

Developing teaching materials for writing observation report texts using Powtoon for grade X high school students

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Abstract: This study aims to develop teaching materials for writing observation report texts based on technology by utilizing the Powtoon application for class X SMA students. This study uses a development procedure called the ADDIE model. This study was conducted at SMA Negeri 15 Pekanbaru with 36 class XB students as research subjects. The data collection techniques used were student needs analysis questionnaires, validation questionnaires for teaching material products by validators, trials (limited tests), and teacher and student assessment questionnaires. The results showed that the quality of the product development of teaching materials for writing observation report texts based on Powtoon for class X SMA students was seen from the results of expert validation and got a score of 4.5 (90%), the practicality of the product was seen from the results of teacher assessments of 4.6 (92%) and student assessments of 4.5 (90%). The average pre-test score was 64, and the post-test was 87, which was stated to be significantly different based on the Wilcoxon test. It can be concluded that teaching materials designed using Powtoon for class X SMA students are very feasible and have the potential to be used in learning to write observation report texts.

Keywords: Observation result report text, Powtoon application, teaching materials

Abstrak: Penelitian ini bertujuan mengembangkan bahan ajar menulis teks laporan hasil observasi berbasis teknologi dengan memanfaatkan aplikasi Powtoon untuk siswa kelas X SMA. Penelitian ini menggunakan prosedur pengembangan yang disebut dengan model ADDIE. Penelitian ini dilakukan di SMA Negeri 15 Pekanbaru dengan subjek penelitian siswa kelas XB sebanyak 36 orang siswa. Teknik pengumpulan data yang digunakan merupakan angket analisis kebutuhan siswa, angket validasi produk bahan ajar oleh validator, uji coba (uji terbatas), dan angket penilaian guru dan siswa. Hasil penelitian menunjukkan bahwa kualitas produk pengembangan bahan ajar menulis teks laporan hasil observasi berbasis Powtoon untuk siswa kelas X SMA dilihat dari hasil validasi ahli dan mendapatkan skor 4,5 (90%), kepraktisan produk dilihat dari hasil penilaian guru 4,6 (92%) dan penilaian siswa 4,5 (90%). Rata-rata skor pre-test sebesar 64 dan post-test sebesar 87, dan dinyatakan berbeda signifikan berdasarkan uji Wilcoxon. Dapat disimpulkan bahwa bahan ajar yang didesain menggunakan Powtoon untuk siswa kelas X SMA sangat layak dan potensial untuk digunakan dalam pembelajaran menulis teks laporan hasil observasi.

Kata kunci: Teks laporan hasil observasi, aplikasi Powtoon, bahan ajar

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INTRODUCTION

The advancement of a nation's existence is significantly influenced by education. Education is a conscious effort carried out systematically to realize the learning and teaching process so that students can develop their potential. With education, a person will have intelligence, noble morals, and good ethics (Chowdhury, 2018; Tambak et al., 2021). Education is a deliberate endeavor to assist each individual in the development and maturation of a responsible, independent, creative, knowledgeable, moral, and physically and mentally healthy human being (Inanna, 2018, Nasir et al., 2024; Sari et al., 2020; Obloberdiyevna, 2022).

The advancement of science and technology is increasingly motivating reform initiatives to incorporate technological outcomes into the learning process. It is mandatory for educators to be capable of developing educational innovations (Abbas et al., 2022; Artipah et al., 2024). One of them is using digital technology as teaching materials for the current development of the times and education. The learning process is facilitated by the use of teaching materials (English & Mayo, 2019; Lyman et al., 2023). The tools, information, and texts that educators need to plan and evaluate the implementation of learning are referred to as teaching materials. Teaching materials may be either written or unwritten. Teaching materials should include learning instructions for both students and teachers, competencies that must be achieved, exercises, supporting information, task instructions (which may be in the form of Student Worksheets), and learning evaluations (Asfahani et al., 2023; Kenta & Bosha, 2019).

Teaching materials can be classified into four categories: (a) printed materials, (b) audio-visual, (c) audio-visual, and (d) interactive teaching materials (Hasanah et al., 2021; Karami, 2019). One of the important problems teachers often face in learning activities is choosing and utilizing the right teaching materials to help students achieve competence. With the selection and use of appropriate teaching materials, as well as the existence of aspects of innovation, creativity, and digital technology, teachers are expected to provide effective and efficient learning to achieve maximum goals and results (Lee et al., 2021; Ramlah et al., 2022).

The teaching materials developed must be able to meet the needs of students for theory and practice in writing observation report texts. According to Ma and Li (2022), writing is a process of thinking and reasoning to pour ideas and ideas into symbols in the form of written language so that it can be read by other people who understand the language (George, 2008; Sanjaya et al., 2018). According to Mustafa (2022), the purpose of writing is to record or sketch graphic symbols that denote a language that an individual comprehends, thereby enabling others to decipher the symbols if they possess an understanding of the language and graphic images. The unity of language is not represented by pictures or paintings, despite the fact that they may convey meanings. Writing is a representation of a component of the unity of language expression.

The observation report text is one form of text that students are taught. The text of the observation report is classified as a factual text. The text aims to present information or facts about a certain object. The object in question can be natural conditions, social behavior, cultural conditions, objects, and the like. Lascano Pérez and Altamirano Carvajal (2023) stated that the observation report text is a text that provides information about an object or situation after systematic research has been conducted. The purpose of learning the observation report text is to describe or classify something based on the observations results.

According to Kosasih (2014), the observation report structure is formed by the following parts: general definition, division description, and description of use. A general definition describes the observed object, its characteristics, existence, habits, groupings, or other aspects. Partial descriptions describe certain aspects of the observed object (Millner, 2021)—a description of the benefits explaining the usefulness of the previously stated theme exposure.

The observation report text was chosen in this study for several reasons, namely based on the interviews results with Indonesian teachers of SMA Negeri 15 Pekanbaru: (1) the observation report text is observation-based in order to refine students' environmental awareness. (2) The observation report text is a form of text that is classified as difficult to acquire in Indonesian. (3) Despite the fact that students frequently employ this text in their daily lives, they are unaware that it is the observation report text, (4) this text is studied at two different levels of education, namely grade VII junior high school and class X senior high school, and (5) observation is one of the stages in a very important scientific approach.

The author interviewed five students at SMA Negeri 15 Pekanbaru class X B on August 11, 2023. They stated that learning to write the observation report text in schools could be more exciting and still use conventional methods. There are still a few of the latest innovations in developing teaching materials. In line with the student's statement, the author also conducted observations and direct interviews with one of the Indonesian teachers at SMA Negeri 15 Pekanbaru on August 11, 2023. The interviews were related to learning to write the text of observation reports at school. The interview results stated that the teacher still uses conventional methods and has yet to use innovative teaching materials to support the teaching and learning.

The author wants to develop teaching materials for writing observation report texts using a digital-based media called Powtoon. Powtoon is an online application that enables users to generate brief videos with captivating animation features, such as handwritten animations, cartoon animations, more vibrant transition effects, and a user-friendly timeline configuration interface (Tafari & Kamaludin, 2023). According to Yusuf et al. (2020), the popularity of Powtoons can produce amazing movie animations compared to ordinary videos. Almost all features can be accessed on one screen, making PowerPoint very easy for creating learning media (Chen et al., 2018; Jamiah et al., 2019). Using the animation in the Powtoon feature will likely increase interest in learning activities.

The designed PowerPoint teaching materials will then be understood by students, who will later make direct observations in the school environment. The environment plays an important role in Indonesian learning (Jeong & So, 2020; Lakkala et al., 2021). The pursuit of environment-based language learning is necessary in order to utilize linguistics and the diversity of languages that represent biodiversity in a specific environment as a writing source and to preserve local languages, Indonesian, and foreign language mastery (Mbetse, 2015). By studying languages that are founded on the environment, students can develop a greater understanding and appreciation for their surroundings (Ali et al., 2024).

The author has made observations related to learning to write the observation report text in one of the schools, namely SMA Negeri 15 Pekanbaru, especially in class X. Learning to write the observation report text is included in CHAPTER 1, namely "Revealing Natural Facts Objectively" in Indonesian learning using the independent curriculum in Learning Objectives (LO) 10.5 Writing ideas in the form of observation reports logically and ethically. The aim of this research is to develop teaching materials for writing observation report texts using Powtoon for class X high school students.

METHOD

This study refers to the learning objectives contained in Flow of Learning Objectives (FLO), which are included in CHAPTER 1, namely "Revealing Natural Facts Objectively" in Indonesian language learning using the independent curriculum in Learning Objectives (LO) 10.5. Writing ideas in the form of observation reports logically and ethically. The research and development model, commonly abbreviated as R&D, is a specific form of research conducted to produce specific products and evaluate their efficacy in society. The research was conducted at a public high school in Pekanbaru, with 36 students in class XB as the research subjects. The ADDIE model is employed in the development process of this research (Branch, 2009). The ADDIE model is considered good to be developed as an innovative learning model because it makes the learning process more systematic, effective, and efficient. The population in this study is students of class X one of the state high schools in Pekanbaru. In this study, the author uses a purposive sampling technique, namely judgment sampling and class X B is determined as a limited trial sample class for developing teaching materials for writing text reports on observation results assisted by Powtoon.

The data sources in this study are in the form of a Powtoon needs analysis and a Powtoon feasibility test analysis questionnaire. The data source refers to the results of interviews with teachers and the distribution of questionnaires. The data collection instrument in this study is a questionnaire. The questionnaires are teacher interview instruments, student needs analysis questionnaires, experts validation sheet, teacher assessment questionnaires, student assessment questionnaires, and pretest and post-test question instruments. The pretest was carried out once and the posttest also once with 3 essay questions each. The results of the pretest and posttest were carried out to measure students' ability to write observation report texts with the help of the developed Powtoon application-based teaching materials.

The data analysis stage is carried out by cataloging the Likert scale data from the distributed questionnaire. A normality test was conducted to conclude, which would later affect the use of statistical test tools to test the product's effectiveness. The normality test of the data results in this study was carried out using the normality test of Kolmogorov Smirnov and Shapiro-Wilk using SPSS Statistics 29 for the window. In addition, the data will also be analyzed using the homogeneity test and the Wilcoxon Test.

RESULTS AND DISCUSSION

This stage began with an interview with an Indonesian language teacher at one of the Pekanbaru public high schools. The researcher asked several questions to one Indonesian language teacher on August 11 2023. The questions the researcher asked were about learning observation report texts at school.

After conducting an interview with an Indonesian language teacher on August 11 2023, the author also conducted an analysis of the curriculum. The curriculum used is the latest curriculum, namely the independent curriculum, which has been implemented for class X students at Pekanbaru State High School for two years. In the independent curriculum, high schools are listed in phase E, for learning the text of observation reports in Indonesian subjects is included in CHAPTER I, "Revealing Natural Facts Objectively,"

which presents material on the text of observation reports. Writing the text of the observation report is one of the materials discussed.

One of the data collection techniques is distributing a questionnaire about learning to write the text of observation reports at school (attached), which was carried out on August 25, 2023. A recapitulation of the results of the questionnaire distribution was obtained (Table 1).

Table 1. Recapitulation of analysis questionnaire results

No	Necessity	Average	Percentage
1	Material	3,09	61
2	Media/Methods	2,69	53
3	Evaluation	3,70	74,6
	Average	9,48	94,8
	Criterion	Desperately needed	

Based on the recapitulation of Table 1, it can be concluded that from the aspect of material needs, the final average score was 61% with the criteria of need. Based on the aspect of the need for learning methods/media, the final average score was obtained, which was 53% with the criteria of sufficient need. Based on the recapitulation of the results of the evaluation needs analysis questionnaire, the final average score was obtained, which was 74.6% with the criterion of sufficient need. The final average score was obtained at 9.48 with an average of 94.8% with the criteria of very needy.

After conducting the needs analysis stage, the next stage is the design stage. In the preparation of the development of teaching materials assisted by Powtoon, it is arranged into three parts. Powtoon is an online application that allows users to create short videos that have interesting animation features including handwriting animation, cartoon animation, and more lively transition effects as well as very easy time line settings (Atapukan, 2019). According to Nugroho (2020), the popularity of Powtoon can produce amazing animated films compared to ordinary videos. Almost all features can be accessed on one screen making Powtoon very easy to use for creating teaching materials. Using the Powtoon application in the learning process is considered to really make it easier and makes the learning atmosphere interesting and not boring. The Powtoon's features are varied and the developments carried out can be adjusted to our wishes if we want to modify it (Sholihah et al., 2020).

Initial parts of teaching materials products

The first part consists of the front cover and introduction of the teaching material product, as well as writing the text of the observation report with the help of Powtoon.

Table 2. Initial design teaching materials products

Component	Description
Front Cover	<p>a. The front cover of the development of teaching materials writes the observation report text with the help of Powtoon, which contains information on the title, grade level, and compiler.</p> <p>b. The colors of the envelope of this portion of teaching material are red,</p>

	black, and green.
Introduction	<ul style="list-style-type: none"> a. The introductory part of this teaching material is the initial activity, which contains greetings to students. b. In this section, the character of a teacher stands in front of the class and greets students to listen to the explanation that will be presented.

Content section of teaching materials products

The content section explains the material presented in the teaching material product, writing the text of the observation report with the help of Powtoon.

Table 3. Design of teaching materials product content

Component	Description
Description of the material	<p>Contains material presentation about the observation report text, starting from the definition of the observation report, characteristics, functions, structure, linguistic rules, and writing steps to examples of the observation report text.</p> <p>The description of the material presents a learning atmosphere in the classroom, using the character of a teacher who explains the learning material on the board.</p>

Teaching materials product cover

This section contains an invitation for students to continue learning about the observation report text and an invitation to start practicing writing the text of the observation report.

Table 4. Design of covering parts of teaching materials products

Component	Description
Cover	<ul style="list-style-type: none"> a. In the form of an invitation to students to continue learning about the observation report text. b. In the form of an invitation to students to start practicing writing the observation report text. c. Encouraging students.

Initial parts of teaching materials products

The initial part consists of the front cover of the development of teaching materials, the introduction of the teaching material product, and writing the report on the results of observations assisted by Powtoon.



Fig. 1. Initial part of the teaching material product

Content section of teaching materials products

The content consists of a description of the observation report text that is explained.

Teaching materials product cover

The content consists of an explanation of the observation report text. Product validation is carried out to know and evaluate the development of teaching materials by the goals to be achieved. In this study, validation was carried out by six validators, namely material expert, linguist expert, and media expert validators. The results of the assessment from the validators are explained in detail below:

Table 5. Recapitulation of expert validation results

No	Necessity	Total Validator Values 1 and 2	Average	Percentage
1	Material	37	4,6	92
		36	4,5	90
2	Language	48	4,8	96
		46	4,6	92
3	Media	66	4,7	94
		60	4,2	85
Sum		293	27.4	549
Average		53.3	4.5	91.5
Criterion		Excellent		

Based on the expert assessment table for material, language and media, the number of statements can be seen, namely 32 statements with a rating scale of 1-5. From the validation results by media experts, the final average score for the media aspect assessment was 91,5% in the very good category. Based on research conducted by Nurdiansyah et al. (2018), the teaching materials that have been validated by experts can be used for limited trials.

After the teaching material produces the text of the observation report with the help of Powtoon, which is declared valid and suitable for testing, the researcher will conduct a limited trial for students. This trial was carried out on the class that was the sample of this study. Class X students are more specifically XB, with 36 students on September 19, 2023. The aim of carrying out limited trials is to obtain an overview of the feasibility of the model design being developed, as well as to make improvements to the model design based on input/corrections within a limited scope. This limited trial was carried out for the initial quality of the product being developed (Dita et al., 2023; Sidqi, 2023).

Table 6. Pretest and post-test results data

Sample	Pretest	Post-test	Difference
Sum	2,308	3,165	857
Average	64	87	23

In the pretest and post-test data table of 36 students, the number of pretests was 2308 with an average score of 64, and the number of post-tests was 3,165 with an average

score of 87. Furthermore, this data will be tested for normality using the normality test of Kolmogorov Smirnov and Shapiro-Wilk using SPSS Statistics 29 for Windows.

Table 7. Results of pretest and post-test normality test

Data	Kolmogorov-Smirnova			Shapiro-Wilk		
	Statistics	Df	Signification	Statistics	Df	Signification
Pre-test	0.153	36	0.032	0.922	36	0.015
Post-test	0.130	36	0.130	0.947	36	0.084

The pretest data is not normally distributed, as the significance value (sig.) for the pretest data in the Kolmogorov-Smirnov test and Shapiro-Wilk test is <0.05 , as indicated by the normality test results of the ability to write observation report text. The posttest data is also concluded to be normally distributed, as the significance value (sig.) for the posttest data in the Kolmogorov-Smirnov test and Shapiro-Wilk test is >0.05 . A Wilcoxon test will be conducted using SPSS Statistics 22 for the window, as the data is not normally distributed. The Wilcoxon test on student learning outcomes was carried out to determine the differences in pretest and posttest data.

Table 8. The results of the pretest and posttest analysis used the Wilcoxon test

Posttest - Pretest	
Z	-5.234
Asymp. Sig. (2-tailed)	0.000

Table 8 shows the results of the Wilcoxon test, the pretest and posttest results for the sample group show that the Z count is -5.234 and the sig is 0.000. This shows that $sig\ 0.000 < 0.05$ (5% error rate), so it can be concluded that there is a difference in the pretest and posttest results before and after the Powtoon teaching materials were given.

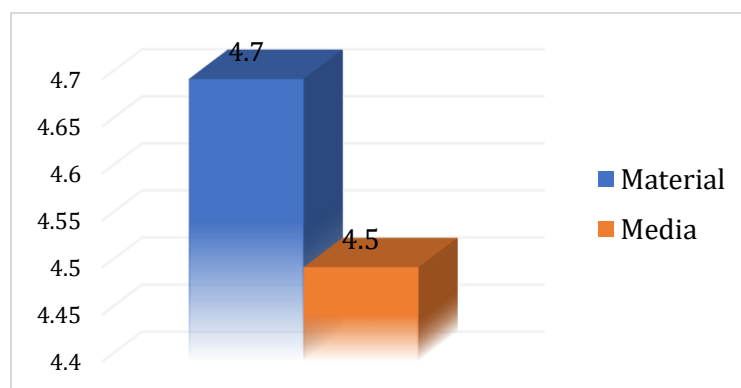


Fig. 2. Results of Indonesian teacher assessment

Based on the Figure 2, the result of the teacher's product assessment is 4.6 with a percentage of 92% and is classified as very good/very practical. The highest score is in the material aspect, with an average score of 4.7. The second highest score was in the media aspect, with an average score of 4.5.

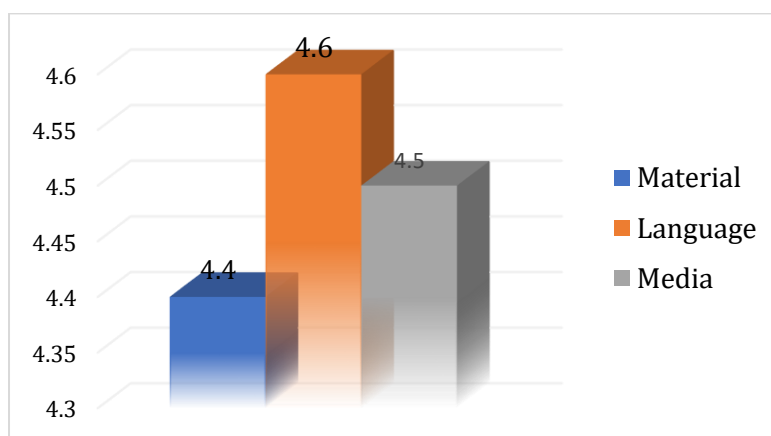


Fig. 3. Results of product assessment by students

Based on the results of student assessments of the product on the material indicators (Figure 3), the average score was 4.4 (88%), which was classified as very good. The language indicator obtained an average score of 4.6 (92%), classified as very good, and the media indicator obtained an average score of 4.5 (90%), classified as very good. The average of students' assessment scores on the product is 4.5, (90%) classified as very good.

Based on the analysis of the need for teaching materials for writing observation report texts with the help of Powtoon for class X. From this stage, it was concluded that in the analysis of student needs, a questionnaire had been distributed containing statements regarding learning observation report texts at school and the results showed that there was a need to develop teaching materials in learning observation report texts that were interesting, easy to understand, and certainly created an atmosphere fun learning for students. To carry out differentiated learning that suits students' needs, teachers are required to use various approaches and methods according to their interests and learning styles student. Teachers organize and organize materials, activities, and assignments for students to complete at school or at home. The final evaluation is customized to the students' interests, preparedness, and preferences (Purba et al., 2021).

The teaching material is feasible to be implemented with product quality based on the assessment of expert validators, namely two material validators, two language validators, and two media validators. The validation results show an average percentage score of 90% with a very good and effective category for use in learning observation report texts. Based on the results of the pretest and posttest, the practicality of the product can be seen from the evaluation of student assessments and assessments from Indonesian language teachers on the product of developing teaching materials for writing observation report texts assisted by Powtoon that the researcher developed with an average score of 91% with a very practical and effective category for implementation in learning to write observation report texts. According to Adnyani et al. (2020), The PowToon-based video media achieved its final version after being used in the classroom, incorporating insights gained from observations and feedback from both teachers and students.

The developed teaching materials have successfully improved students' ability to write observation report texts with the conclusion that there is a significant difference

between the results of students' abilities in the pre-test (before using the teaching materials) and after. The average score for the pre-test was 64 and the post-test was 87. This finding means that the developed product is effective. This teaching material helps students improve their understanding of learning material regarding observation report texts and improve students' ability to write observation report texts as evidenced by the Wilcoxon test results. The results of the pretest and posttest in the sample group show that the Z count is -5.234 and the sig is 0.000. This shows that $\text{sig } 0.000 < 0.05$ (5% error rate), so it can be concluded that there is a difference in the pretest and posttest results before and after the Powtoon teaching materials were given. Based on research conducted by Nurdiansyah et al., (2018) that Powtoon-based teaching material has the potential to increase students' understanding of learning material.

During the posttest, the researcher conducted a question-and-answer process with students related to the learning of observation report texts taught using teaching materials for writing observation report texts assisted by Powtoon. Students have begun to understand the structure and linguistic rules of observation report texts that were previously difficult to understand, after being given examples of observation report texts plus learning outside the classroom which makes students more free to observe the objects being reported. According to Nugroho (2020), some of the benefits of Powtoon are clarify the presentation of material so that it is not too verbalistic, make the learning atmosphere more innovative and creative with very interesting animation features, and Extensive material can be explained in more detail using Powtoon media. As an application that can be used for learning media, the benefits of Powtoon are as a new, creative innovation to facilitate the learning process. According to Akmalia et al., (2021) Powtoon is an audiovisual tool available online through Google that allows users to create presentation videos featuring engaging animations and a user-friendly timeline. The results of the product assessment by Indonesian language teachers were 4.6 with a percentage of 92% and were classified as very good/very practical. The highest score was in the material aspect with an average value of 4.7. The second highest score was in the media aspect with an average value of 4.5. Teachers considered the learning media with the Powtoon application a very creative innovation by utilizing digital media which is indeed needed in modern times.

The results of the product assessment by Indonesian language teachers were 4.6 with a percentage of 92% and were classified as very good/very practical. The highest score was in the material aspect with an average value of 4.7. The second highest score was in the media aspect with an average value of 4.5. Teachers considered the learning media with the Powtoon application a very creative innovation by utilizing digital media which is indeed needed in modern times.

CONCLUSION

Based on the research results, it shows that the quality of the product development for teaching materials for writing text reports based on Powtoon-based observations for class The practicality of the product was assessed from the results of teacher and student assessment questionnaires, with a teacher assessment of 4.6 percent 92% in the very good category and a student assessment of 4.5 percent 90% in the very good category. There are significant differences obtained before and after using the product. Powtoon-based

teaching materials for writing observation report texts for class X high school students can be used to learn how to write observation report texts.

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