meet the needs of students and are ready to be validated by validators. The product is validated by material experts, media experts, and teacher practitioners to assess the feasibility of gamification media before being tested in learning. Suggestions from the validator are used as a reference for improving the content and appearance of the gamification media design.

Validators are qualified material and media experts with a minimum of a Master's degree and a minimum of 5 years of experience (Wardathi & Pradipta, 2019). Material experts who are competent in the field of Indonesian language and literature can test the feasibility of narrative text material contained in gamification media. Furthermore, media experts are competent in assessing the feasibility of gamification learning media, which is reviewed based on the suitability of the learning presentation. Meanwhile, expert validation of teacher practitioners assesses the feasibility from the teachers' perspective as media users. Class teachers become expert practitioners who assess the suitability of learning and student characteristics. The validator assessed the media aspect indicators in the questionnaire using a Likert scale. The percentage of media feasibility values is interpreted based on Table 1.

Table 1. Media Feasibility Category

Interval	Criteria
76%– 100%	Very Feasible
51% - 75%	Worth
26% – 50%	Decent Enough
0% - 25%	Less Feasible

Source: (Mulyani et al., 2024)

The implementation stage is to test the product after revision and validation in the previous stage. The media is implemented in narrative text material of Indonesian language subjects with the RADEC model. Researchers prepare assessment instruments to determine user responses and pretest-posttest instruments to measure student competency (Batubara, 2020, p. 59). This product was tested in small and large groups in grade V of Sedayu State Elementary School. Students were given a pre-test before learning and a post-test after learning.

The evaluation stage assesses the success of the development of learning media products. Evaluation is integrated at each stage of ADDIE so the media quality is assessed before and after the implementation of the product (Branch, 2010). Evaluation instruments can be in the form of tests or user response questionnaires. The Likert scale in the teacher and student response questionnaire was used to analyze user responses to the media (Batubara, 2020, p. 60). Thus, the advantages and disadvantages of the product can be improved.

Researchers applied a *one-group pretest-posttest design* to determine the effectiveness of gamification media based on the genially integrated RADEC model on the ability to read and comprehend narrative texts. Students were given a pretest and posttest in the form of 25 multiple-choice questions that had been tested for validity and reliability. The N-Gain test measures the effectiveness of media in learning (Sukarelawa et al., 2024). Meanwhile, the paired sample t-test measures the difference in average pretest and post-test scores (Linda Rosalina et al., 2021, p. 56). Data analysis in small and large group trials measures the effectiveness of gamification media.

Table 2. N-Gain Value Criteria

N-Gain Value	Criteria
$0,70 \leq g \leq 100$	High
$0,30 \leq g < 70$	Medium
$0,00 \leq g < 0,30$	Low
$g = 0,00$	invariable
$-1,00 \leq g < 0,00$	Lowering

Table 3. Effectiveness Category

Percentage (%)	Category
< 40	Not Effective
40 - 55	Less Effective
56 – 75	Quite Effective
> 76	Effective

Source: (Sukarelawa et al., 2024:11)

RESULTS

1. Analyzing stage

The analyzing stage focused on identifying learning needs and aligning them with learning objectives, student characteristics, and school facilities and infrastructure availability. Interviews with fifth-grade teachers revealed that students often feel unfocused and bored when reading lengthy narrative texts. This lack of engagement makes it difficult for them to understand information, identify main ideas, analyze intrinsic elements, and draw conclusions from the text. This challenge is further supported by the Minimum Competency Assessment (AKM) results, which highlight students' struggles with literacy questions related to narrative text comprehension.

The results of a needs analysis questionnaire indicated that existing technology-based interactive learning media were not being used optimally to improve students' narrative text reading comprehension skills. Both teachers and students expressed a need for innovative, engaging learning media to address these difficulties. The responses also emphasized the necessity of adequate school infrastructure, such as LCD projectors, WiFi access, and Chromebooks, to support the implementation of interactive learning tools. This feedback highlighted the demand for media that could effectively combine engaging content with technological accessibility.

The development of gamification media using the Genially platform was proposed as a solution. Genially offers features to create educational games, quizzes, presentations, and other interactive content. The platform's ease of access, requiring no additional downloads on devices, was seen as an advantage, making it suitable for classroom use. The proposed gamified media would include narrative text readings and practice questions designed in stages, reflecting game levels. The content would be tailored to the learning objectives for fifth-grade Indonesian language studies, specifically focusing on the reading and viewing components of phase C to match students' comprehension levels and learning progress. This approach aimed to create a dynamic, interactive, and effective learning experience,

engaging students more deeply with narrative texts while leveraging available technology to improve literacy outcomes.

2. Designing stage

The designing stage aims to prepare a prototype of the gamification media based on the results of the needs questionnaire analysis from teachers and students, namely 1) formulating learning objectives that are adjusted to the learning achievements of phase C; 2) compiling narrative text readings and practice questions that are adjusted to the scope of the material and student characteristics; 3) designing a gamification presentation concept that integrates the RADEC model with game levels; 4) determining gamification content that includes background themes, illustrations, animations, audio, and interactive buttons; 5) compiling a gamification design on the Genially.com.

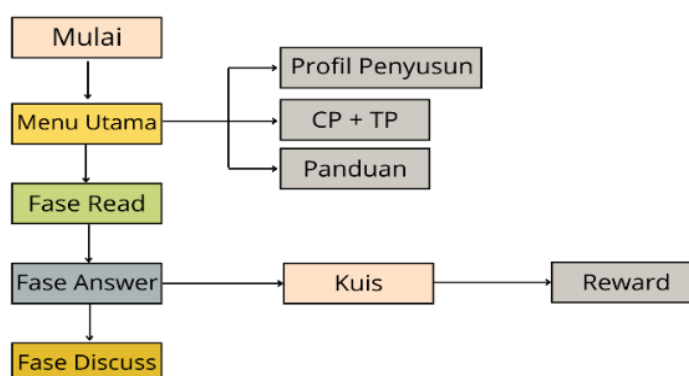


Figure 2. Flowchart Gamification Design

Based on the flowchart, gamification media presents game levels that require users to pass each stage to continue to the next level. Gamification media presents three phases that integrate the RADEC learning model (Read, Answer, Discuss, Explain, and Create). The presentation of the gamification media is equipped with text, illustrations, audio, and interactive buttons to make it more interesting with an adventure and nature-themed background. Researchers created background designs and supporting elements from Canva and then input them into Genially to add interactive features. The background design is arranged into the general application, with each element added with interactive features at the entrance, continuous, and exit display.

Users can press the "start" button on the home page to display the "main menu" page. Users can access the developer profile, gamification guide, learning achievements, and learning objectives through the window feature. Furthermore, the "read phase" page contains three narrative text reading titles, namely Turtle Adventure, Important Mission, and Tori the Brave. In the "answer phase," there are

practice questions related to the narrative text reading in the previous phase. Questions are presented in stages from literal, inferential, critical, and creative understanding. Users can download the leaderboard with right and wrong answers. After all questions have been answered, users get a reward and continue the "discuss phase" according to the learning flow in class. The following is a display of the gamification media.



Figure 5. Main Menu



Figure 3. Home Page



Figure 4. Read Phase Page



Figure 6. Story Display

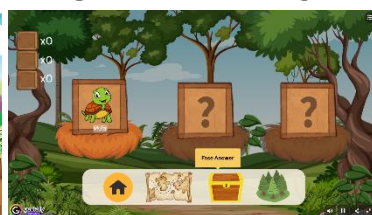


Figure 7. Answer Phase Page



Figure 8. Kuis Display

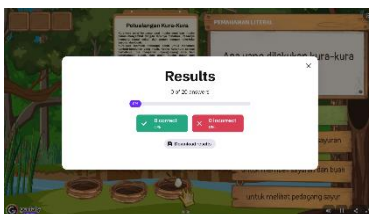


Figure 11. Leaderboard



Figure 9. Reward Display



Figure 10. Discuss Phase Page

3. Developing stage

The gamification design compiled on the Genially website needs to be validated for feasibility by material experts, media experts, and teacher practitioners. The validation by the material expert was carried out by Dr. Panca Dewi Purwati, M.Pd., who is competent in the field of Indonesian Language, Elementary School Teacher Education Study Program, Semarang State University. Material experts assess aspects including relevance, accuracy, understanding, suitability with learning, and language. The validation by the media expert was carried out by Dr. Deni Setiawan, S.Sn., M.Hum., an art lecturer in the Elementary School Teacher Education Study Program at Semarang State University, and is competent in assessing the feasibility of learning media in elementary schools. Media experts assess five aspects: material, user control, application display, language, and program. Meanwhile, the teacher practitioner expert is a grade III teacher at Sedayu State Elementary School who has professionally taught lower and higher classes. Expert practitioners assess four aspects of suitability with learning: media benefits, user control, and language. The following are the results of the

feasibility test of the Genetically-based gamification media integrated with the RADEC model by material experts, media experts, and teacher practitioners.

Table 4. Results of Material Expert Validation

Aspect	Percentage	Criteria
Relevance	93,3%	Very Good
Accuracy	100%	Very Good
Understanding	100%	Very Good
Suitability with Learning	92%	Very Good
Language	100%	Very Good
Mean Score		93,75
Average		97,06%

Table 5. Results of Media Expert Validation

Aspect	Percentage	Criteria
Material	93,3%	Very Good
User Control	100%	Very Good
Application Display	96%	Very Good
Language	90%	Very Good
Program	90%	Very Good
Mean Score		95
Average		93,86%

Table 6. Results of Teacher Practitioner Expert Validation

Aspect	Percentage	Criteria
Suitability with Learning	88%	Very Good
Media Benefits	100%	Very Good
User Control	95%	Very Good
Language	100%	Very Good
Mean Score		92
Average		95,75%

The results of the feasibility validation on the indicators in each aspect are accumulated into a percentage value. The validation results of material experts were 97.06%, media experts were 93,86%, and teacher practitioner experts were 95,75%. These results can be seen in the product feasibility category in Table 1. The

validation results of the gamification media based on the genially integrated RADEC model were > 90%, which means the category is very feasible.

The development of gamification media is feasible for use in learning, but it still receives suggestions from experts for revision. The material expert validator provided suggestions for improvement related to the use of diction, spelling, sentence effectiveness, and narrative text reading content. The researcher revised the main page to include the material, phase/class, and compiler of the media. The answer page needs to add a full-screen feature that displays a larger narrative text reading page when the user clicks on the element. The revised gamification-based genially integrated RADEC model can be tested in narrative text learning in grade V.

4. Implementing stage

The syntax of the RADEC learning model, namely read (R), answer (A), discuss (D), explain (E), and create (C). At this stage, the teacher applies the RADEC model to support the use of genially-based gamification media in learning. In the read phase, students read learning resource books or narrative text readings containing information related to the learning topic. In the answer phase, students answer questions presented in the form of quizzes on gamification media. Then, in the discussion phase, students conduct group discussions on a topic on the student worksheet (LKPD). In the explain phase, students can explain the topic of the material that has been discussed. While in the creation phase, students can formulate ideas to solve problems in the form of assignments or projects.

Gamification based on genial was tested in small and large group learning. Small group trials involving 6 out of 30 students. Meanwhile, the large group trial involved all students in grade V. Students worked on pre-post tests using gamification media based on the genially integrated RADEC model to measure students' reading comprehension skills. The difference in the average pretest and posttest indicates increasing the ability to read comprehension of narrative texts. The following are the pretest-posttest results in small and large group trials.

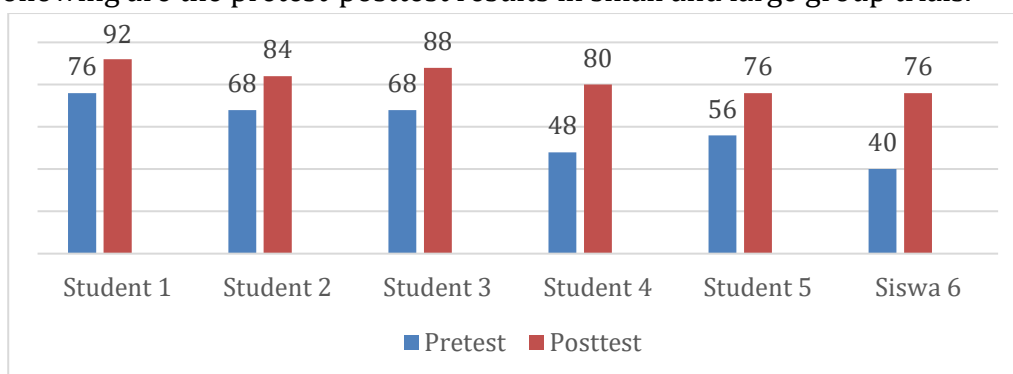


Chart 1. Results of Pretest-Posttest Small Group Trial

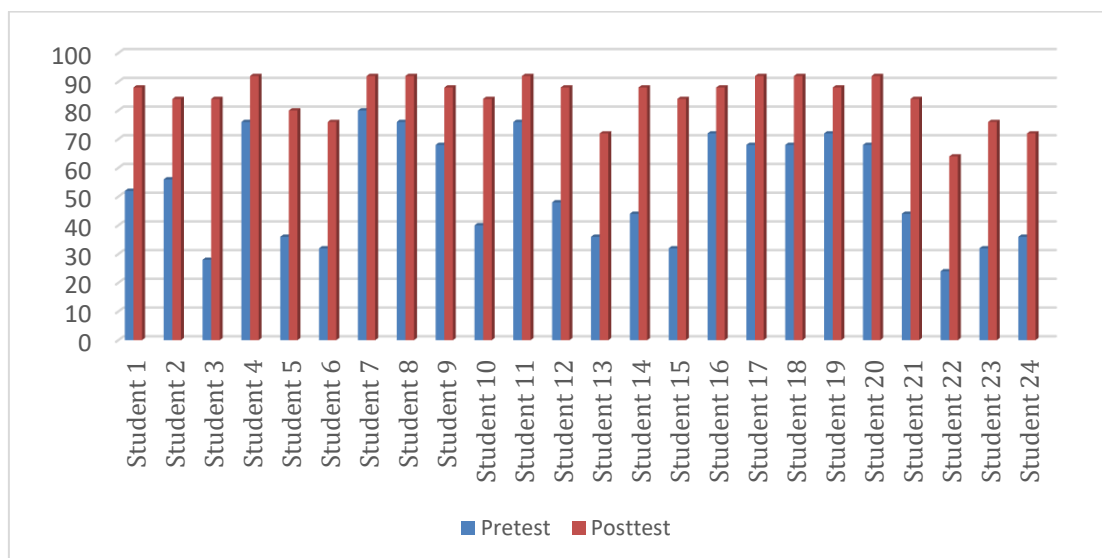


Chart 2. Results of Pretest-Posttest Large Group Trial

Small and large group trial results showed an increase in fifth-grade students' average reading comprehension ability as measured using a pretest-posttest. The small group trial showed an average increase of 23.334, and the large group trial showed an increase of 32.00. Based on the pretest results, six students achieved completeness with a score of > 70. Meanwhile, the posttest results showed that 29 students achieved the learning objective achievement criteria (KKTP). Thus, learning using gamification media based on the RADEC model increases the reading comprehension ability of fifth-grade students.

Furthermore, the results of the pretest-posttest were analyzed using t-test and n-gain. The following are the results of the t-test analysis.

Table 7. Results of Average Pretest-Posttest Small Group Trial

The Test	Average	Average Difference
Pretest	59,333	23,334
Posttest	82,667	

Table 8. Results of Average Pretest-Posttest Large Group Trial

The Test	Average	Average Difference
Pretest	52,667	32,00
Posttest	84,667	

Table 9. Results of Paired Sample T-test

The Test	Sig. (2-tailed)	Criteria
Small Group Trial	0,001	Significant Changes
Large Group Trial	0,000	Significant Changes

The paired sample t-test is used to see whether there is a difference in the average ability of students with the same respondent. The requirement for a significant difference is if the sig. (2-tailed) < 0.05 . Conversely, there is no meaningful or insignificant difference if the sig. (2-tailed) > 0.05 (Sukarelawa et al., 2024). Based on the results of the small group trial above, the sig. (2-tailed) = 0.001 < 0.05 . Meanwhile, the large group trial shows a sig. (2-tailed) = 0.000 < 0.05 . This means there is a significant difference between students' abilities before and after using gamification learning media based on the genially integrated RADEC model. The results of the n-gain analysis are as follows.

Table 10. Results of the N-Gain Test

The Test	Average Percentage N-Gain	Category
Small Group Trial	57,69%	Quite Effective
Large Group Trial	67,43%	Quite Effective

The N-Gain test can see an increase in the ability to read narrative text comprehension. The average analysis of N-Gain in the small group trial was 67.43%, and the large group trial was 67.43%. The analysis results show an increase in the reading comprehension of grade V students; as many as 10 out of 30 students (33.3%) are in the "high" category. Meanwhile, 20 out of 30 students (67.7%) were in the "moderate" category. Thus, the determination of the effectiveness of gamification based on the genially integrated RADEC model can be seen from the percentage of N-Gain, which is included as quite effective in improving the reading comprehension of narrative texts for fifth-grade students.

Another evaluation instrument, a user response questionnaire, was given to teachers and grade V students after learning using gamification media based on the genially integrated RADEC model. The user response questionnaire was measured using a Likert scale to assess 10 indicators. The teacher response questionnaire has five aspects: student involvement, ease of use, influence on understanding, teaching skills, and media flexibility. Meanwhile, the student response questionnaire contains five aspects: involvement, ease of use, reading comprehension ability, interest and motivation, and media quality. The following are the results of analyzing teacher and student response questionnaires on gamification media based on the genially integrated RADEC model.

Table 11. Results of the Response Questionnaire

Respondent	Average	Category
Teacher	100	Quite Effective
Students	89,87	Quite Effective

The teacher response questionnaire analysis results obtained an average score of 100. Meanwhile, the response questionnaire given to 30 students obtained

an average of 89.87. Thus, a gamification-based genially integrated RADEC model effectively teaches narrative text for grade V. In addition, there are suggestions for the product to be applied to other learning materials to improve students' literacy skills.

DISCUSSION

The development of gamified learning media based on the Genially platform, integrated with the RADEC (Read, Answer, Discuss, Explain, Create) model, presents a promising solution to improving fifth-grade students' reading comprehension of narrative texts. The validation process, involving material experts, media experts, and teacher practitioners, confirmed the media's high feasibility with an average rating exceeding 90%. This indicates that the media is well-suited for elementary school use. Genially's features, including interactive content, ease of use, and accessibility across devices, were effectively tailored to the RADEC model, ensuring engaging and structured learning experiences.

The pretest and posttest results demonstrated significant improvements in students' reading comprehension, with the N-Gain analysis categorizing the media as "quite effective." Students showed enhanced abilities in identifying main ideas, analyzing intrinsic elements, and drawing conclusions. These findings were consistent in small and large group trials, supported by statistically significant results from paired sample t-tests. This aligns with prior research by Lorenzo-Benítez et al. (2024), which highlighted gamification's potential to increase motivation and interest in reading through interactive and enjoyable learning environments.

One of the study's key strengths lies in integrating the RADEC model with Genially's gamification features. The RADEC model's structured phases—reading, answering, discussing, explaining, and creating—were seamlessly embedded into the gamified platform, encouraging critical thinking and collaborative learning. This approach goes beyond traditional gamification by emphasizing deeper cognitive engagement. Studies such as those by Nura & Hartati (2022) and Salam et al. (2023) confirm RADEC's effectiveness in enhancing literacy skills, while this research uniquely extends its application through interactive media.

This innovative approach also highlights the synergy between pedagogy and technology. Gamified features of Genially, such as levels, rewards, and interactive quizzes, provide a dynamic learning environment that keeps students motivated. Unlike previous studies that examined RADEC or gamification separately, this research combines the two, addressing challenges like student disengagement and the monotony of traditional learning methods. Castillo-Cuesta's (2022) findings on gamification's impact on comprehension further validate this integration, positioning the study as a novel contribution to literacy education.

This research reinforces the constructivist view that meaningful and engaging interactions with content foster better learning outcomes. By integrating gamification with RADEC, the study demonstrates how technology can transform passive learning into active and enjoyable experiences. This combination also aligns with motivation theories, showing how gamified elements like rewards and challenges can stimulate intrinsic and extrinsic motivation (Novita Sari et al., 2023; Maulidiyah et al., 2023).

The gamified media based on RADEC offers educators a flexible and scalable solution. Teachers can use Genially's ready-made templates to design lessons tailored to their student's needs, creating interactive and differentiated instruction. The leaderboard feature allows for efficient performance tracking, enabling teachers to provide timely feedback. This practicality makes the media accessible even in schools with basic technological resources, such as projectors and the Internet. This finding aligns with previous studies that show that digital media developed according to student needs has a high level of practicality (Batubara et al., 2023).

Despite its strengths, the study has certain limitations. The focus on narrative texts restricts its applicability to other types of texts, such as expository or argumentative texts. Expanding the scope to include various text genres would provide a more comprehensive approach to literacy development. Additionally, this study does not address the long-term retention of reading comprehension skills. Future research could explore the sustainability of these improvements through longitudinal studies and evaluate the media's effectiveness across diverse student demographics.

Based on these findings, several steps can be taken to maximize the study's impact. Schools are encouraged to adopt gamified learning media as part of their curriculum to promote interactive and engaging literacy education. Teachers should be provided with professional development programs to familiarize them with the RADEC model and Genially's features, ensuring smooth implementation. Policymakers should advocate for increased investment in digital literacy tools, recognizing their role in preparing students for the demands of 21st-century education.

CONCLUSION

This research successfully developed and implemented a gamification media based on the RADEC learning model to enhance fifth-grade students' reading comprehension of narrative texts. Throughout the ADDIE framework, each stage played a crucial role in shaping the outcome. In the Analyzing phase, the study identified significant challenges faced by students, such as disengagement and difficulties in understanding the main ideas within long narrative texts. This led to

recognizing the need for more engaging, technology-driven learning tools. The design phase focused on creating a detailed prototype that seamlessly integrated the RADEC model's phases (Read, Answer, Discuss, Explain, and Create) into interactive game-based activities using the Genially.com app. The Development phase involved rigorous validation by experts in material, media, and teaching practices, resulting in a highly feasible and refined media product with over 90% approval ratings. During the implementation phase, the gamified media was tested in small and large groups, demonstrating substantial improvements in students' reading comprehension scores, as evidenced by significant pretest-posttest gains (67.43%). Finally, the Evaluation phase revealed high satisfaction levels among teachers and students, affirming the media's effectiveness in fostering an engaging and effective learning environment.

The findings indicate that the integration of gamification with the RADEC model reinforces the premise that interactive and game-based learning strategies substantially enhance cognitive skills and motivation among young learners. This observation is consistent with existing literature, which underscores the positive effects of technology-enhanced learning on student engagement and comprehension. The significant improvement in reading comprehension scores validates the efficacy of gamification media based on the RADEC model as a viable educational tool. Additionally, the high satisfaction ratings from users suggest that such media can be effectively implemented in various educational environments to enhance literacy outcomes. However, it is important to note that this study is limited to narrative texts, which underscores the necessity for future research to examine the application of this approach across diverse text types and further develop students' digital literacy skills in alignment with the demands of 21st-century education. Overall, this gamification media represents a promising advancement in fostering interactive, enjoyable, and impactful learning experiences for elementary students.

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