

DEVELOPMENT OF A PROJECT-BASED LEARNING MODEL ASSISTED BY HEYZINE MEDIA TO IMPROVE JUNIOR HIGH SCHOOL STUDENTS' FANTASY STORY WRITING SKILLS

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Abstrak

Keterampilan menulis cerita fantasi pada siswa SMP masih cenderung rendah, salah satunya akibat terbatasnya media pembelajaran yang interaktif dan menarik. Penelitian ini bertujuan mengembangkan model pembelajaran Project Based Learning (PjBL) berbantuan media digital Heyzine untuk meningkatkan kemampuan menulis siswa. Pendekatan yang digunakan adalah penelitian dan pengembangan (Research and Development) dengan mengadaptasi model Borg & Gall yang dimodifikasi menjadi sepuluh langkah, meliputi: identifikasi kebutuhan, pengumpulan informasi, perancangan, validasi ahli, revisi awal, uji coba terbatas, revisi lanjutan, uji coba luas, perbaikan akhir, dan penyusunan produk final. Instrumen pengumpulan data mencakup observasi, wawancara, angket, dan tes menulis, dengan subjek uji coba terdiri dari 9 siswa pada kelompok kecil dan 23 siswa pada uji lapangan. Hasil validasi oleh dua ahli materi dan dua ahli media menempatkan produk pada kategori sangat layak digunakan di kelas. Uji efektivitas melalui perbandingan hasil tes sebelum dan sesudah penerapan menggunakan paired sample t-test menunjukkan nilai signifikansi 0,000 ($< 0,05$), menandakan adanya peningkatan hasil belajar secara signifikan. Produk akhir yang dihasilkan telah tervalidasi dan direkomendasikan untuk diterapkan secara luas dalam pembelajaran Bahasa Indonesia di tingkat SMP guna mendorong keterampilan menulis kreatif siswa.

Kata Kunci: *project based learning, heyzine, keterampilan menulis, pengembangan media*

Abstract

The writing skills of fantasy stories among junior high school students remain relatively low, partly due to the limited use of interactive and engaging learning media. This study aims to develop a *Project Based Learning* (PjBL) model supported by the digital media platform *Heyzine* to improve students' writing skills. The research employed a Research and Development (R&D) approach, adapting the Borg & Gall model into ten modified steps: needs analysis, information gathering, design, expert validation, initial revision, small-scale trial, further revision, large-scale trial, final refinement, and final product development. Data collection instruments included observation, interviews, questionnaires, and writing tests, with trial subjects comprising 9 students in the small group stage and 23 students in the field trial stage. Validation results from two subject-matter experts and two media experts classified the product as highly feasible for classroom use. The effectiveness test, conducted by comparing pre-test and post-test scores using a paired sample t-test, yielded a significance value of 0.000 (< 0.05), indicating a significant improvement in learning outcomes. The final validated product is recommended for wider implementation in Indonesian language instruction at the junior high school level to foster students' creative writing skills.

Keywords: project-based learning, heyzine, writing skills, media development

1. INTRODUCTION

Mastering fantasy writing skills at the junior high school level plays a crucial role in developing students' creative and imaginative literacy. Many students struggle to organize ideas into fantasy narratives with strong plot structures

and characters. The creative process of writing fantasy stories requires media and learning models that can stimulate students' imagination and innovation. Limited creative resources in schools lead to low student interest and low student output. This situation clearly requires new, more engaging and contextual approaches.

Digital technology offers great potential as an innovative creative learning medium. Digital *flipbooks*, for example, provide a rich visual and interactive experience. Developing digital media to support fantasy literacy is highly relevant.

Project Based Implementation Problem-Based Learning (PBL) has been proven effective in improving students' writing outcomes in various non-fantasy genres. (Dalimunthe et al. 2023) showed that the PBL model had a positive impact on the development of fantasy story writing skills in students at MTsN 2 Deli Serdang. Research by (Margawati 2021) also showed a significant increase in fantasy story writing skills in junior high school students in Depok after using PBL with film as a medium. However, most of these studies have not utilized interactive digital media. The absence of such media in the school environment creates opportunities for innovation. PBL enriched with interactive media is expected to enrich students' creative processes and writing outcomes. This study aims to explore the potential of integrating PBL with digital media. Initial findings indicate this model has significant potential to advance students' creative literacy.

Heyzine Media Flipbooks have been developed for interactive learning and proven valid and effective for elementary school subjects. Denisa and Astimar (2024) reported a validity score of 94.73% and high effectiveness in improving elementary school student learning outcomes. Furthermore, Munajah and Anggraini (2025) demonstrated that *Heyzine* increasing student engagement and understanding of Indonesian language materials in elementary schools. Unfortunately, the use of *Heyzine* to support fantasy story writing in junior high schools is still very minimal. This is the starting point of a *gap* that can be filled by implementing digital media in creative learning. The potential of animation, audio, and *hyperlinks* presented by *Heyzine* can enrich students' creativity. This medium provides an appropriate interactive

platform for the fantasy genre. Further exploration of this medium is urgently needed.

Recent reviews on fantasy writing show that research is still limited to traditional media such as films or worksheets. Nirmalasari and Yahya (2022) demonstrated that PBL using the film "*Ambilkan Bulan*" improves writing skills, but interactive digital media has not been studied. Pratiwi and Andriyani (2021) also demonstrated that PBL-based worksheets can improve students' fantasy skills with a high N gain. Although these data demonstrate the effectiveness of PBL, the benefits of digital media such as *Heyzine* have not been explored. This *gap* paves the way for more interactive media innovations. This study presents *Heyzine* as a new accompanying medium. The strategies developed are expected to improve the quality of fantasy writing more broadly.

SMP Negeri 4 Ngamprah has never implemented *flipbook media* Digital media in writing learning continues to rely on conventional printed materials. This lack of innovative media has the potential to hinder the development of students' creativity and digital literacy. School infrastructure is sufficiently supportive if digital media integration and teacher training are provided. This new learning environment offers significant opportunities for the development of creative literacy. Exposure to interactive digital media is expected to spark students' imagination and motivation. This approach can create a more dynamic fantasy writing experience. This innovation gap presents a significant opportunity to make a real contribution. The implementation of digital media is expected to change the paradigm of writing learning in schools.

Heyzine Potential The value of PBL as an interactive digital medium lies in its multimedia features, such as animation, sound, and *links*, that support students' imagination. These features can create a more immersive and enjoyable narrative writing experience. Furthermore, PBL offers a collaborative and reflective framework that

supports students' creative processes. The combination of these two elements is still rarely applied in junior high school fantasy writing. By utilizing digital technology, this research has the opportunity to create a new learning model. This model combines digital methods and media. Students' creative and collaborative aspects are expected to improve. Digital literacy and awareness of media are added value in learning.

Due to the dominance of traditional methods, many students struggle to create fantasy stories rich in imagination and coherence. Previous research has shown that PBL can improve story structure and ideas, but the limitations of interactive media still hinder students' full potential. This situation creates a gap between research findings and classroom learning practices. By incorporating *Heyzine media*, this model has the potential to bridge this gap. This implementation also allows for measurement of the impact on student motivation and the quality of student work. Implicitly, this study aims to enrich relevant digital approaches. If successful, students' experiences in fantasy writing could be significantly enhanced. This will make a new contribution to digital literacy practices in junior high schools.

This background demonstrates the urgency of developing a learning model that combines PBL and *Heyzine* for writing fantasy stories. The research gap is evident in the lack of similar studies at the junior high school level. This study focuses on the courage to integrate interactive digital media into the fiction genre. The potential of digital technology is expected to increase students' creative motivation. Previous studies have demonstrated the success of PBL in the fantasy genre, but not yet with digital media. This research has a strong theoretical and practical foundation. The findings of this study are expected to serve as a reference for digital creative literacy education in the modern era. Research contributions are expected to be innovative and widely applicable.

2. METHOD

This research uses a research and development approach (*Research and Development / R&D*) which focuses on creating a Project- Based learning model Learning (PjBL) assisted by *Heyzine media* to improve students' fantasy story writing skills. The development model used in this development process adapts the *Research and Development model. and Development (R&D)* from ' which not only focuses on product creation, but also evaluates the extent to which the product is effective when applied in real contexts through a series of validity tests and trials. The following is a diagram of the Research and Development (*R&D*) development model. and Development (R&D).

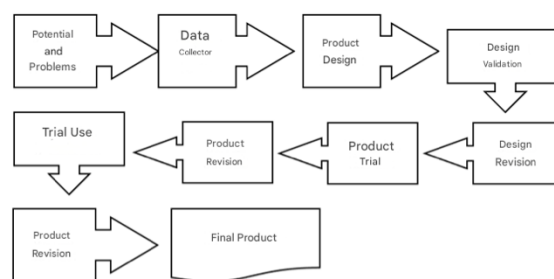


Figure 1: Model Research and Development (R&D) (Sugiyono 2017)

1. The initial stage in this research began with observation and interview activities involving Indonesian language teachers and students at SMP Negeri 4 Ngamprah to identify low fantasy story writing skills and the lack of innovative learning media.
2. Information gathering: Information was collected through literature studies, lesson plan documentation, syllabi, and in-depth interviews. This data was used to design a model that meets student needs.
3. Product Design, product development in the form of a draft PjBL learning model integrated with *Heyzine interactive media*. At this stage, *flowcharts*, learning scenarios,

and designs for the learning media to be used are prepared.

4. **Design Validation:** Validation involves two subject matter experts and two media experts assessing the product. The assessment covers aspects of content, language, graphics, and model usability. Validation aims to ensure the product's feasibility before testing.
5. **Design Revisions:** Based on expert input, improvements were made to the product design. Aspects revised included content, visual appearance, and the effectiveness of the learning media.
6. **Product Trial:** A trial was conducted on nine heterogeneously selected students. The goal was to determine the extent to which the product could be understood and applied in learning.
7. **Product Revision,** the results of small group trials are used as a basis for improving product weaknesses, both from a technical and pedagogical perspective.
8. A field trial was conducted with one class (approximately 23 students). The goal was to determine the model's effectiveness, efficiency, and broader appeal.
9. **Final Revision,** based on the results of field testing, the product is revised to be ready for wider application.
10. **Final Product,** the final product is in the form of a PjBL learning model with the help of *Heyzine* media which has been validated and proven effective in improving students' fantasy story writing skills.

Product testing involved three stages: individual (expert and 2 students), small group (9 students), and full class. Each stage was used to measure the product's acceptability, effectiveness, and appeal.

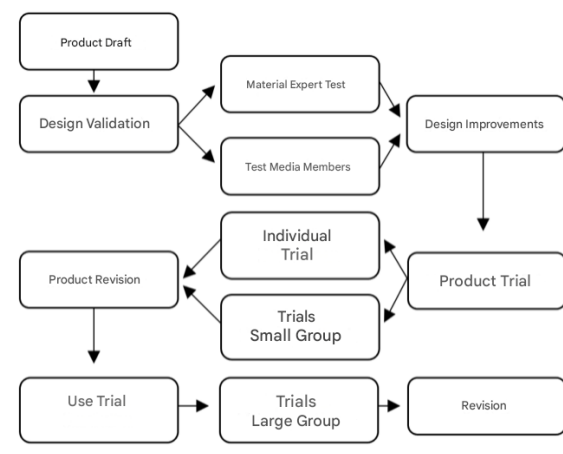


Figure 2. Usage Test Flow

The tools used in this study included observations to observe student behavior during the learning process, interviews to elicit responses from teachers and students, and questionnaires used to assess the media's suitability by experts and users. Additionally, written tests in the form of *pretests* and *posttests* were administered. applied to measure the improvement of students' writing skills. Documentation is also used as physical evidence of each stage in the product development process.

Analysis qualitative done on the data obtained through interviews, observations, and expert responses. The data analyzed in a way thematic For identify patterns certain as well as formulate development suggestions relevant products with need learning. Approach This allows researchers understand in a way deep context and meaning from information provided by respondents.

Analysis quantitative done in a way descriptive with use Likert scale on the interval 1–5 for evaluate eligibility product. Every the score given classified in accordance category assessment, start from very worthy to very much not worthy. Measurement results Then processed For produce percentage level eligibility to be base

in determine quality end product developed learning.

Table 1. Assessment Score Scale

Score	Criteria
1	Very Worthy
2	Worthy
3	Quite Decent
4	Not feasible
5	Totally Unworthy

Data from the questionnaire were then analyzed using percentage calculations using a specific formula.

$$P = \frac{\sum x}{\sum xi} \times 100\%$$

Information:

P = Percentage of trial results.

$\sum x$ = Total number of scores obtained.

$\sum xi$ = Total maximum score.

Based on the results of the percentage calculation, the data is then classified using a rating scale (*rating scale*) to determine the level of feasibility of the product being developed. The classification according to (Sukmariantika 2023) can be seen in the table below.

Table 2. Clarification of the Assessment Scale

Presentation	Implementation
0 - 20%	Totally Unsuitable for Use
20.1% - 40%	Not Suitable for Use
40.1% – 60%	Suitable for Use With Improvement
60.1% – 80%	Worth Using
80.1% - 100%	Very Worth Using

1. Effectiveness Test

Pretests and *posttests* were used to measure product effectiveness by comparing the trial

results before and after using digital comic media. The research design applied was a *pretest* and *posttest* group, which is described as follows:

O ₁	X	O ₂
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Description:

O₁ : *pre-test*

O₂ : *post-test*

X : treatment

(Arikunto, 2010:85)

To determine whether there are differences in results between before and after using the media, analysis was carried out using the *t-test formula*.

3. RESULTS AND DISCUSSION

The development of learning media in this study was carried out systematically through a research and development (R&D) approach designed to produce learning products with high validity, practicality, and effectiveness. All stages were carried out sequentially, starting from the process of identifying needs and problems to achieving a final product that was ready to be applied in learning activities. The results of each stage were analyzed descriptively to determine the product's contribution to improving students' fantasy story writing skills. The results of this research and discussion is arranged based on the sequence of development stages and is supported by field findings and data from various relevant sources.

Potential and problems were identified through direct observation activities at the school and in-depth interviews with Indonesian language teachers and seventh-grade students of SMP Negeri 4 Ngamprah. Initial findings indicate that students face obstacles in developing fantasy story texts, especially in building logical and creative plots, characterizations, and settings. Writing activities are still understood as merely copying or rewriting existing texts, rather than as an activity to express original ideas.

Teachers stated that writing instruction in the classroom is not supported by engaging and innovative media. The learning process tends to be teacher-centered and lacks meaningful writing practice. This situation has implications for student learning outcomes, as evidenced by the average score for fantasy story writing assignments remaining below the Minimum Completion Criteria (KKM). These findings are supported by findings in a study (Sugilestari 2022) which found that the use of conventional methods in writing instruction hinders students' creativity and imagination.

Analysis of the Lesson Implementation Plan (RPP) and syllabus documents revealed a lack of digital media integration in the delivery of fantasy text writing materials. Most activities involved reading sample texts and rewriting sections of the story. These results demonstrate that students require contextual and project-based learning to actively and enjoyably develop their writing skills.

Interview results also revealed that students exhibit a high level of interest in digital media and visual technology. Nearly all students have access to digital devices such as gadgets and computers and demonstrate enthusiasm for multimedia-based learning. These findings demonstrate the significant potential for integrating interactive media such as *Heyzine*, which presents fantasy story content in a digital flipbook format, complete with visuals and audio to support comprehension.

Project Based Learning Model Learning (PjBL) is the right approach to accommodate these needs because it encourages students to actively seek information, collaborate, and produce authentic products. According to previous research, PjBL has been proven effective in improving critical thinking skills and narrative writing skills because students are directly involved in the text creation process. Therefore, the integration of PjBL and *Heyzine* media has great potential to address the problem

of low fantasy story writing skills at SMP Negeri 4 Ngamprah.

The information gathering stage is carried out to obtain an empirical and theoretical basis in designing a *Project Based learning model. Learning* assisted by *Heyzine* media. Data were collected through literature studies, document analysis, and in-depth interviews with Indonesian language teachers. The literature study included a search for previous research results regarding the use of the PjBL model and interactive digital media in writing learning. The documents analyzed included the Learning Implementation Plan (RPP), syllabus, and annual program used at SMP Negeri 4 Ngamprah.

The analysis results indicate that learning to write fantasy narrative texts still tends to be conventional and does not engage students in creative thinking. Teachers reported that most students experienced difficulties in developing story ideas, organizing narrative structures, and utilizing linguistic elements appropriately. Interviews also revealed that digital learning media that optimally support project-based learning are not yet available. These findings align with previous research that emphasized the importance of integrating interactive technology in writing learning to improve student motivation and writing quality. The data obtained from this stage serves as the basis for designing a learning model relevant to the needs of students in the digital era.

The initial design of the product development was prepared by designing a *Project Based learning model. Learning* (PjBL) integrated with *Heyzine interactive digital media*. The purpose of this design is to provide an alternative learning method for writing fantasy stories that is more creative and contextual for students of SMP Negeri 4 Ngamprah. The learning flowchart is designed to systematically map the flow of student learning activities, from the project introduction stage to the presentation stage of the work results.

The learning scenario is structured based on the syntax of the PjBL model, which consists of six stages: defining fundamental questions, designing a project plan, developing an implementation schedule, monitoring the process, testing the results, and evaluating the learning experience. This design takes into account student abilities and characteristics and strengthens the interaction between teachers, students, and learning media.

Heyzine was chosen for its ability to present learning materials in an easily accessible and visually engaging interactive flipbook format. Interactive features such as audio, video, and quizzes make the material delivery more effective and foster student motivation. At this stage, essential elements such as learning objectives, student activities, digital teaching materials, and assessment rubrics were developed in detail to ensure students achieved their fantasy story writing competency.

Product design is based on the principles of material suitability to student needs and the effectiveness of the media used. The results of this stage serve as the basis for validation by experts before product trials are conducted on research subjects.

PjBL learning model development product. The interactive media *Heyzine* has met the criteria for content suitability, visual appearance, language, and usability before being further

tested on students. This validation aims to evaluate the initial product design and provide constructive feedback to ensure the product is of optimal quality and meets the needs of learning to write fantasy stories at the junior high school level.

Validation was conducted by two subject matter experts with backgrounds in Indonesian language education and two media experts with competencies in educational technology. Aspects assessed by the subject matter experts included the relevance of the material to learning outcomes, conceptual accuracy, and the material's meaningfulness for students. Meanwhile, the media experts assessed technical aspects such as clarity of display, layout, color selection, text and visual integration, and ease of navigation in using the *Heyzine* interactive media. This validation process aligns with the opinion of Rahmi, Hasibuan, and Wahyuni (2022), who emphasized the importance of expert involvement in testing the feasibility of digital learning media to ensure more objective and high-quality results.

Validation data was obtained through an assessment sheet instrument using a *Likert scale* of 1–4. The assessment was then analyzed using a percentage formula to determine the product's suitability category. Based on the assessment results, the following results were obtained:

Table 3. Results of Material Expert Validation

No	Assessment Aspects	Maximum Score	Score Obtained	Percentage	Category
1	Suitability of content to learning objectives	5	5	100%	Very Worthy
2	Conformity of content with curriculum	5	4	80%	Worthy
3	Accuracy and clarity of material	5	4	80%	Worthy
4	Language and sentence structure	5	4	80%	Worthy
5	The usefulness of the material for students	5	5	100%	Very Worthy
Total		25	22	88%	Very Worthy

Table 2. Media Expert Validation Results

No	Assessment Aspects	Maximum Score	Score Obtained	Percentage	Category
1	Visual appearance and design	5	4	80%	Worthy
2	Consistency and navigation	5	4	80%	Worthy
3	Suitability of media to material	5	5	100%	Very Worthy
4	Audio and visual quality	5	4	80%	Worthy
5	Ease of use by students	5	5	100%	Very Worthy
Total		25	22	88%	Very Worthy

The design revision process is a crucial step after the product validation stage. Based on suggestions and input from material and media experts, several aspects of the PjBL learning model design were revised. with the help of *Heyzine* media. The material experts' feedback included adjusting the fantasy story content to make it more contextual to the world of teenagers and paying attention to the structure and linguistic elements of the narrative text. Furthermore, the sequence of learning activities in the learning scenario was revised to be more systematic and support syntax. PjBL as a whole.

In terms of visual appearance, media experts recommend refining the *Heyzine media interface* to make it more engaging and interactive. This is achieved by adding multimedia elements such as high-quality illustrations, audio narration, and user-friendly navigation. Color and typography adjustments are also considered to ensure students' reading comfort when accessing digital learning media.

The effectiveness of the media in conveying the material was also a primary focus during the revision process. Some content deemed too dense was restructured to be more concise and understandable without compromising the learning essence. Adjustments were also made to the assessment section *within the media* to accurately measure learning outcomes and align with the indicators of fantasy story writing skills.

This revision ensures that the model and media are not only theoretically valid but also practically relevant. Thus, the developed learning

model is more applicable and adaptive to the needs of students at SMP Negeri 4 Ngamprah. All changes made are systematically recorded and retested before proceeding to the product trial stage. This is crucial to maintain the consistent quality of the developed product (Zahroh and Suyatno 2020) and.

Product trials are an important stage to determine the level of understanding, application, and attractiveness of the PjBL learning model. using *Heyzine* media before being widely implemented. This trial was conducted on a small group of nine eighth-grade students at SMP Negeri 4 Ngamprah. The selection of trial subjects was carried out heterogeneously, taking into account writing ability level, gender, and academic background so that the results obtained represent the diversity of students in the class.

The instrument used at this stage is a questionnaire. student responses and observations of learning activities. The questionnaire was given after students participated in learning using the models and media that had been developed. Aspects assessed in the questionnaire included: (1) ease of understanding the material, (2) attractiveness of the media display, (3) student involvement in learning activities, and (4) clarity of instructions and navigation in the *Heyzine media*.

The questionnaire results were analyzed quantitatively using a percentage formula for each indicator. The scores obtained were then classified based on eligibility categories according to.

Table 3. Product Trial Results

Rated aspect	Maximum Score	Score Obtained	Percentage (%)	Category
Ease of understanding the material	45	39	86.67%	Very good
The appeal of media displays	45	40	88.89%	Very good
Involvement in learning activities	45	38	84.44%	Very good
Clarity of instructions and media navigation	45	37	82.22%	Very good
Total Average	180	154	85.56%	Very good

Based on the results above, an average percentage of 85.56% was obtained, which falls into the Very Good category. This indicates that the developed product is easy to understand, visually appealing, actively engages students, and is easy to operate. Student feedback also indicates that *Heyzine media is effective*. help them understand the structure and elements of fantasy stories more enjoyably.

These results form the basis that the learning model and media are suitable for use on a wider scale, but still require minor improvements based on suggestions from students, such as adding examples of fantasy stories and variations in interactive activities in the media.

The product revision stage was carried out after small group testing on nine students with diverse academic abilities. The trial results showed that the interactive learning media based on *Heyzine*, integrated into the *Project- Based Learning* (PjBL) has functioned optimally in delivering material and capturing students' attention. The average score obtained from the student response questionnaire reached 85.56%, which is included in the "very good" category based on the assessment criteria used.

Although no substantial deficiencies were found in terms of content or visual appearance, the development team still made minor revisions to improve the overall quality of the product. Improvements were made to the placement of navigation icons to make them more intuitive, and several illustrations were replaced to better

align with the learners' local cultural context. These revisions did not alter the primary structure of the learning model or the content, but rather focused on readability and ease of use for students.

The decision to make minor revisions was supported by the opinion of media experts who stated that visual aspects play a crucial role in maintaining student focus in digital-based learning. Meanwhile, material experts assessed that the learning content met the basic competency indicators and objectives of Indonesian language learning, particularly in the skill of writing fantasy narrative texts.

Revisions at this stage are more technical refinements aimed at improving the product's usability, rather than addressing major deficiencies. This demonstrates that the initial product design meets the feasibility criteria from a pedagogical, technological, and aesthetic perspective. The product is deemed ready to proceed to a larger-scale trial phase.

The trial usage stage is an important step to assess the extent to which the product has effectiveness, efficiency, and appeal in its application in learning after going through a series of validations and initial revisions. At this stage, the product was tested in an experimental class consisting of 23 students of SMP Negeri 4 Ngamprah. The main focus of the trial was to identify the extent to which *Heyzine* -based learning media was able to improve students' abilities in writing fantasy stories after the

learning process using the *Project-Based model. Learning*) which is integrated with digital media.

Before the lesson, students were given a pretest to measure their initial fantasy story writing skills. After learning using interactive media products, students were given a similar posttest. *Pretest and posttest scores analyzed using paired statistical tests sample t- test* with the help of the SPSS application to determine significant differences between the results before and after treatment.

Research Hypothesis

Null hypothesis (H_0): states that there is no significant difference between the *pretest results* and *posttest* after using *Heyzine -based interactive learning media*. Conversely, the alternative hypothesis (H_1): states that there is a significant difference between the pretest and posttest scores after implementing the learning media.

Decision Making Criteria

If the significance value (*Sig. 2-tailed*) is less than 0.05, then the null hypothesis (H_0) is rejected and the alternative hypothesis (H_1) is accepted. However, if the significance value is equal to or greater than 0.05, then the null hypothesis is accepted and the alternative hypothesis is rejected.

Table 4. t- Test of Usage Trial

Paired Samples Test			
			Pair 1
			Pretest - Posttest
Paired Differences	Mean		-81,870
	Standard Deviation		7,968
	Std. Error Mean		1.661
	95%	Lower	-85.315
	Confidence Interval of the Difference		
		Upper	-78.424
	t		-49.279
df		22	
Sig. (2-tailed)		.000	

Based on the analysis results, a significance value (*2-tailed*) of 0.000 was obtained, which is

far below the significance limit of 0.05. This finding indicates a significant difference between the *pretest scores*. and *posttest* students. Therefore, the null hypothesis (H_0) is rejected and the alternative hypothesis (H_1) is accepted.

The significant difference in mean scores (81.870 points) demonstrates that the use of *Heyzine -based learning media* integrated into the PjBL model significantly improved students' fantasy story writing skills. These results reinforce previous findings that integrating interactive media into the learning process has a positive impact on student learning outcomes.

Final revisions were made after the large-group trial phase was completed. Feedback was obtained from teacher observations, student responses, and quantitative and qualitative data analysis, including *paired-end statistical tests. sample t- test*. Findings during the implementation of the learning showed that the Heyzine- based learning media in the PjBL model had run well and was effective in improving students' fantasy story writing skills.

Although the product has generally demonstrated high effectiveness, several improvements have been made as a commitment to quality. These improvements include:

- Adjust the sentences in the assignment instructions to make them more concise and easier for students to understand.
- Adding visual elements to *Heyzine media* to increase the attractiveness of the learning page.
- Aligning learning time in each session to suit the ideal duration of class activities.

This revision was conducted based on input from Indonesian language teachers and reflections from the pilot testing process. This step aims to ensure that the learning product is fully developed and ready for wider implementation or even adoption across schools.

The final result of this research is a *Project Based learning model. Learning* supported by the use of interactive media *Heyzine*, which is

designed to improve the fantasy story writing skills of junior high school students. This product has gone through all stages of development starting from identifying needs, collecting information, designing, validating by experts, individual and group trials, and final revisions based on field data.

This model is designed as a thematic learning unit that utilizes *Heyzine* -based interactive *flipbook digital media*. The media is integrated into a project-based learning flow with a systematic learning scenario, including: determining the project theme, planning, implementing, and publishing the results of students' fantasy story writing.

The main advantages of this product lie in:

- a. Digital integration, the use of *Heyzine* allows students to learn through interactive, visual, and easily accessible media.
- b. Active learning, the PjBL model encourages active participation of students in the learning process and the production of real works in the form of fantasy stories.
- c. Tested effectiveness, based on the results of the *t- test statistical test*, this product is proven to significantly improve students' writing skills (Sig. 0.000 < 0.05).

The final product can be concluded as feasible, engaging, and effective for use as a learning medium and model for developing writing skills, particularly fantasy narrative texts. It also has the potential to become an innovative alternative solution for Indonesian language learning in the digital age.

DISCUSSION

Teaching fantasy writing at the junior high school level often faces limitations in media and methods that do not stimulate students' creativity. Previous research has shown that the use of *Project Based Writing Learning* (PjBL) effectively improves writing skills, as reported by Margawati (2021) through the integration of PjBL and film media, and Pratiwi and Andriyani

(2021) who developed PjBL -based Student Worksheets. Despite the positive results, the media used are still conventional and have not fully utilized the potential of interactive technology. This study offers a new approach by combining PjBL and the digital media *Heyzine*, which is specifically designed to spark imagination and facilitate creative writing learning.

The use of *Heyzine* in this study is a major advantage because it combines text content, illustrations, audio, and interactive navigation in a digital flipbook format. Unlike print media or films, *Heyzine* allows students the freedom to interact with the material independently or collaboratively. This aligns with the findings of Setiawan and Mulyasa (2022), who emphasized that interactive digital media can increase student engagement and understanding. The integration of multimedia features makes writing learning oriented not only toward the final product but also toward a continuous creative process.

The trial results in this study showed a significant increase in fantasy story writing skills, with the difference between pretest and posttest scores reaching 81.87 points. This significant increase exceeds several similar studies using non-interactive media, which generally show lower score increases. The high effectiveness was also evident in student responses, which placed this media in the "Very Good" category for aspects of ease, appeal, and engagement. This success indicates that the combination of PjBL and *Heyzine* provides a dual stimulus: the encouragement of active participation from the PjBL method and the visual and interactive appeal of digital media.

The feasibility of the developed product has been validated by material and media experts with an average score of 88%, indicating suitability in both content and technical aspects. These results confirm that the product is not only empirically effective but also meets academic quality standards and learning technology. Unlike

the research of Munajah and Anggraini (2025) which focused on the use of *Heyzine* at the elementary school level, this study expands its implementation to the junior high school level by adapting content relevant to adolescents. This adaptation ensures the media remains contextual while challenging students to develop original fantasy story ideas.

The approach used in this study also considers the sustainability of learning by integrating technology accessible through students' personal devices. This affordability and flexibility of access make *Heyzine* a medium easily implemented in schools with limited facilities, as long as basic digital devices are available. This advantage adds value compared to previous research that used media that required more complex infrastructure or high production costs. The resulting learning model can be replicated in various schools with minimal modifications, thus potentially becoming an applicable innovation in the field of digital literacy education.

4. CONCLUSION

Learning model based on Project Based Learning (PjBL) with interactive media support *Heyzine* show effectiveness tall in increase skills write text story fantasy junior high school students. Validation results by two experts material and two media experts placed products in the category very high eligibility, including suitability content, clarity language, visual quality, and usability for learning. Trial scale small and big give proof existence improvement understanding concept, ability develop ideas, as well as involvement active student in every stage learning. Improvement the show that integration approach PjBL with interactive digital media capable create experience learn more meaningful, creative, and participatory. Analysis effectiveness with *paired sample t-test* produce mark significance of 0.000 (< 0.05), which confirms existence difference significant between

pretest and posttest results. Differences This indicates impact real use of models against quality results work write students, good from aspect structure story, use language, as well as creativity. Based on proof empirical mentioned, the PjBL model based *Heyzine* No only worthy used but also recommended as a learning strategy innovative that can implemented in a way more wide in Indonesian language learning at junior high school level for push skills write creative student.

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