

## Development of teaching materials for writing short stories based on multi-modal through the Glide Apps platform

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### Abstract

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Developing a multimodal short story writing application is an innovative step in improving students' understanding and ability to write short stories. This study aims to develop and test the effectiveness of an application for learning to write short stories through the Glide Apps platform. This study adopts a research and development (R&D) method to develop multimodal short story writing teaching materials through the Glide Apps platform by integrating qualitative and quantitative approaches. The effectiveness test was conducted using a pseudo-experimental method for students of Kuningan University taking the anatomy of fictional prose course through a one-group pretest-posttest design to evaluate the impact of the application. The results of the effectiveness test provide a positive picture of the potential of this application as an effective tool in improving short story writing skills. This application presents various learning methods, theories, and exercises that gadgets can access flexibly. This application also provides short story writing assignment facilities via email. The results of this study have positive implications, especially in developing innovative learning methods that can improve students' literacy and creativity in writing short stories.

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### Abstrak

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#### Pengembangan bahan ajar penulisan cerpen berbasis multi-modal melalui platform Glide Apps

Pengembangan aplikasi menulis cerpen berbasis multi modal merupakan langkah inovatif dalam meningkatkan pemahaman dan kemampuan menulis cerpen mahasiswa. Penelitian ini bertujuan mengembangkan dan menguji efektivitas aplikasi untuk pembelajaran menulis cerpen melalui platform Glide Apps. Penelitian ini mengadopsi metode penelitian dan pengembangan (R&D) untuk mengembangkan bahan ajar menulis cerita pendek multimodal melalui platform Glide Apps dengan mengintegrasikan pendekatan kualitatif dan kuantitatif. Uji efektivitas dilakukan dengan metode pseudo eksperimen kepada mahasiswa Universitas Kuningan peserta mata kuliah anatomi prosa fiksi melalui desain one-group pretest-posttest untuk mengevaluasi dampak aplikasi. Hasil dari uji efektivitas memberikan gambaran positif terkait potensi aplikasi ini sebagai alat bantu yang efektif dalam meningkatkan keterampilan menulis cerpen secara menyeluruh. Aplikasi ini menyajikan berbagai metode pembelajaran, teori, dan latihan yang dapat diakses secara fleksibel melalui gawai. Aplikasi ini juga menyediakan fasilitas penugasan penulisan cerpen melalui email. Hasil penelitian ini berimplikasi positif, terutama dalam pengembangan metode pembelajaran inovatif yang dapat meningkatkan literasi dan kreativitas mahasiswa dalam menulis cerpen.

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### Kata Kunci:

menulis cerpen;  
metode pembelajaran  
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Glide Apps;  
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## 1 Introduction

Literary education includes understanding scholarly works and emphasizes students' ability to create literary works, especially short stories. Along with the times, educators and researchers have tried to design innovative teaching materials to develop students' creative potential in writing short stories. Several studies have been conducted to detail various strategies and approaches in developing teaching materials for short story writing.

Learning to write requires students to continue to learn to present ideas in written form. Writing a story as a conveyor of the message is an entertaining short story in the form of fiction (Nurgiantoro, 2010). A short story, although a work of fiction, has the purpose of being made by the author to be tapped by the reader either directly or indirectly. Short stories have a creative process that students should run at all levels. In learning, short stories must be accompanied by the foundation of understanding and teaching the writing (development) of short story writing.

Students' understanding begins with understanding the meaning and intrinsic elements of short stories and continues with the short story genre becoming an important foundation in developing creative writing skills. Rohman (2020) proposed an approach that applies to students' understanding of the short story genre. This approach can be used to detail effective learning methods in guiding students toward the mastery of short stories. So, students need to know the genre and method of learning short stories.

The creative process of writing requires a complete guide to make short stories more interesting. Short stories are made based on references that can inspire to create storytelling techniques that captivate short stories. Perspective on the creative aspects of writing refers to the innovative concepts that underlie the final result of the short story (Aksan, 2023; Lewa & Santoso, 2020). The elements of short stories (intrinsic elements) have certain characteristics and characteristics that the writer must master. Students learning to write when mastering the aspects of exorcism can find out how short stories are built in their entirety. A short story should be made better after understanding every element of it. After the creative process and intrinsic elements, there is a short story learning method to improve students' writing skills.

Various studies reveal that short story writing learning methods, creative processes in short story writing, and creative views in initiating short stories can contribute to developing literacy and creative writing. Therefore, this article outlines and analyzes the contributions of each reference to understand and improve short story writing skills. First, Khulsum et al. (2018) initiated using storyboard media to effectively teach short story writing to high school grade X students. This approach utilizes story visualization through storyboards to improve students' understanding of the structure and flow of short stories. They discussed the integration of storyboards as a dynamic and effective tool to teach the art of writing short stories among tenth-grade high school students. Their study emphasizes the visual representation of narrative elements through storyboards, providing an in-depth understanding of the structural nuances and complexity of the plot. Another research study by Novita et al. (2020) delves into eleventh-grade high school education, focusing on applying storyboard techniques in teaching short story writing. His findings emphasize the role of this technique in improving students' skills in planning and structuring narrative elements systematically.

A different perspective was introduced by Rupa and Sumbi (2021) by integrating a scientific approach in the development of teaching materials aimed at junior high school students by using structured activities. His research develops guided learning methods to develop students' critical thinking and creativity, offering a fresh and innovative view of teaching short story writing. Himang et al. (2019) contributed by exploring an experience-based approach to teaching short story writing at the vocational school level by involving students' personal experiences in writing short stories. This

research aims to personalize the learning journey, forming a more meaningful engagement with creating short stories.

The study of Kusmana and Yatimah (2018) introduces different points of view, carefully examining structural elements and moral values in an anthology of 20 selected short stories from Kompas. Using anthology as a teaching tool for short story writing aims to provide a diverse and comprehensive understanding of the genre. One of the structural elements, namely the mandate researched by (Budiman & Listyarini, 2017), provides a unique view, concentrating on using honesty as a basic value in teaching short story writing, which aligns with the principles of character education. This research emphasizes integrating moral values, ensuring that literary works are alluring, and instilling ethical values in students. An in-depth analysis of the intrinsic elements in short stories is the focus of Maryanti et al. (2019) research, focusing on the short story "Catastrophe" by Han Gagas. This research provides an understanding of the nuances of structural complexity, character development, and moral basis in short story writing.

Short story learning methods at various levels have a variety of benefits in increasing creativity and writing skills. Methods of learning require media that accommodate how the technique is applied properly through practical steps so that learning methods, teaching materials, and teaching materials are integrated. In this study, the researcher sees that the developed method requires the development of multi-modal teaching materials as a forum for learning methods and learning content packaged in media that must develop students' abilities gradually to develop in such a way.

Writing learning and learning to write short stories can be developed by developing learning media related to the teaching materials. In its development, media can be made as learning applications related to what is close to students as modern learners who often use gadgets. The application development references Andriyana et al. (2022) research, which develops gadget-based research through the glide platform. In this research, the platform has built multi-modal research that uses audio and video media and images that can be collected in one Phonetic Writing application. After being compiled, the application-based learning media can be used as multi-modal-based teaching materials.

Literary education involves understanding scholarly works and emphasizes students' ability to create literary pieces, particularly short stories. Educators and researchers have innovated teaching materials as educational practices evolve to enhance students' creative potential in short story writing. Various studies highlight different strategies and approaches for developing effective teaching materials for short stories. For instance, using storyboard media can help students visualize narrative structures, while experiential learning methods incorporate personal experiences into writing. Additionally, integrating moral values and examining structural elements through diverse teaching tools provide a comprehensive understanding of the genre. This article will analyze these innovative approaches and their contributions to improving short story writing skills, including developing multi-modal teaching materials to enhance engagement and learning outcomes through modern applications.

The novelty of this study lies in its comprehensive exploration of innovative approaches to teaching short story writing, focusing on how modern educational techniques and multi-modal resources can significantly enhance students' creative abilities. By integrating visual storytelling tools, experiential learning methods, and moral values into the curriculum, this research introduces new dimensions to literary education that address both the technical and creative aspects of short story writing. Additionally, the development of interactive, application-based teaching materials represents a novel approach to engaging students in a digital age, providing a practical and dynamic platform for learning. This study contributes fresh insights into effective teaching strategies and offers a unique

perspective on fostering creativity and improving writing skills through contemporary educational practices.

In this study, multi-modal-based teaching materials try to use the same platform to build gadget-based teaching materials for learning to write short stories. Multi-modality-based learning is developed based on previous references related to the picture-to-picture method and the audio-video method in the development of student composition. From the references that support this research from what is written in this introduction, the learning method can be carried out in the next development process, where the researcher sees that the potential of the application developed in this study can be created based on the scientific references in this paper. From these references, two main ideas were formed, namely making a multi-modal short story writing application and applying (testing) to students what was made based on references from the methods discussed earlier. Therefore, this study presents the process of creating and using applications and test results on students, which will be discussed in more detail in the method section.

## 2 Method

The research and development method, better known as research and development (R&D), uses two approaches, namely qualitative and quantitative (Arifin, 2012; Gall et al., 2003). This research adopts research and development (R&D) methods to develop teaching materials for writing multi-modal short stories through the Glide platform by integrating qualitative and quantitative approaches. A qualitative approach is used to evaluate aspects of the design and content of the application by collecting feedback from early users, such as students and lecturers. Through interviews, observations, and feedback analysis, researchers gained in-depth insights into the app's ease of use, material relevance, and feature quality and identify areas for improvement before the app was further tested.

A quantitative approach is applied to measure the effectiveness of the application in improving students' short story writing skills. A pseudo-experimental method with a one-group pretest-posttest design is used to evaluate the impact of the application. Students from the Indonesia Language and Literature Education Study Program, University of Kuningan, became the research sample, with one class participating in the fictional prose anatomy course. Before using the application, students are given a pretest of 30 questions that have been statistically validated to measure their initial abilities. After using the application, they took a posttest with the same questions to assess the improvement of writing skills. The pretest and posttest results will be analyzed to determine the effectiveness of the application. This research follows systematic steps that include problem identification, data collection, product design, design validation, design revision, product trial, product revision, and usage trial before mass production. The application developed is expected to be easily accessible by students and lecturers through gadgets, supporting effective learning to write short stories.

A total of 30 items were tested for validity using SPSS to ensure that the instrument accurately measures the intended construct. Content validity was assessed by analyzing whether the items adequately covered the measurement objectives. Construct validity was evaluated through factor analysis to check the internal consistency and relationships between items. The results indicated significant validity coefficients, confirming that all items met the required validity standards. Therefore, the instrument is considered valid and reliable for research or evaluation.

The effectiveness test begins with examining prerequisites such as data normality using the Shapiro-Wilk test and the homogeneity of variance with the Levene test. The t-test with a one-group pretest-posttest design was tested using a paired-sample t-test designed to evaluate the mean change in the same group before and after the intervention. In this method, pretest and posttest data are collected from the same group, then the difference is calculated for each individual. The translation of the statistical test will be based on the null hypothesis (H<sub>0</sub>), which states that there is no significant

difference between the tested groups, and the alternative hypothesis (H1), which states that there is a difference.

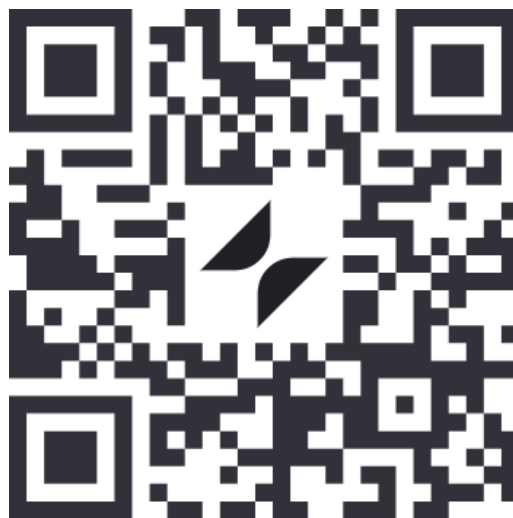
### 3 Results and Discussion

#### 3.1 Result

##### 3.1.1 Short Story Writing Application Products

The results of the research resulted in a product in the form of teaching materials for writing short stories at <https://menuliscerpen.glide.page/dl/6471c6> links in the form of a web and can also be installed in the form of an application if desired. In this study, the researcher developed teaching materials that were made simple and prepared for short meetings because writing practice was only carried out for part of the semester. This application can be used in several courses. Product development results produce applications in the links and barcodes below to be accessed by lecturers and students who need them in learning.

Figure 1 Short story writing application installation barcode



##### 3.1.2 Application Effectiveness Test

The instrument's validity was measured on 20 students of Kuningan University by measuring as many as 40 questions to test the validity or absence of question instruments if tested repeatedly by respondents in the effectiveness test. The research was conducted on students of the University of Kuningan who had received short story material. In this study, the instrument's validity obtained satisfactory results in 30-question instruments with a significance value of less than 0.05. From the data obtained, there are five invalid instruments, namely instruments number 1, 3, 7, 27, and 31. From the data obtained, the research to test the effectiveness can only use 30 instrument numbers of test questions (Table 1). In the next test statistics, a reliability test is carried out.

The reliability test yielded a Cronbach's Alpha score of 0.948 out of thirty-five reliably tested items. The test value is  $0.948 > 0.05$ , meaning the instrument is reliable or worthy of repeated tests on homogeneous respondents (Table 2). Therefore, from the validity and reliability test of the instrument carried out by the researcher, statistical feasibility was obtained to test the questions asked by the researcher to the study's respondents to conduct an effectiveness test.

**Table 1 Instrument Validity**

		Total		Total		Total		
S1	Pearson Correlation	0,659**	S11	Pearson Correlation	0,587**	S21	Pearson Correlation	0,561**
	Sig. (2-tailed)	0,000		Sig. (2-tailed)	0,000		Sig. (2-tailed)	0,000
	N	40		N	40		N	40
S2	Pearson Correlation	0,607**	S12	Pearson Correlation	0,676**	S22	Pearson Correlation	0,575**
	Sig. (2-tailed)	0,000		Sig. (2-tailed)	0,000		Sig. (2-tailed)	0,000
	N	40		N	40		N	40
S3	Pearson Correlation	0,561**	S13	Pearson Correlation	0,659**	S23	Pearson Correlation	0,785**
	Sig. (2-tailed)	0,000		Sig. (2-tailed)	0,000		Sig. (2-tailed)	0,000
	N	40		N	40		N	40
S4	Pearson Correlation	0,575**	S14	Pearson Correlation	0,663**	S24	Pearson Correlation	0,659**
	Sig. (2-tailed)	0,000		Sig. (2-tailed)	0,000		Sig. (2-tailed)	0,000
	N	40		N	40		N	40
S5	Pearson Correlation	0,785**	S15	Pearson Correlation	0,577**	S25	Pearson Correlation	0,663**
	Sig. (2-tailed)	0,000		Sig. (2-tailed)	0,000		Sig. (2-tailed)	0,000
	N	40		N	40		N	40
S6	Pearson Correlation	0,754**	S16	Pearson Correlation	0,733**	S26	Pearson Correlation	0,577**
	Sig. (2-tailed)	0,000		Sig. (2-tailed)	0,000		Sig. (2-tailed)	0,000
	N	40		N	40		N	40
S7	Pearson Correlation	0,574**	S17	Pearson Correlation	0,587**	S27	Pearson Correlation	0,712**
	Sig. (2-tailed)	0,000		Sig. (2-tailed)	0,000		Sig. (2-tailed)	0,000
	N	40		N	40		N	40
S8	Pearson Correlation	0,843**	S18	Pearson Correlation	0,743**	S28	Pearson Correlation	0,590**
	Sig. (2-tailed)	0,000		Sig. (2-tailed)	0,000		Sig. (2-tailed)	0,000
	N	40		N	40		N	40
S9	Pearson Correlation	0,712**	S19	Pearson Correlation	0,556**	S29	Pearson Correlation	0,575**
	Sig. (2-tailed)	0,000		Sig. (2-tailed)	0,000		Sig. (2-tailed)	0,000
	N	40		N	40		N	40
S10	Pearson Correlation	0,590**	S20	Pearson Correlation	0,712**	S30	Pearson Correlation	0,785**
	Sig. (2-tailed)	0,000		Sig. (2-tailed)	0,000		Sig. (2-tailed)	0,000
	N	40		N	40		N	40

**Table 2 Reliability Statistics**

Cronbach's Alpha	N of Items
0,948	40

The experimental and control groups' values showed that the data was normally distributed, as seen in Table 3, with the values in the Shapiro-Wilk table of  $0.421 > 0.05$ . The results showed that the data was normally distributed, and a homogeneity test could be carried out as a prerequisite test for the research. The homogeneity test results are shown in Table 4.

**Table 3 Tests of Normality**

	Posttest	Shapiro-Wilk		
		Statistic	df	Sig.
Pretest	80,00	0,902	5	0,421
	83,33	0,895	4	0,406
	86,67	0,908	6	0,421
	90,00	0,630	4	0,001

\*. This is a lower bound of the true significance.

a. Pretest is constant when Posttest = 76,67. It has been omitted.

b. Lilliefors Significance Correction

**Table 4 Test of Homogeneity of Variance**

No	Respondent	Levene Statistic	df1	df2	Sig.
Pretest	Based on Mean	1,525	3	15	0,249
	Based on Median	0,595	3	15	0,628
	Based on the Median and with adjusted df	0,595	3	11,365	0,631
	Based on trimmed mean	1,427	3	15	0,274

a. Pretest is constant when Posttest = 76,67. It has been omitted.

The data based on the mean table shows a significant value of  $0.249 > 0.05$ , meaning homogeneous data between the pretest and posttest scores conducted on students. After obtaining sufficient normality and homogeneity values for the parametric statistical test, the test was carried out with a t-test to measure the effectiveness of the test against conventional methods and short story writing applications in understanding short stories and writing short stories.

**Table 5 Paired Samples Test**

Pair	Pretest - Posttest	Paired Differences				t	Df	Sig. (2-tailed)	
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower				Upper
Pair 1	Pretest - Posttest	-14,33333	7,26282	1,62402	-17,73244	-10,93423	-8,826	19	0,000

The statistical value shows that there is an influence between the pretest and the posttest carried out. The use of conventional methods compared to the technique of using applications obtained satisfactory significance values. The results of the hypothesis test show that the value of Sig. (2-tailed) in the table is 0.00, which is smaller than 0.05. This means the p-value is less than the set significance level, so the null hypothesis is rejected. Thus, there were significant differences between the groups tested. The value of Sig. (2-tailed) in the table is  $0.00 < 0.05$ , which means that the value has a very satisfactory significance. The translation of the statistical test is based on the null hypothesis (H0), which states that there is no significant difference between the tested groups, and the alternative hypothesis (H1), which states that there is a difference.

### 3.2 Discussion

The development of teaching materials for writing multi-modal short stories through the Glide platform can be linked to the concept of an outcomes-based education framework (OBE) outlined by Reddy et al. (2003). The framework emphasizes the importance of essential features of technology and technology education in developing effective programs. In teaching short story writing, Glide provides a platform that integrates various technological elements such as text, audio, video, and images. This creates a rich and interactive learning environment, aligning with the OBE principle that emphasizes specific, measurable learning outcomes. Features that allow for direct feedback and data analysis on Glide facilitate teachers in monitoring student progress and assessing whether the expected learning outcomes have been achieved.

Reddy et al. (2003) also emphasized the importance of contextualization in technology education, namely how technology can be applied in real-life situations. Glide provides students with the opportunity to use their writing skills in a variety of contexts, such as creating short stories that are relevant to their personal experiences or current social issues. This increases student engagement and helps them see the real relevance of their learning skills. Thus, developing teaching materials for writing multi-modal short stories through the Glide platform utilizes technology to create interactive learning experiences and complies with the OBE framework that emphasizes the achievement of clear, measurable, and relevant learning outcomes. This shows how technology can be effectively integrated with education to achieve higher educational goals.

The development of teaching materials for writing multi-modal short stories through the Glide platform has inspired the creation of innovative fiction prose applications. This application uses modern technology to improve students' writing skills and creativity in the fictional prose genre. Based on the principles outlined by Halgren et al. (2004) regarding the importance of speed, accuracy, and "enrichment" in the research process, this application is designed to provide quick and accurate access to various rich and interactive learning elements.

They emphasized speed and accuracy in the docking and scoring process in medical chemistry research, which became the cornerstone of developing this fictional prose application. The app allows users to access various features such as text, audio, video, and images quickly and efficiently, enhancing their learning and writing experience. Accuracy in content presentation ensures that students can easily understand the techniques of writing fictional prose and apply them in their work.

In addition, the concept of "enrichment" described by Halgren et al. (2004) is applied in this application to enrich the user's learning experience. This fiction prose app provides various interactive tools and features that support the learning process, such as discussion forums, live feedback features, and inspirational examples of fictional prose works. By using multi-modal technology, this application not only facilitates a better understanding of the material but also encourages the user's creativity and critical thinking skills. Thus, this fictional prose application becomes an effective and innovative tool in supporting literary education and improving students' writing skills.

### 3.2.1 Feature Application Writing Short Story in Learning

Aprilia et al. (2023) provide insight into the effectiveness of web-based learning media, Glide Apps, in improving students' creative thinking skills. The contribution of this research may involve developing learning technology that schools or teachers can adopt to improve the quality of learning on certain materials. This research proves the improvement of students' creative thinking skills in understanding and learning the Human Digestive System material through web-based learning media, especially the Glide Apps platform.

Courses related to this teaching material are writing courses, writing learning, anatomy (analysis) of fictional prose, fictional prose, and other cross-disciplinary courses that require teaching materials for writing fiction stories according to the needs of the lecturers who teach the course. In its delivery, this teaching material contains several written texts about the meaning of short stories, the types of short stories, the elements of short stories, short story writing techniques, and creative tips for writing short stories.

In the Interface view of the application, there is one menu containing theory and two menus containing exercises. Exercises are an optional menu for teachers to assign assignments through the columns, references, or learning resources offered through the application. There are only so many references, so teachers focus more on deepening the teaching materials in each assignment, both videos and images. With few references, teachers can see the originality of students' works and



distinguish them from each other to optimize students' ability to write short stories. In its presentation, the task is given in the following view.

**Figure 3 of the in-app video display**



**Figure 4 Assignment form to train students to write**



Assignments must be given in a guided manner by the lecturer who teaches. Teachers provide direction and instruction based on learning needs. At the student level, this learning is used to improve paraphrasing skills in rewriting stories and organization from the forms presented in the application into short stories. In the application view, students can access multi-modal media. The media is in the form of fairy tales, short stories, and short films. As a teaching material, an exercise was carried out to measure students' ability to make short stories through stories that can be sent directly through the help of the application shown in Figure 6.

In Figure 5, there are instructions and audio-video media in the form of a display of reading fairy tales that can be listened to by students on their respective devices. After listening, they can rewrite the story, which will be sent directly to the teacher through the available dialogue box. In the media of gadgets, of course, this is very helpful for students in writing short stories through assignments provided as an eclipsing process from existing forms through audio-video media to text-based short stories.

This transition is important because creativity through equalization is rich in the field, as discussed in several studies. Rohmawati et al. (2021) explain valuable insights into the use of modern media in learning short story texts. The use of learning videos emphasizes student engagement. Although it has advantages, it is necessary to pay attention to its limitations so that the research results can be applied more widely in diverse educational contexts. For learning and reference, students need to pay attention to what media is used as a reference or spectacle in writing short stories.

In the video modeling, the researcher attaches fairy tales as a reference medium for writing learning, as in the research of Milawati(2019), which reviews the teaching of short stories in a discovery manner through the press of fairy tales. The research helped hone students' creativity in reading. Research on short story videos was conducted by Indriani (2019) by measuring students' ability to write stories after watching story videos. In using short film references, Annisa and Fatimah (2020) provided a reference for writing through film media and declared it successful.

From these three studies, the use of video and its elements (short story reading, fairy tale reading, and short film) has been proven to improve writing skills based on previous research. This can be recognized as the validity of the content or the validity of the content of the teaching materials listed in the application as exercises that teachers can give following Eriyanti et al. (2022). Another element that is a reference is the image as a reference for writing short stories.

Research on images was carried out by Putra (2014) on students by testing one image as a reference given by teachers to help provide references and foster imagination in students. In this case, of course, in the process of improvement, it can also be done to students, but with the note that the object of the chosen image is made more complicated and contains elements of themes that force them to think more critically when looking at the pictures presented.

From the references to the exercises carried out, this study contains the validity of previous research related to increasing creative thinking and understanding using the Glide Apps platform, videos, selected videos, and images. In learning, researchers need to prove empirically whether the entire application built can have an impact when used in classroom learning activities.

### 3.2.2 Use of Apps in Learning

Developing multi-modal-based short story writing teaching materials through the Glide Apps platform utilizes various technological features to improve students' writing skills. In discussing the factors that affect the use of mobile applications in education, Kang (2014) identifies ease of use, usefulness, and user satisfaction as important elements. Glide Apps provides an intuitive and easy-to-use interface, allowing students to quickly understand how to access and take advantage of the various features available. This is in line with the findings of Weichbroth (2020), who emphasized that easy navigation, attractive displays, and quick responses are essential for improving the user experience. Glide's simple and responsive design ensures that students do not feel overwhelmed when using the app, thus supporting continued use.

Karabatzaki et al. (2018) found that a well-designed mobile app can help students better understand the subject matter and increase class participation. Glide's ability to integrate text, audio, video, and images provides a rich and diverse learning experience. This supports (Kang, 2014) finding that a useful app can increase students' motivation to use the platform actively. In addition, Wang et al. (2013) showed that the functional value of the app, such as the tools that support the writing process, greatly influences the use of mobile apps. Glide Apps provides a wide range of features that help the writing process, making it an effective tool for improving students' writing skills.

Wang et al. (2013) also explored consumption values that affect mobile app use, such as emotional value and social value. Glide Apps provides emotional value by making learning more enjoyable through interactive and multimedia elements. Social value is also created when students can share their work and collaborate with friends through the app's features. This increases student engagement and strengthens the learning community, which aligns with the findings of Karabatzaki et al. (2018) on the importance of social interaction in education.

By paying attention to various factors that affect the intention to use a mobile application, such as ease of use, usefulness, user satisfaction, and consumption values, Glide Apps can be an effective tool to improve students' writing skills. Continuous evaluation and adaptation to user feedback will ensure these teaching materials remain relevant and useful in an ever-evolving educational context. Integrating technology through the Glide Apps platform in developing teaching materials for writing multi-modal short stories has great potential to create an interactive and collaborative learning environment, supporting students in achieving better learning outcomes.

### 3.2.3 Email Technology in Assignments

Developing teaching materials for writing short stories based on multi-modal through the Glide Apps platform aims to utilize technology to improve students' writing skills. Benlian (2020), in his research, shows that technology has a significant impact on daily life, including in the field of education. The use of technology can create spillover effects that affect activities outside of the primary context, such as education. By using the Glide Apps platform, which allows the creation of no-code applications, we can create an interactive and flexible learning environment. This multi-modality-based application provides various features such as text, audio, video, and images that can be accessed anytime and anywhere, supporting Benlian's findings regarding the positive effects of technology on daily interactions.

Mittal et al. (2010), in their study on communication skills via email, highlighted the importance of effective communication in learning. Although their focus is on email communication skills among medical professionals, the same principles can be applied to short story writing education. The Glide platform can support communication between teachers and students and between students and fellow students. Collaborative features such as discussion forums, commenting on written works, and providing direct feedback can improve interaction and collaboration, similar to how email is used for professional communication in Mittal et al.'s research.

Using multi-modal-based teaching materials facilitates access to information and enriches students' learning experience. Combining text, audio, and visuals helps accommodate students' different learning styles and increase their engagement in the learning process. Students can listen to short story stories through podcasts, watch video tutorials on writing techniques, and read short story examples directly from the application. This aligns with Benlian's findings that technology can support and expand traditional learning environments.

The importance of continuous evaluation of teaching materials is also reflected in the research of Mittal et al., which underscores the need to measure and improve communication skills through feedback. In the context of short story writing teaching materials, the Glide Apps platform allows data collection on student interaction and learning progress. This data analysis provides valuable insights into the effectiveness of teaching materials and areas that need improvement. Continuous evaluation and development of teaching materials can be carried out more efficiently.

Integrating technology through the Glide Apps platform in developing multi-modal-based short story writing teaching materials has great potential to improve students' writing skills. The findings of Benlian (2020) and Mittal et al. (2010) support using technology to create an interactive and collaborative learning environment. By continuing to evaluate and develop, this teaching material can be an effective tool in short story writing education.

## 4 Conclusion

As outlined in this article, developing a multi-modal-based short story writing application positively contributes to students' understanding and ability to write short stories. This application presents various learning methods, theories, and exercises that gadgets can flexibly access. With positive effectiveness test results, this application can increase students' literacy and creativity in writing short stories. This article encourages educators and researchers to continue to explore and apply innovative approaches in teaching short story writing. Using modern technology, literary education can become more engaging and relevant for students. In an era where media and technology increasingly dominate daily life, this approach is appropriate and important to prepare the younger generation to face future literacy and creativity demands.

Future research is expected to explore further the variety of application features that can further support interactivity and collaboration between students. Additionally, it would be beneficial to conduct a longitudinal study to measure the long-term impact of these apps on students' writing skills. Further research can also consider piloting these applications at different levels of education and in various cultural contexts to see their generalizations and adaptability. Finally, integrating learning analytics data analysis from the app can provide deeper insights into student learning patterns and areas that need improvement.

## References

- Aksan, H. (2023). *Proses kreatif menulis cerpen*. Nuansa Cendekia.
- Andriyana, A., Eriyanti, R. W., & Iswatinungsih, D. (2022). Bahan ajar fonetik berbasis aplikasi gawai bagi mahasiswa (Phonetic teaching materials based on device applications for students). *Indonesian Language Education and Literature*, 8(1), 1–15. <https://doi.org/10.24235/ileal.v8i1.9622>
- Annisa, A., & Fatimah, S. (2020). Peningkatan menulis teks cerita sejarah berbasis media film dokumenter kelas XII SMK Negeri 5 Medan Tahun 2019/2020. *Journal of Maritime and Education (JME)*, 2(1), 89–92. <https://doi.org/10.54196/jme.v2i1.18>
- Aprilia, C., Agraeni, E. A. E., & Nazarudin, N. (2023). Pengembangan media pembelajaran berbasis web (Glideapps) untuk meningkatkan kemampuan berpikir kreatif pada materi sistem pencernaan manusia siswa kelas VIII SMP Negeri 11 Kota Jambi (Development of web-based learning media (Glideapps) to improve creative thinking ability on human digestive system material for class VIII Students of SMP Negeri 11 Kota Jambi). *BIODIK*, 9(2), 171–179. <https://doi.org/10.22437/biodik.v9i2.22351>
- Arifin, Z. (2012). *Penelitian pendidikan metode dan paradigma baru*. Bandung: PT Remaja Rosdakarya.
- Benlian, A. (2020). A daily field investigation of technology-driven spillovers from work to home. *MIS Quarterly*, 44(3). <https://doi.org/10.25300/misq/2020/14911/>
- Budiman, M. A., & Listyarini, I. (2017). A comparative literature on children's short stories. *Lite: Jurnal Bahasa, Sastra, dan Budaya*, 13(2), 137–156. <https://doi.org/10.33633/lite.v13i2.1716>
- Eriyanti, R. W., Cholily, Y. M., Rahardjanto, A., Masduki, M., & Andriyana, A. (2022). Peningkatan Kreativitas Guru Dalam Pemanfaatan Media Pembelajaran Digital Melalui Lesson Study Kolaboratif. *Fon: Jurnal Pendidikan Bahasa dan Sastra Indonesia*, 18(1), 166–176. <https://doi.org/10.25134/fon.v18i1.5724>
- Gall, M. D., Borg, W. R., & Gall, J. P. (2003). *Educational Research: An Introduction*. Pearson Education. Inc.
- Halgren, T. A., Murphy, R. B., Friesner, R. A., Beard, H. S., Frye, L. L., Pollard, W. T., & Banks, J. L. (2004). Glide: A new approach for rapid, accurate docking and scoring. 2. Enrichment factors in database screening. *Journal of Medicinal Chemistry*, 47(7), 1750–1759. <https://doi.org/10.1021/jm030644s>
- Himang, V. H., Mulawarman, W. G., & Ilyas, M. (2019). Pengembangan bahan ajar menulis cerpen berbasis pengalaman siswa kelas XI SMK. *Diglosia: Jurnal Kajian Bahasa, Sastra, Dan Pengajarannya*, 2(2), 93–102. <https://doi.org/10.30872/diglosia.v2i2.21>
- Indriani, M. S. (2019). Meningkatkan kemampuan menulis cerita fantasi dengan penggunaan video cerita. *PRASI*, 14(02), 56–64. <https://doi.org/10.23887/prasi.v14i02.22506>

Hidayat, A., Andriyana, A. & Kautsar, T. (2024). Development of teaching materials for writing short stories based on multi-modal through the Glide Apps platform. *LITE: Jurnal Bahasa, Sastra, dan Budaya* 20 (2), 178-191. <https://doi.org/10.33633/lite.v20i2.11270>

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- Kang, S. (2014). Factors influencing intention of mobile application use. *International Journal of Mobile Communications*, 12(4), 360–379. <https://doi.org/10.1504/IJMC.2014.063653>
- Karabatzaki, Z., Stathopoulou, A., Kokkalia, G., Dimitriou, E., Loukeri, P. I., Economou, A., & Drigas, A. (2018). Mobile application tools for students in secondary education: An evaluation study. *International Journal of Interactive Mobile Technologies*, 12(2). <https://doi.org/10.3991/ijim.v12i2.8158>
- Khulsum, U., Hudiyono, Y., & Sulistyowati, E. D. (2018). Pengembangan bahan ajar menulis cerpen dengan media storyboard pada siswa kelas X SMA. *Diglosia: Jurnal Kajian Bahasa, Sastra, dan Pengajarannya*, 1(1), 1–12. <https://doi.org/10.30872/diglosia.v1i1.4>
- Kusmana, S., & Yatimah, Y. (2018). Kajian struktural dan nilai moral dalam Antologi 20 cerpen pilihan Kompas serta pemanfaatannya sebagai bahan ajar cerita pendek di SMA. *Jurnal Tuturan*, 7(1), 822–836. <https://doi.org/10.33603/jt.v7i1.1700>
- Lewa, A. H., & Santoso, B. (2020). Ketidaklangsungan ekspresi dalam judul cerita rubrik “Nah Ini Dia” Harian Poskota. *Lite: Jurnal Bahasa, Sastra, dan Budaya*, 16(2). <https://doi.org/10.33633/lite.v16i2.4456>
- Maryanti, D., Sujiana, R., & Wikanengsih, W. (2019). Menganalisis unsur intrinsik cerpen “Katastropa” karya Han Gagas sebagai upaya menyediakan bahan ajar menulis teks cerpen. *Parole: Jurnal Pendidikan Bahasa dan Sastra Indonesia*, 2(6), 787–792. <https://journal.ikipsiliwangi.ac.id/index.php/parole/article/view/1141>
- Milawati, M. (2019). Peningkatan keterampilan menyusun teks cerita pendek secara tertulis menggunakan model discovery learning dan media dongeng peserta didik kelas VII SMP Negeri 2 Padangsidimpuan Ta 2016/2017. *Jurnal Education and Development*, 7(4), 525–561. <https://doi.org/10.37081/ed.v7i4.1398>
- Mittal, M. K., Dhuper, S., Siva, C., Fresen, J. L., Petruc, M., & Velázquez, C. R. (2010). Assessment of email communication skills of rheumatology fellows: a pilot study. *Journal of the American Medical Informatics Association*, 17(6), 702–706. <https://doi.org/10.1136/jamia.2010.004556>
- Novita, I., Siddik, M., & Hefni, A. (2020). Pengembangan bahan ajar menulis teks cerpen berdasarkan teknik storyboard pada siswa kelas XI SMA. *Diglosia: Jurnal Kajian Bahasa, Sastra, Dan Pengajarannya*, 3(1), 46–52. <https://doi.org/10.30872/diglosia.v3i1.29>
- Nurgiantoro, B. (2010). *Teori Pengkaji Fiksi*. Gajah Mada University Press.
- Putra, N. A. (2014). Penggunaan media gambar seri untuk meningkatkan keterampilan menulis narasi pada mata pelajaran bahasa Indonesia siswa kelas IV SDN Moahino Kabupaten Morowali. *Jurnal Kreatif Tadulako*, 2(4), 122381.
- Reddy, V., Ankiewicz, P., De Swardt, E., & Gross, E. (2003). The essential features of technology and technology education: A conceptual framework for the development of OBE (Outcomes Based Education) related programmes in technology education. *International Journal of Technology and Design Education*, 13, 27–45. <https://doi.org/10.1023/B:ITDE.0000039568.05480.c3>
- Rohman, S. (2020). *Pembelajaran cerpen*. Bumi Aksara.
- Rohmawati, N., Mohammad, F., & Haryadi, H. (2021). Analisis penggunaan media audio visual interaktif untuk meningkatkan pembelajaran teks Cerpen. *Jurnal Tuturan*, 10(1), 44–49. <https://doi.org/10.33603/jt.v10i1.5228>

Hidayat, A., Andriyana, A. & Kautsar, T. (2024). Development of teaching materials for writing short stories based on multi-modal through the Glide Apps platform. *LITE: Jurnal Bahasa, Sastra, dan Budaya* 20 (2), 178-191. <https://doi.org/10.33633/lite.v20i2.11270>

---

Rupa, J. N., & Sumbi, A. K. (2021). Pengembangan bahan ajar menulis Cerpen dengan pendekatan saintifik untuk siswa Sekolah Menengah Pertama. *Edukatif: Jurnal Ilmu Pendidikan*, 3(6), 3602–3616. <https://doi.org/10.31004/edukatif.v3i6.652>

Wang, H.-Y., Liao, C., & Yang, L.-H. (2013). What affects mobile application use? The roles of consumption values. *International Journal of Marketing Studies*, 5(2), 11. <https://doi.org/10.5539/ijms.v5n2p11>

Weichbroth, P. (2020). Usability of mobile applications: A systematic literature study. *Ieee Access*, 8, 55563–55577. <https://doi.org/10.1109/ACCESS.2020.2981892>