ELTIN JOURNAL:
Journal of English Language Teaching in Indonesia
p-ISSN 2339-1561
e–ISSN 2580-7684

DEVELOPING THE LEARNING MEDIA THROUGH TEACHMINT BASED ON FLIPPED LEARNING IN LITERAL READING COURSE

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Received: January 28, 2025; Accepted: Agustus 10, 2025

ABSTRACT

This study aims to develop a practical reading learning media using Teachmint application in the Literal reading Course for English education students at UIN Maulana Malik Ibrahim. The need for this development arises from students' difficulties in finding suitable and practical materials for the course. To foster interactive teaching and learning activities, the study integrates the Teachmint platform with the Flipped Learning model. This study employed a Research and Development (R&D) method using the ADDIE model. The participants were third-semester English education students at UIN Maulana Malik Ibrahim. Data were collected through interviews, validation sheets, questionnaires, and documents. Interview and document data were analyzed qualitatively to identify needs, while validation sheets and questionnaires were analyzed quantitatively to assess the product's validity and practicality. The results of the validity test indicate that the use of Teachmint as a learning medium within the Flipped Learning model meets the criteria for excellent content and media validity, with an average value of 93.78%. In addition, the results of the practicality test revealed that 86.24% of respondents thought this learning media was extremely useful. These findings suggest that the developed learning media is both valid and practical for use in Literal Reading instruction.

Keywords: Development, Flipped Learning, Learning Media, Teachmint

A. INTRODUCTION

The development of society 5.0 has a major impact on the world of education (Setyo, 2023). The transition from the industrial revolution 4.0 to society 5.0 is closely related to technological advances such as artificial intelligence (AI), computing, and industrial robotics based on the Internet of Things. In this era, society, including the younger generation, particularly students is highly dependent on information, communication, and internet technology. According to the *We Are Social report* (2024) Indonesia had 185 million internet users in January 2024, equivalent to 66.5% of the total national population. There was an increase of around 1.5 million internet users in Indonesia at the beginning of this year or an increase of 0.8% compared to January 2023. Thus, education in Indonesia must be able to

collaborate with technology that is creative, innovative, adaptive, and competitive to produce superior and quality human resources. This aligns with the values emphasized in Surah Al-Ankabut [29:43], which highlights the importance of knowledge and reflection (Kiptiyah et al., 2022)." The power in the verse can be interpreted as progress in science and technology. With these two components, humans can explore the world, outer space, and cross the boundaries of space and time (White, 1998). According to Aljaraideh (2019), technology-based education is a system that utilizes technology extensively in the teaching and learning process, where the transfer of knowledge is dominated by the use of technology. This changes the learning paradigm where books are not the only source of reference, and teachers or lecturers are not the only providers of learning materials.

At the State Islamic University of Maulana Malik Ibrahim Malang, the use of communication, information, and internet technology has become an inevitable part of learning, including as a means of online classes, sharing materials, managing schedules, uploading assignments and grades, and as a learning resource. However, there are still many lecturers who have not utilized technology-based media to develop learning media (Sudarsana et al., 2020; Amaliyah, 2023), including in courses such as Literal Reading in the Study Program (Isnaeni & Hidayah, 2020). This is because the learning technology used is limited to several platforms such as Zoom (Silalahi et al., 2022), G meet (Priyastuti, 2023), e-learning (Ardini et al., 2020), e-modules (Khasanah & Untari, 2022), and PPT. This course focuses on the ability to decipher the meaning of words, phrases, and sentences in the text, as well as to understand the structure and context in depth for students. To bridge the problems and needs that occur in reading learning, researchers are interested in developing learning media with the Teachmint application platform (Sulastiani & Rusdiyani, 2023).

Teachmint application is a new and innovative company that presents the latest solutions in complete learning through one mobile platform (Thakur, 2021). With Teachmint, teachers and students can connect both in and out of class, and have a learning management system (LMS) that makes it easy to plan, distribute, and manage learning materials online (Kasiuhe et al., 2023). Teachmint features include quizzes (Sanjaya et al., 2024), learning recordings, digital whiteboards (Matban, 2023), live communication, and student attendance monitoring, enriching the online learning experience. In addition to using the Teachmint application, researchers are interested in using the concept of flipped learning. Flipped learning is a learning strategy that integrates classroom sessions with online learning (Fatmawan et al., 2023). According to Korolija et al. (2005), this concept changes classroom activities, such as material presentations, assignments, exercises, and homework, into online learning. assignments, exercises, and homework, into online learning. For example, instead of students having to follow a direct explanation from the lecturer about the topic of accounting (Chorlay, 2022), the material is recorded in the form of a video that must be watched by students before the lecture session (Nainggolan et al., 2024). Thus, in the classroom, the focus of learning is more emphasized on student interaction with case studies, problem solving, practice, and discussion, so that learning becomes more student-centered (Hannafin & Land, 2000). The main principle in flipped learning is to move activities that are usually homework, such as exercises, case studies, and problem solving, into the classroom, while the presentation of material by the lecturer is delivered via video as homework. This forms the basis of the flipped learning concept (Sunarto et al., 2023; Hasriadi, 2022).

Based on the explanation that has been described, this study aims to develop a practical reading learning media using the Teachmint application in the literal reading course for English education students at UIN Maulana Malik Ibrahim Malang. This development is intended to address the lack of suitable and practical learning media currently available for the course. Therefore, a pedagogical innovation is necessary to create more engaging and effective teaching and learning experiences, particularly through the integration of digital platforms such as Teachmint (Sunarto et al., 2023).

B. METHOD

This study employs a Research and Development (R&D) method, which aims to produce a specific product and test its effectiveness (Sugiyono, 2018). The study adopts the ADDIE design, a widely used instructional design model for developing educational products, especially in e-learning and distance learning contexts (Branch, 2009). The ADDIE model consists of five stages namely Analysis, Design, Development, Implementation, and Evaluation—each involving continuous evaluation to ensure that the developed product meets learners' needs, instructional goals, and assessment standards (Beal, 1950). This development process also included both validation and practicality trials to ensure its quality (Prasetyo et al., 2020). The subjects of the trial in this study were 3rd-semester English Education students at UIN Maulana Malik Ibrahim Malang. During the trial process, students were divided into several evaluation stages based on the prototype of the product being developed.

This development research involved both qualitative and quantitative data. Qualitative data were obtained from the responses of material experts and learning media experts. In addition, qualitative data were also gathered through open-ended questionnaires and interviews with 10 students during the one-to-one evaluation process. These qualitative data consisted of assessments, responses, criticisms, and suggestions they provided. Meanwhile, quantitative data were collected during the small-group evaluation by distributing closed and structured questionnaires to 35 randomly selected students. The questionnaire covered specific points related to product assessment, particularly regarding the practicality of the learning media and the flipped learning model. Closed and structured questionnaires were also administered to 68 students during the field test.

To provide a clearer understanding of how the product was developed, the following section outlines the procedures carried out in each stage of the ADDIE model. At the analysis stage, a needs analysis related to the problem was carried out in the form of a preliminary study conducted using an unstructured interview technique with 10 English education students. At the design stage, the design and sketch of learning media were carried out. At the development stage, a development process was carried out in the form of compiling teaching materials and media validation and development testing by expert validators. At the implementation stage, a one-to-one test was carried out on prototype 1 and then refined into a prototype 2 product which was carried out on a small group, consisting of 35 English education students. And at the evaluation stage, an evaluation of prototype 3 was carried out. The process was carried out with a field test which tested the practicality of using the product through the questionnaire sheet provided. While, the product validation process involves several experts who directly try the development product. In addition, experts are also asked to fill out a questionnaire designed to assess the suitability of learning materials with previously determined indicators. Quantitative data obtained from the questionnaire are then

analyzed using a certain formula to calculate the level of product validity. To find the average, it can be calculated using the following formula:

$$\bar{x} = \frac{Achieved\ score}{Maximum\ score} \times 100\% \ldots. (1)$$

The process of converting scores from raw data into scores that correspond to the questions can be seen in detail in Table 1.

Table 1. Validation Criteria (modified)

Achievement Criteria	Category	Explanation
81% - 100%	Very Valid	Can be used without revision
61% - 80%	Valid	Can be used for minor revisions
41% - 60%	Less Valid	Can be used for major revisions
<40%	Not Valid	Cannot be used

Source: (Arikunto Suharsimi, 2013)

Product practicality data was obtained from a questionnaire filled out by students. This questionnaire uses a Likert scale to measure various aspects of practicality. The collected data was then analysed. Quantitatively using a formula adapted from research (Sugiyono, 2018). The results of the calculation of the percentage of learning implementation as an indicator of product practicality can be seen in table 2.

Table 2. Criteria for assessing the practicality of the Product

Percentage Interval	Score
81% - 100%	Very Practical
61% - 80%	Practical
41% - 60%	Quite Practical
21% - 40%	Not Practical
<20%	Very Not Practical

Source: (Sugiyono, 2018)

C. FINDINGS AND DISCUSSION

The development process followed the ADDIE model, which consists of five stages namely Analysis, Design, Development, Implementation, and Evaluation. The results from each stage of the development process are presented and discussed in detail as follows:

1. Analysis Stage

The researchers conducted the analysis stage through a preliminary study by conducting unstructured interviews with 10 English education students in 3rd semester. At this stage, the researchers identified that 3rd semester English education students still heavily rely on direct explanations from lecturers during synchronous sessions due to the lack of application-based learning media or websites that are easy to operate before the learning begins. This reliance signals that students are not adequately supported to engage in self-directed learning, which

is a crucial component of flipped learning. Furthermore, the absence of practical, accessible teaching materials and user-friendly digital media tailored for flipped classroom implementation has hindered the development of independent and active learning behaviors. These finding align with the findings of Suka (2023) that showed that a flipped classroom model supported by the Teachmint significantly improved students' critical thinking skills, yielding a moderate N-Gain score of 0,44 and receiving a positive response of 73% from participants. Similarly, Aini et al. (2024) demonstrated that use of Teachmint based media in senior high school economics classes led to higher student achievement and improved engagement. These empirical findings highlight that when digital tools are intuitive, interactive, and integrated with relevant learning materials, they can significantly enhance the effectiveness of flipped learning model. Consequently, the preliminary results of this study provide a strong rationale for moving forward to the product design phase, where the development of a practical, application-based digital learning media tailored for flipped learning will be prioritized to address these identified gaps.

2. Design Stage

At this stage, the researchers began to design the product in the form of an e-module in the Teachmint application that the content was based on the RPS but adapted using English texts appropriate for third-semester students. Previously, the module design also went through the process of formulating the competencies to be achieved. The next process is the design of the learning concept. In designing the learning concept, the researcher emphasized the Flipped Learning method or learning before the material in class. The design stage resulted in two key outputs. The first was the module design, which provided a detailed outline of the e-module structure. This structure consisted of several units that focused on essential reading skills, including vocabulary acquisition, paragraph structure, skimming and scanning, applying previewing strategies, and understanding compound nouns. The second output was content sourcing, which involved selecting and collecting relevant English texts and multimedia resources from various scholarly and digital references. These materials were intended to support the development of the learning content and ensure that the module aligned with the students' needs and the targeted learning objectives.

3. Development Stage

In this stage, the product designed in the previous phase was developed into a functional e-module integrated into the Teachmint application. The product, named Teachmint and E-module, was created in the form of an application and website with an approximate size of 40 MB. The development process was carried out in three phases: pre-production, production, and post-production. In the pre-production phase, the researchers gathered various reference sources to serve as the basis for preparing learning materials and designing the module. They also explored and tested the accessibility of the Teachmint application to ensure its feasibility as a learning platform. While, during the production phase, several materials from the lesson plan (RPS) were selected and compiled into the e-module using English suitable for third-semester English Language Education students. The materials were then designed and edited using the Canva application to produce visually engaging content. After the editing process, the materials were reviewed for content accuracy, and the usability of the Teachmint application for classroom activities was also tested. In the post-production phase, the researchers finalized the e-module and submitted it to expert validators to assess its accuracy and suitability for instructional use. The Teachmint application itself was also reviewed by the validators to ensure its appropriateness as a

delivery platform. The following is a description of the features of the Teachmint application and e-modules:

Table 3. Teachmint App Storyboard

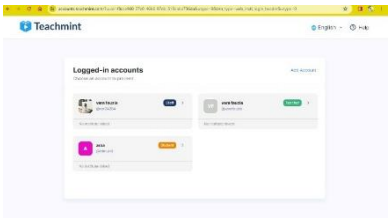
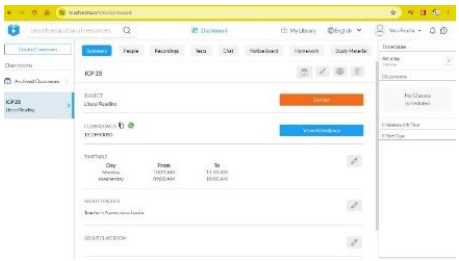
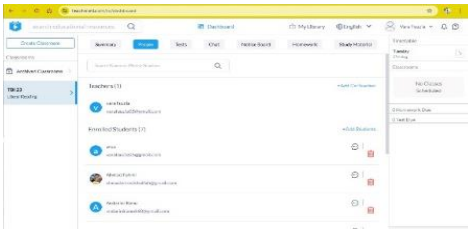
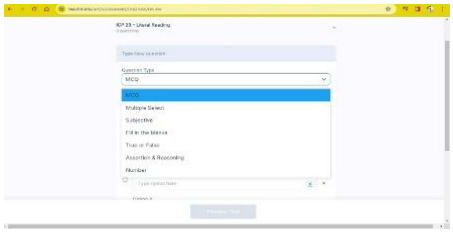
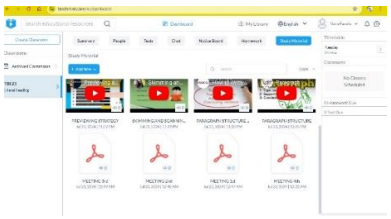
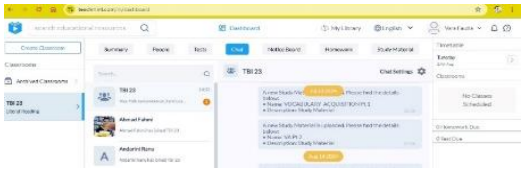
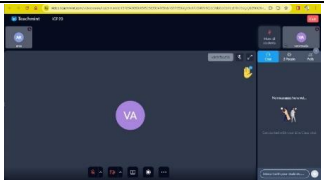
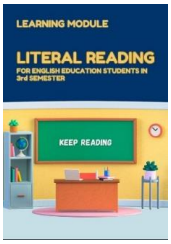
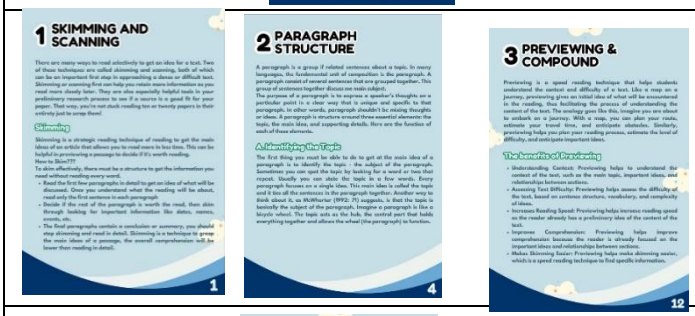
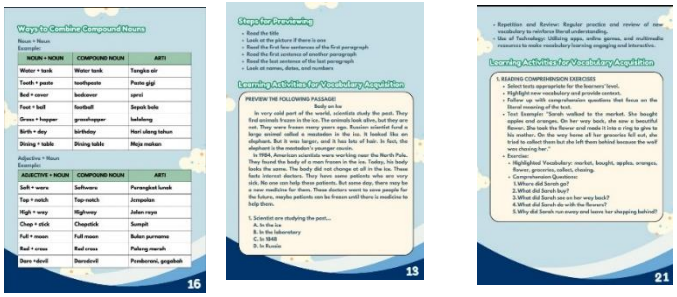
Appearance	Description
	Login Page
	The Home Page or Dashboard contains information related to the course, namely the class code and when the learning hours are held. This page also contains other information, such as about the teacher and the class itself.
	The “People” feature contains data on students and lecturers who join the class. Lecturers can share the class code with students so they can join through this feature.
	In the “Test” feature, there are various types of questions or assessments that can be done by students. Lecturers are facilitated to create various variations of questions in the feature.
	The “Material” feature contains materials that can be accessed by lecturers and students in various forms, such as videos, texts, and others.
	In this “chat” feature, students can exchange information without having to open another application.
	The “Live Class” feature is an online class feature like the Zoom application.

Table 3 presents the storyboard of the Teachmint application, which outlines the main features integrated to support the e-module. The Login Page provides secure access for users, leading to the Home Page or dashboard that displays course information, class codes, schedules, and lecturer profiles. The People feature manages class participants, while the Test feature allows lecturers to create assessments and students to submit their answers. The Material feature offers access to various learning resources, and the Chat feature enables direct communication among users. Lastly, the Live Class feature supports real-time virtual meetings. Together, these features create a comprehensive platform for delivering and managing the e-module effectively. To ensure that the learning materials are well-organized and aligned with the course objectives, the researchers designed a storyboard for the Literal Reading e-module. This storyboard outlines the structure and content flow of the e-module, illustrating how the materials, activities, and assessments are presented to support students' learning. The storyboard serves as a blueprint for the development process, ensuring that each component contributes to achieving the intended learning outcomes.

Table 4. Literal Reading E-module storyboard

Appearance	Description
	Cover view of the e-module for the Literal Reading subject
	The Introduction page contains learning objectives, discussion focus, and learning outcomes.
	The next page contains materials that are covered in the Literal Reading course, namely Skimming and Scanning, Paragraph Structure, Foreword and Compound, and Vocabulary Acquisition.
	The learning activity page contains questions that help students better understand the material that has been taught.

	The reference page contains sources of material taken from books, journals, and websites.

Table 4 presents the storyboard of the Literal Reading e-module developed for English Education students. The e-module begins with a cover page that introduces the course title, followed by an introduction page outlining the learning objectives, discussion focus, and expected learning outcomes. The main content section presents key materials of the Literal Reading course, including Skimming and Scanning, Paragraph Structure, Foreword and Compound, and Vocabulary Acquisition. To reinforce students’ understanding, the e-module also includes a learning activity page containing various practice questions related to the materials. Finally, the reference page lists the sources used in developing the materials, which include books, journals, and reputable websites. This structured design ensures that the e-module supports students’ learning systematically and comprehensively.

After finishing the storyboard design, the next step was content validation. This stage aimed to check whether the content and structure of the e-module matched the planned learning objectives. The validation process followed the framework proposed by Widyahening (2018). Before being tested, the developed product went through this validation to measure its level of validity. Validation questionnaires were given to material experts and learning media experts. The results of their assessments are presented below.

Table 5. Content/material validation results

Statement	Score
Learning objectives aligned with target competencies	5
Learning objectives are clearly stated on the first page	5
Materials are in accordance with learning objectives	5
Learning materials are easy to understand	5
Materials are presented systematically, theoretically, and structured	5
Materials are presented completely	5
Materials are given using special formulas to make them easier to understand.	5
In theory, the material is given correctly	4
The examples are presented in a simple and straightforward way	5
Examples given make it easy to understand the learning material	5
Discussion of each example is easy to understand	5
Clear material references	5
Presentation of material can provide a comprehensive understanding to users	5
Sentences used are clear and easy to understand	5
Acquisition Score	69
Maximum Score	70
Percentage	98.57%

The content validation results show that the developed e-module achieved a total score of 69 out of 70, resulting in a validity percentage of 98.57%. This score places the product in the "very valid" category, indicating that the content is accurate, comprehensive, and well-aligned with the intended learning objectives. The consistently high scores across almost all indicators suggest that the materials are theoretically sound, clearly structured, and easy to understand for the target learners. These findings confirm that the e-module is highly appropriate for use without major revision, supporting Tomlinson's (2017) view that expert-validated materials enhance instructional reliability and user trust.

In addition to the high validation score, there were several suggestions from the experts to improve the quality of the e-module. They recommended (a) including more diverse text types in the examples and exercises to better prepare students for various academic writing formats, and (b) correcting minor errors in typing and writing mechanics. These suggestions were incorporated into the refinement process to ensure that the final version of the e-module meets both content and usability standards (Richards, 2006). The following section presents the results of validation conducted by media experts.

Table 6. Media Expert Validation Results

Statement	Score
I can easily access the Teachmint application anytime and anywhere.	5
The Teachmint application is easy to use without the need for additional guidance.	4
The appearance of the Teachmint application is very user friendly and easy to understand.	5
I can easily manage and access learning materials through the Teachmint.	3
The Teachmint application provides all the features I need to learn Literal Reading.	5
Literal Reading learning becomes more effective with the use of the Teachmint.	3
The Teachmint facilitates effective interaction between me and the lecturer.	4
The video and audio quality on the Teachmint is very good and supports learning.	5
The Teachmint application provides flexibility in time in accessing learning materials.	5
The discussion feature on the Teachmint helps me to discuss with classmates.	5
The Teachmint makes it easy for me to manage and submit assignments.	5
The Teachmint application operates quickly and rarely lags.	4
Notifications from the Teachmint really help me in remembering schedules and assignments.	4
The reminder feature on the Teachmint helps me to remember assignment.	3
All the learning features needed are available in the Teachmint application.	5
Using the Teachmint helps me understand the Literal Reading material better.	5
The evaluation and quiz features on the Teachmint app are very helpful in assessing my understanding.	5
I have used Teachmint in the learning process.	4
The Teachmint can be integrated with other platforms that support learning.	5
Overall, I am satisfied with using the Teachmint for Literal Reading learning.	5
Acquisition Score	89
Maximum Score	100
Percentage	89%

Based on the media expert validation, the e-module scored 89%, which falls within the “very valid” category (81%-100%). This high score indicates that the module is visually and functionally appropriate for use and without requiring major revision (Arikunto Suharsimi, 2013). This aligns with Harahap & Eska (2022) who reported around 90% media validity in computer-based learning tool and Apriyus et al. (2020) who found 87% media feasibility in interactive vocational larning media. These studies support the argument that the 89% validation score is not merely a number but a representation of the module’s practical and visual readiness for implementation.

Table 7. Results of validity instruments

Assessment Aspects	Score	Mark %	Category
Content/material expert validation instrument	69	98.57	Very Valid
Media expert validation instrument	89	89	Very Valid
$\bar{x}$		93.78	Very Valid

Based on the results of the validity test, the Teachmint-based flipped learning media achieved a 93,78% validity score, which falls into the “very valid” category. This high score indicates that the content and media design are aligned with curriculum, are easy to understand, and effectively support learning objectives (Arikunto, 2013). Based on these findings, it can be concluded that the Teachmint-based e-module is highly suitable for use in the Literal Reading course for 3rd semester English Education students at UIN Malang, and does not require further revision.

4. Implementation and Evaluation Stage

After the validation process by material experts and learning media experts, the Implementation stage was carried out to produce Prototype, followed by the Evaluation stage to produce the final product. During these two stages, product trials and field trials were conducted to gather students’ responses to the development of the Teachmint learning media using the flipped learning model for third-semester English Education students. This process involved distributing a questionnaire to assess the practicality of the platform. The product trial process consisted of two stages. In the initial trial, 35 third-semester English Education students were given a questionnaire to evaluate the practicality of the Teachmint application and the e-module, with the aim of obtaining preliminary data on product usability.

Based on the results of this initial trial, necessary improvements were made. The revised product was then tested in a field trial involving all 68 third-semester English Education students to confirm the initial findings and ensure the product’s readiness for broader implementation. The data obtained from students were quantitative, using a 1–5 scale. The evaluation focused on assessing the practicality of the Teachmint application. The results of the assessments from both the small-group and large-group trials are presented as follows.

Table 8. Results of student responses

Respondents	Mark%	Category
Small Group	85.14	Very Practical
Big Group	87.35	Very Practical
$\bar{x}$	86.24	Very Practical

Based on the calculation results, the practicality score reached 85,14% in the small group and 87,35% in the large group. After conversation using the practicality scale, both fall within the 81% – 100% range, indicating a "very practical" category as explained by (Sugiyono, 2018). The combined average of 86,24% shows that the learning media is functionally effective and well-received. This suggests that the Teachmint-based flipped learning media for the Literal Reading course is highly feasible for implementation among 3rd semester English Education students at UIN Malang. The high practicality score reflects it ease of use, accessibility, and relevance to students' needs key aspects, reported 92,5% practicality level in a similar Teachmint-based flipped learning model for science students as emphasized by (Kurniawan & Fitria, 2023). This study supports the conclusion that the Teachmint-based flipped learning media is highly practical and feasible for classroom implementation, as reflected in the high practicality scores and consistency with previous research findings.

D. CONCLUSION

Based on the results of this study, it can be concluded that this study successfully developed interactive learning media using the Teachmint application based on flipped learning model specifically designed for the Literal Reading subject for English Education students in 3rd semester at UIN Malang. The development process that follows the ADDIE model has produced a product that meets high-quality standards. This was evidenced by validation results (93.78%) and practicality tests (86.24%), which confirmed that the product is both valid and practical for use. Thus, the Teachmint application can be used directly in the learning process without requiring further revision. However, this study is limited in terms of its implementation scope, which only involved a small and large group trial within a single institution. Broader implementation across diverse learning environments and institutions may be needed to generalize the findings. This study implies that integrating digital platforms like Teachmint with flipped learning strategies can significantly enhance the effectiveness and efficiency of reading instruction in higher education. Future researchers are encouraged to explore its application in other language skills and educational contexts to enrich the exciting literature and support innovation in digital pedagogy.

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