DEVELOPMENT OF ANDROID-BASED DIMENSI APPLICATION AS A MEDIA FOR POETRY WRITING SKILLS FOR ELEMENTARY SCHOOL STUDENTS

Adisa Adriani[1*], Dadan Djuanda[2] , Prana Dwija Iswara[3]

[1,2,3]Universitas Pendidikan Indonesia
[1*]adhisaadriani@upi.edu

Abstract

This research is hampered by the less optimal use of media in the learning of the Indonesian language, especially the poetic material. This is because of the lack of creativity of teachers in using technology and learning that is focused only on textbooks so that students are difficult in understanding the learning material delivered by teachers. The aim of this research is to develop an Android-based "Dimensi" learning media that can be used as media in the learning of poetry writing skills especially for elementary school students in the fifth grade. The research method used in this research is the method of design and development (D&D) with the research design used is research design following the ADDIE model (Analyze, Desain, Development, Implementation, Evaluation). The subjects of this study are students of the V class of elementary school with a total of 31 people. As for the five results of the research according to the ADDIE phase are: 1) The Analysis of media "Dimensi" developed based on the needs of teachers and students, the analysis of content and materials used, user needs, hardware and software needs, 2) The design of media "Dimensi" is done by producing components that will be loaded such as GBPM preparation, flowchart, storyboard, 3) The development of media "Dimensi" is done using Kodular as the elementary application of the end result in the form of.apk with storage of 9.9MB. As well as validation test with average percentage acquisition of 91% by media experts, 93% by material experts, and 77% by language experts, 4) The implementation of the media "dimensions" is performed by students as users with an average percentual gain of 95% in limited tests, and 92% in wide trials, 5) The evaluation of media "Dimensi" after obtaining advice from experts and students and input.

Keywords: Android-based learning media; poetry writing skills; poetry

Abstrak

Penelitian ini dilatarbelakangi oleh penggunaan media yang kurang optimal pada pembelajaran bahasa Indonesia khususnya materi puisi. Hal ini karena kurang kreativitasnya guru dalam memanfaatkan teknologi dan pembelajaran yang hanya berpusat pada buku ajar sehingga siswa sulit dalam memahami materi pembelajaran yang disampaikan oleh guru. Tujuan dari penelitian ini adalah mengembangkan media pembelajaran berupa aplikasi berbasis Android "Dimensi" yang dapat digunakan sebagai media dalam pembelajaran keterampilan menulis puisi khususnya untuk siswa kelas V sekolah dasar. Metode penelitian yang digunakan pada penelitian ini adalah metode perancangan dan pengembangan (D&D) dengan desain penelitian yang digunakan adalah desain penelitian mengikuti model ADDIE (*Analyze, Desain, Development, Implementation, Evaluation*). Subjek dari penelitian ini adalah siswa kelas V sekolah dasar dengan jumlah 31 orang. Adapun lima hasil penelitian sesuai dengan tahapan ADDIE yakni: 1) Analisis media "Dimensi" dilakukan berdasarkan kebutuhan guru dan siswa, analisis konten dan materi yang dipakai, kebutuhan pengguna, kebutuhan perangkat keras dan lunak, 2) Desain media "Dimensi" dilakukan dengan menghasilkan komponen yang akan dimuat seperti penyusunan GBPM, *flowchart*, *storyboard*, 3) Pengembangan media "Dimensi" dilakukan menggunakan Kodular sebagai aplikasi utama berupa hasil akhir berbentuk *.apk* dengan penyimpanan sebesar 9.9MB. Serta dilakukan uji validasi dengan perolehan rata-rata persentase sebesar 91% oleh ahli media, 93% oleh ahli materi, dan 77% oleh ahli bahasa, 4) Implementasi media "Dimensi" dilakukan siswa sebagai pengguna dengan perolehan rata-rata persentase sebesar 95% pada uji terbatas, dan 92% pada uji luas, 5) Evaluasi media "Dimensi" dilakukan setelah mendapatkan saran dan masukkan dari ahli dan siswa.

Kata Kunci: media pembelajaran berbasis Android; keterampilan menulis puisi; puisi

Introduction

The use of exercises has a great impact in facilitating human life, especially in learning activities (Isma et al., 2022). Through the exercise, teachers can use a variety of interactive and visual learning methods that are of interest to students. In addition, students can access online learning resources and collaborate with classmates more easily. However, the use of practice in learning should be balanced with the appropriate guidance and supervision of teachers (Abidin et al., 2023). In the teaching learning process, the role of teachers is very important. Therefore, educators are required to be more creative and innovative in designing learning activities that use practical technology as a learning media (Syabrina, 2023).

The use of learning media in the teaching learning process can arouse the interest and motivation of students to learn (Junaidi, 2019). Android-based learning media allows students to study without time or place limitations (Octavira et al., 2022). In learning the Indonesian language especially on the poetic material, the learning media is very needed for the delivery of more interesting material by using technology facilities (Suprayogi et al., 2021). Digital interactive learning media can not only be a solution to the problem of literary appreciation learning in elementary schools, but can also be a resolution to the issue of the use of books in literary genres in libraries that are still not maximized. Other obstacles in learning literary valuation in elementary schools are the availability of time, school library management, and the lack of creativity of teachers in developing interactive learning media (Zettirah et al., 2023).

This study examines the weakness of the mastery of Indonesian language lessons, especially poetry, in students of the fifth grade in elementary school. Based on the results of an interview with one of the teachers, the obstacle that occurs in the student's learning to write poetry is the lack of student understanding of the material and composing poetry. The cause of the occurrence of such obstacles is due to the teaching of writing poetry that uses only textbooks and is monotonous. Therefore, the solution that can be done is to compile the appropriate learning media. From the problem, it can be concluded that the alternative solution to maximize learning load of Indonesian language and literature is to develop the right learning media for students (Nuraini & Mintowati, 2021).

Based on the above explanation, the researchers are interested in developing Android-based learning media. In the era of Industry 4.0 revolution, Generation Z has shifted to Generation Alfa, where the sophistication of technology today is accessible to children here, especially practical technology. The child is independently able to operate all the features in the exercise. However, the use of exercise in children dominates its negative impact, resulting in a decrease in children's interest in learning, and can affect the mental readiness of children in the face of the era of revolution (Hidayatuladkia et al., 2021). However, the opinion according to Widiastuti & Yuliati, (2023) says that increasingly rapid technological progress can be used as a means of learning and facilitate children in acquiring new knowledge and experience. It's not the first time that Android-based media product development has been done. Previous research by Faisal et al., 2020 has successfully developed Android-based poetry writing learning media with category worth using in the learning process. Further research by Arin Fikriyah, 2019 concluded that application development gets category worth utilizing in learning processes. In addition to the research by Ari Kartini, Diah Eka Sari., 2022 also stated that the learning media based on an android-based application is stated to be used in learning to write poetry.

However, some research has not been much developed for learning to write poetry at the elementary school level. While learning the skills of writing poetry is important for appreciating literature so that it does not go extinct. The media to be developed on this research is an Android-based "Dimensi" application that contains audio-visual material and poetry skills

training that can be used as a media to train the ability to create poetry, collection of poetry to generate ideas or ideas in poetry writing, and a poem writing column that students can use to create and save literary works. The "Dimensi" application is an interactive learning media that is efficient in terms of space and time, as well as providing ease in searching, reading and redirecting text more economically because it does not require a lot of paper. On the "Dimensi" application, it displays text, images and audio-visual material that can be accessed on Android electronic devices. This media creation is supported using supported applications and websites such as Canva, Google Drive, and Kodular. Referring to the problems obtained through the study of literature on Indonesian language learning activities, the main objective of this study is to develop the application "Dimensi" that can be used by teachers as an alternative solution to the minimum use of learning media in particular in the learning of Indonesians language materials poetry writing skills for students of the fifth grade of elementary school. In the Indonesian a language learning curriculum, a teacher should think about how effective methods in implementing the learning process of writing poetry can run effectively and efficiently (Sigit Vebrianto Susilo et al., 2020). To educate the teacher to write poetry effectively and efficiently, the teacher needs to condition the learning in a variety of ways that can stimulate the student's interest in writing poetry. A way that can be used to solve the problems of the poetry writing process is to use the "Dimensi" media to improve poetry skills.

The learning media presented is an android-based application that can be accessed using exercise. The novelty of this research is, the "Dimensi" application has a variety of features that are more complete than other media, in the application "Dimensi" there are some features presented such as, material presented in the form of e books and learning videos, various poetic making exercises in the shape of quizzes and digital worksheets, collection of poems with various themes, as well as a poetic writing column that can be used by students to write to write and save their work and this feature facilitates the process of student poetic evaluation by teachers. Although the evaluation of poetry writing is still subjective and done manually by the teacher, this research contributes in providing a media that can help teachers evaluate student poetry skills practically through the features provided in the app. For the perfection of the application as a learning media to write poetry for elementary school students, further development is needed through future research. A writer interested in doing research with the title "Development of Android-Based Dimensi Application as A Media for Poetry Writing Skills for Elementary School Students" Because further development is needed to produce more innovative work. Nonetheless, the "Dimensi" application is a positive start in using digital technology as a media of poetry skills for elementary school students. The Android-based "Dimensi" application development research has several purposes, namely: (1) To analyze the need for the development of an Android-Based "Dimensi" application as a media poetry writing skills for elementary school students. (2) To design an Android -driven "Dimensi" application as the media for elementary school children's poetry skills. (3) To develop an Android based "Dimensi" app as a media for elementary school students' poetry literacy skills. (4) To implement the Android - driven "Dimensi" application for elemental school students ' poetic writing skills media. (5) To evaluate the Android-Baseed "Dimensi" app as the media for poetry writing skills for elementary school students.

Research Methods

This research uses the D&D method. (Design and Development). According toRichey dan Klien (dalam Maulana & Kurniasih, 2021) suggest that development research is done to

produce or develop a product and to test how effective a product is made. The research was conducted at one of the elementary schools in Rancaekek district, Bandung District, West Java. A total of 31 V-grade students, media experts, material experts, and linguists were used as research subjects. The research procedure used in this study is the ADDIE development model. The ADDIE model consists of five stages, namely: 1) Analysis, 2) Design, 3) Development, 4) Implementation, and 5) Evaluation. This research model was chosen because it was designed systematically, gradually and structured on the basis of learning design theories. The aim is to produce a learning product that can solve learning problems according to the needs and characteristics of students (Halifah, 2021). In the first phase (Analysis), analyze problems or needs by conducting interviews with teachers, user analysis to students, analysis of software needs and hard for development needs. The second phase (Design), that is, the design of the product to be developed based on the results of analysis such as designing the main lines of the media program, flowchart, and storyboard. The fourth stage (Implementation) is the implementation of the test after validation by the experts. A product test was conducted to determine the validity of the media in the learning of poetry writing skills. The fifth stage (Evaluation), includes product evaluation by material & media experts as well as field trials to find advice and input to product or learning media.

Data collection techniques use interviews to dig into problems that need to be solved, then the information obtained from the results of the interviews will be studied in depth by the researcher, so that solutions can be found to solve the problem and the lifts used to validate the "Dimensi" media to the experts and users to see the response and validity of the media and lifts. The instruments used are expert assessment lift sheets and user or student responses. This research uses techniques of qualitative and quantitative descriptive analysis, the results of the interview will be processed qualitatively with three stages namely data reduction by converting the information already collected from the analysis results into accurate data, data presentation by making the data in the form of tables, and data conclusion to draw conclusions as well as quantitatively used to calculate the results raised by experts and users using the selection of likert scale scores which then the number of scores is qualitately percentaged. Qualitative data analysis consists of criticism and advice from media experts, material experts, and linguists to follow up on the product based on the validation results. Quality data is obtained from interviews, and the results of the media expert, material and language as well as the responses of users or students. Meanwhile, quantitative data analytics interprets the data into numbers. Quantitative information is derived from the value using the Likert Scale calculation presented with five levels, then the results are classified into five categories.

Results and Discussion

As the times evolve, technological developments can affect learning processes, one of which is the technology of smartphones (Isma et al., 2022). Smartphones in today's era, not only used as a tool to communicate, but can also be used to facilitate the learning process in elementary schools (Hariyadin & Nasihudin, 2023). The use of smartphones in learning has opened the door to a more dynamic, flexible and personal learning approach. By using the potential of technology wisely, students can experience a more interactive, and effective learning experience in this digital age (Abidin et al., 2023). In today's era of modern technology, advances in digital devices have a significant influence on the behavior and way of thinking of individuals, including elementary school students. Excessive use of exercise or electronic devices can lead to a decrease in concentration and ability to absorb information effectively. In addition to these

external factors, the low interest in learning materials also contributes to the minimal absorption of material by students.

One of the language skills that must be possessed and mastered by students is the writing skills (Suprayogi et al., 2021). Writing skills are required so that students can write and convey messages in writing well and correctly (Ali, 2021). Interest in writing poetry for elementary school students is still minimal and low, this is due to the difficulty of students in finding vocabulary and inspiration when wanting to write a work of poetry (Musnar Indra Daulay & Nurmnalina, 2021). Based on interviews between researchers and class teachers at SDN Green Pearl Rancaekek district of Bandung, the interest and ability of students in writing poetry is still low. The reason is that students have difficulty identifying ideas or ideas for writing poetry, lack of explanation about the elements of literacy in poetry; learning to write poetry that is still embedded in conventional learning media (teacher's books and explanations), as well as the facilities available in the school are actually complete and potentially to be used in the learning of poetry writing, but teachers do not use such facilities because of the lack of knowledge and insight that teachers have in the use of digital learning media. The use of Android-based apps is a solution to the problem of learning to write poetry in elementary school students. Android applications in the development of technology are widely used for convenience especially in the learning process (Fadhlillah et al., 2021).

As an alternative solution to the problem of learning to write poetry in elementary school, the researchers conducted research into the development of learning media products. The development is to create an Android-based learning media product that can be used by teachers and students in the learning process of teaching, especially on the learning of Indonesian language material poetry. In this context, learning media serves as a bridge between teachers and students in delivering lessons. In addition, learning media also serves to arouse the motivation, interest, and enthusiasm of students in following learning activities (Windawati & Koeswanti, 2021). Thus, the use of learning media in the teaching learning process can take place in a more enjoyable and attractive atmosphere for students to the material presented (Saputri & Fransisca, 2020).

The product developed is a "Dimensi" or Poetry Writing Media, the use of which can be accessed using the practices of each individual student. There are four main features in the "Dimensi" media, namely material, exercises, collection of poems, and columns for writing poems. To access all four features, students need a stable quota and network. Exercise is a feature that can be used by students to learn and learn information related to learning to write poetry which can be accessed in PDF and video forms. Exercises are features that students can use to train skills and fill out their spare time by playing while learning which are accessible in the form of a liveworksheet and wordwall website. Poetry groups are features which students can utilize to find ideas or ideas when writing poetry. A poem writing column can be easily used for students to write and save poetry writing.

Phase (1) analyzes the need for the development of Android-based "Dimensi" applications as a media of poetry writing skills for elementary school students, researchers conduct interviews with students and teachers so that they find the needs for digital (electronic) applications, examples of poems, material (theory) poem, writing poetry (notes), and practice using digital lkpd. Other needs are learning access and analysis of learning media needs that are suitable for writing poems. The application is called the "Dimensi" application.

Phase (2) designed the Android-based "Dimensi" application as a media for elementary school students' poetry writing skills, researchers compiled several designs such as media

program grandline (GBPM), flowchart, storyboard, content, application design. The design of the application was made following the characteristics of elementary school pupils who are children, so that the use of colors, the elements used are adapted to children's tastes. Considering the availability of hardware and ease of operation, developers chose to use Kodular. Using Kodular, the developers can link, and create an attractive visual. Kodular is an application development site that allows users to create Android-based applications for free using programming blocks, so that their use does not need to do complicated coding (Rismayanti et al., 2022). In line with the statement of Ekawati & Basri, (2022) stated that kodular is a development website with ease of use. So with Kodular teachers have the opportunity to create a learning atmosphere that is creative, innovative and attractive for students.

Phase (3) development of the Android-based "Dimensi" application as a media of poetry writing skills of elementary school students was carried out for two months, the entire design that had been made at the design stage was merged into a single product unit with output as an apk entirely using the Kodular application. Here's an app development picture.
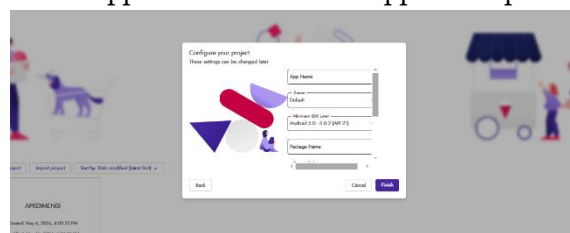
Picture 1. Make Project New
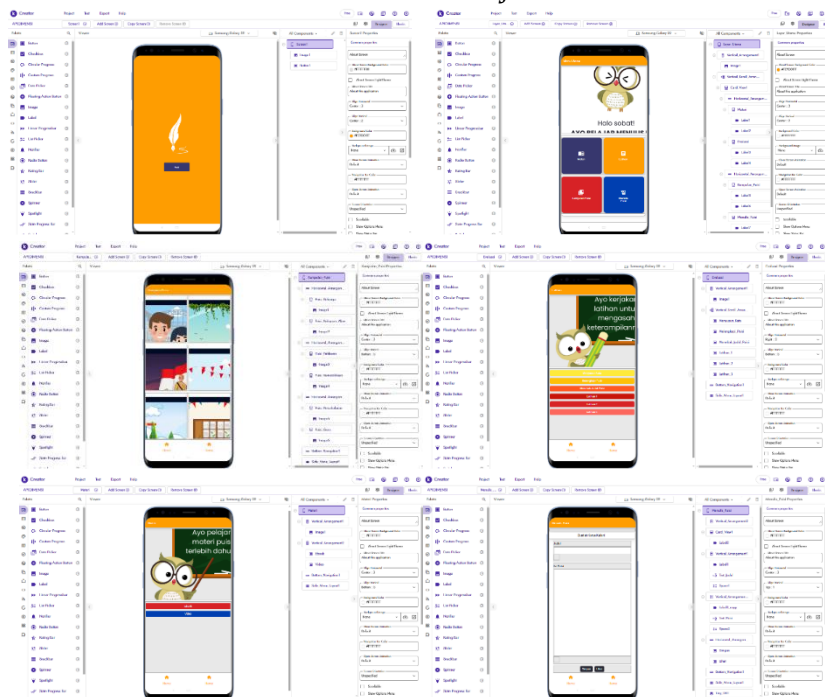
Picture 2. Initial view, menu, materials, exercises, poetry collections, and poetry writing columns
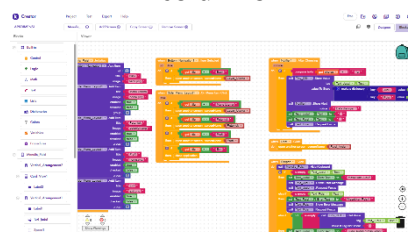
Picture 3. Blok programming application

The next process is to install the application by downloading the application on the Android device. Once formed in the form of an Android-based application, a validation test is carried out on a "Dimensi" media. This validation test is carried out to determine the validity of the media developed by the researchers. The tests were conducted by media, material and language experts using a likert scale with scores ranging from 1 to 5 and the results were then categorized into eligibility criteria according to (Sugiono, 2015, hal. 135). In this study, two rounds of media expert validation were conducted with the validator of a background lecturer of a media expert and a teacher with a background in the field of technology, two round of material expert validator with a teacher of language and literature learning, and the teacher of grade V of elementary school. On the validation of media experts and materials two rows were performed to make the media "Dimensi" into a very valid category. Whereas in the language expert one round was carried out because it was felt sufficient by the researcher with a valid category by a validator lecturer with background in language and literature.

The first qualifying test was carried out by a media expert. On the media expert's 1 rating, the "Dimensi" media got 88% with very valid categories, and the 2nd media expert got 94% with very correct categories. From both media experts, the media "Dimensi" got a percentage with an average of 91% and went into the very valid category. The second validity test is carried out by the material expert. In the first material expert assessment of the first round, the "Dimensi" media gets a 73% percentage with a valid category and gets a lot of suggestions and input, then the second a round validity testing is performed on the "Material" expert 1, and the "Dimensi" media gets a 88% percent with a very valid category. Then the "Materia" media takes a 98% percent validity. Of the two material experts, the "Dimensi" media gets a 93% average validity category. The third validity tests are performed by a linguist with a 77% validity Category. Here's a table summarizing the results of the validation by the experts:

Table 1. Recapitulasi of Expert Validation Results

Expert Validation	Percentage	Category
Media Expert	91%	Highly Valid
Material Expert	93%	Highly Valid
Linguist Expert	77%	Valid
Average (%)	**87%**	**Highly Valid**

Based on the validation test, it can be concluded that the "Dimensi" media has met the qualification with an average score of 87% with a very valid category that can be used for testing to elementary school students.

Phase (4) implementation of the Android-based "Dimensi" application as a media of elementary school students' poetry skills was carried out to 31 elementary school V-grade students. The teacher asked the student to bring the practice to the classroom for the context of learning to write poetry. The parents of the students borrowed their exercises to accidentally use their children in class. The teacher instructed the students to use the "Dimensi" media in the classroom. Classroom use is relevant to the progressive orientation of Indonesian society as a total of 185.3 million Internet users, 139.0 million social media users (49.9% of the total population), 353.3 million mobile phone connections are active in Indonesia (amy.thompson@wearesocial.net, 2024). The study found that students were enthusiastic about the use of exercise, digital (electronic) media, and internet connections. Internet connectivity at school is very important to bear in mind. Teachers should prevent connections that are slow or frequently disconnected.

In this phase, students are asked to give an assessment of the use of *"Dimensi"* media through the provided lift sheet. The main objective of this implementation is to evaluate the feasibility of the Android-based *"Dimensi"* media as the learning media of poetry writing skills for elementary school students. The assessment process is carried out by distributing the lift to students. The assessment is conducted in two stages, a limited trial and a broad trial. There are five students who are involved in a limited test, with limited test results obtaining the highest score of 100% with very good categories, and the lowest score obtaining 86% with excellent categories and getting an average percentage of 95%. In a wide trial, there are 26 students involved with extensive trial results getting a 100% score with excellent category, and a lowest rating obtains 80% with a good category and an average of 92%. Here is a table summarizing the results of field trials:

Table 2. Recapitulation of trial Results

Expert Validation	Percentage	Category
Limited trial	95%	Excellent
Extensive trial	92%	Excellent
Average (%)	**94%**	**Excellent**

In addition to conducting limited and extensive trials, the researchers conducted installation testing to see if the *"Dimensi"* application was successfully installed and uninstalled as desired. The tests were conducted on 50 different Android devices starting with Android versions 6-13 and the ability to adapt to different screen sizes. Based on installation testing, it was stated that the *"Dimensi"* media can run on a variety of Android devices.

Phase (5) evaluation of the Android-based *"Dimensi"* application as a media of poetry writing skills of elementary school students is carried out after the validation or eligibility test process, the media has been said to be valid or worthy of a trial. The researchers conducted a trial by implementing the use of media to elementary school students in the fifth grade. Researchers get advice and input used as an evaluation. In this evaluation, the *"Dimensi"* media gained an obstacle at the time of the research process, where in the trial process the researcher already provided the QR Code that the student would use to download the application, but there was an impediment in the QR code so that it could not be used, and the researchers performed an invite via WhatsApp to send the application to the students. In addition, in the installation process there was one impediment on the student's exercise, that is, could not install because the exercises the student had limited their use by the parents. Another disadvantage is that the training features available on the *"Dimensi"* media are only 5, and students complain about the little exercise, as well as suggesting to add exercises and other games to the *"Dimensi"* media. However, there is a positive response as an evaluation from media users, that is, many students are interested in using the *"Dimensi"* media to create poetry. This is seen when children are asked to write a poem after playing the game on the app and read some references in the poem collection feature. Students are requested to write poems with original ideas or without some help in the poetry writing feature.

After conducting a whole series of research based on the ADDIE model, the *"Dimensi"* media can be said to be appropriate and can be used as an Android-based learning media in the learning of Indonesian language in particular on poetic material for elementary school students in the fifth grade. This is in line with Kartini, et.ell (2022) which shows that the use of Android-based media not only offers a more modern and attractive learning method for students, but also potentially improves the effectiveness of the learning process as well as fosters the interest and motivation of students to learn.

Conclusion

Based on the findings and discussions that have been submitted, there are some conclusions that can be drawn from this research, among others: (1) Analysis of the need to develop an Android-based *"Dimensi"* application as a media of poetry writing skills of elementary school students refers to the minimum need for learning media in elementary school. The results of the analysis show that the *"Dimensi"* media has been developed as a learning media for writing poetry skills in the learning of the Indonesian language. Other functions of the media can be used to train the ability to appreciate literary works. The *"Dimensi"* media was developed with the help of software, hard and various kinds of major supporting software, namely Kodular. Teacher expects the "dimensional" media can help meet the minimum poetic material learning media that is in elementary schools. (2) The design of the Android-based *"Dimensi"* application as a media of poetry writing skills of elementary school students is done with the results of the preparation of several major designs such as GBPM, Flowchart, Storyboard used as a workflow compilation of the application and a developer's overview related to the application to be created. (3) The development of Android-based *"Dimensi"* media as a elementary school student's poem writing skills media was developed following the ADDIE model with five stages namely analysis, design, development, implementation and evaluation. This development involves software and hardware supported with the main software is Kodular with a file.apk output of 9.9MB. The media consists of four main features, namely menu material, training, collection of poems and writing poems. The learning media is based on Android. (4) The implementation of the Android-based *"Dimensi"* application as a media of poetry writing skills of elementary school students has conducted field trials with limited stage trials and extensive trials, and produced positive responses from students. The highest score given to students was in the "very good" category, while the lowest score was still in the category "good". Thus, it can be concluded that the *"Dimensi"* media deserves to be used as a learning media of poetry writing skills for elementary school students in the fifth grade. (5) Evaluation of the Android-based *"Dimensi"* application as a media of poetry writing skills of elementary school students is carried out with improvements or revisions that have been adjusted with input by experts as evaluation material. A media expert provides input on features in the application. A material expert gives input on media content related to material in a digital book. A linguist provides input to pay attention to reading or writing so that students can understand it. And some media users provide input to multiply practice or play in the media. So from that, the *"Dimensi"* media is said to be worthy to be used as a learning media of poetry writing skills that can be used in the learning process that is valid in the long term. Researchers argue that the developmental research that has been done can be beneficial to teachers, students and schools in increasing the use of digital learning media in the learning process in elementary schools. As for advice for future researchers, the *"Dimensi"* media can be developed even better, such as developing the *"Dimensi"* media not only for Android practices, but can be used for iOS.

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