TEKNODIKA
e-ISSN: 2656-6621
http://jurnal.uns.ac.id/Teknodika

Design of Augmented Reality Interactive Learning Media in Learning Sundanese Fairy Tales

Shoofii Nurrizki Dzakiah[1], Haris Santosa Nugraha[2*], Dede Kosasih[3], Temmy Widyastuti[4]

harissantosa89@upi.edu[2*]

Abstract: Fairy tales contain noble values that can shape students' characters. Specifically, students' ability to understand Sundanese fairy tales currently tends to be low due to the increasing rarity of Sundanese being used in everyday life. For this reason, it is necessary to involve technology-based media that is interesting and able to increase motivation to learn fairy tales. The purpose of this research is to describe the needs analysis, design, and testing of augmented reality learning media development in Sundanese fairy tale material. The method used in this research was the R&D research method with the ADDIE model. The participants involved in this study included two experts (media and literature learning), six Sundanese language teachers, and 24 elementary school students. The research instruments employed were questionnaires, interviews, and tests. The resulting data were then processed using quantitative descriptive techniques, which were then interpreted qualitatively. The results revealed three things: 1) there was a need for the development of fairy tale learning media using augmented reality media; 2) augmented reality media was designed through three stages, namely formulating media concepts (selection of fairy tales and analysis of fairy tale characteristics), designing storyboards (visualization of plot, setting, and characters), and preparing and determining design components using the assemblr EDU application; and 3), the results of expert validity of the augmented reality media design developed could be categorized as very good, with an average percentage of feasibility reaching 92.4%. The implications of using augmented reality media can color the use of digital media in Sundanese language learning as an alternative solution to improving students' ability to understand Sundanese fairy tales.

Keywords: Media design; augmented reality; Sundanese fairy tales; assemblr EDU

Abstrak: *Dongeng mengandung nilai-nilai luhur yang dapat membentuk karakter siswa. Kemampuan siswa memahami dongeng bahasa Sunda saat ini cenderung rendah karena semakin jarangnya menggunakan bahasa Sunda dalam kehidupan sehari-hari. Untuk itu, diperlukan pelibatan media berbasis teknologi yang menarik dan mampu meningkatkan motivasi belajar dongeng. Tujuan penelitian ini adalah untuk mendeskripsikan analisis kebutuhan, rancangan desain, dan pengujian pengembangan media pembelajaran augmented reality dalam materi dongeng bahasa Sunda. Metode yang digunakan dalam penelitian ini adalah metode penelitian R&D dengan model ADDIE. Partisipan yang telibat dalam penelitian ini meliputi 2 orang ahli (bidang media dan pembelajaran sastra), 6 orang guru bahasa Sunda, serta 24 siswa sekolah dasar. Instrumen penelitian yang digunakan adalah kuesioner, wawancara, dan tes. Data yang dihasilkan diolah dengan menggunakan teknik deskriptif kuantitatif, yang selanjutnya dinterpretasi secara kualitatif. Hasil penelitian menunjukkan tiga hal: 1) dibutuhkan adanya pengembangan media pembelajaran dongeng menggunakan media augmented reality; 2) media augmented reality didesain melalui tiga tahap yakni merumuskan konsep media (pemilihan dongeng dan analisis karakteristik dongeng), merancang storyboard (visualisasi alur, latar, dan tokoh), serta menyiapkan dan menentukan komponen desain menggunakan aplikasi assemblr EDU; serta 3), hasil validitas ahli terhadap desain media augmented reality yang dikembangkan dikategorikan sangat baik dengan rata-rata persentase kelayakan mencapai 92,4%. Implikasi*

[1] *Universitas Pendidikan Indonesia, Indonesia*
[2] *Universitas Pendidikan Indonesia, Indonesia*
[3] *Universitas Pendidikan Indonesia, Indonesia*
[4] *Universitas Pendidikan Indonesia, Indonesia*

penggunaan media augmented reality ini dapat mewarnai penggunaan media digital dalam pembelajaran bahasa Sunda sebagai salah satu alternatif solusi dalam meningkatkan kemampuan siswa memahami dongeng bahasa Sunda.

Kata Kunci: desain media, augmented reality, dongeng bahasa Sunda; assemblr EDU

Submitted: December 2023	Accepted: February 2023	Published: March 2023

INTRODUCTION

Learning media in the teaching and learning process can essentially convey learning concepts according to the characteristics of the material so that it is easy to understand. Learning media can be one way to improve the quality of education (Fitri, 2021; Pangestu & Rahmi, 2022). The quality of education is needed to achieve educational goals that affect the quality and quality of human resources (Riowati & Yoenanto, 2022; Safitri et al., 2022). Through learning media, students can get a real experience in the learning process. Besides that, learning will be more interesting and not boring (Layaliya et al., 2021). However, the use of learning media in the field has not been optimized, and some are still using traditional media, leading to students being less interested and motivated (Ahmad, 2023; Winangsih & Harahap, 2023). Therefore, the use of learning media must vary to make it more interesting and can add to the learning experience and improve the quality of education.

The variety of learning media needed can be created by utilizing technological assistance in the field of education. Educators must be able to improve digital literacy and skills to fulfill their role as learning facilitators (Sianipar et al., 2023; Siregar et al., 2023; Sugiarto & Farid, 2023). Technology applied in learning media can significantly change the world of education to be more practical, interesting, and efficient (Miasari et al., 2022; Subroto et al., 2023; Suharmawan, 2023). The use of technology in education is also not limited to the field of learning. All fields of learning can utilize technology to support teaching and learning activities, including the field of language and literature learning.

In the field of language and literature, not only the national language must be learned, but there are also regional languages included in the local content of the curriculum that must be preserved. The Ministry of Education and Culture (2020) said that "the extinction of regional languages in Indonesia is starting to be threatened and must be followed up," based on data in the Regional Language Vitality Condition Overview in Indonesia. Likewise, Sundanese is inseparable from the phenomenon of extinction of regional languages in Indonesia if it is not preserved. Based on research by Aljamaliah and Darmadi (2021) regarding the use of Sundanese, 73.6% of 250 children still use Sundanese as their mother tongue, but their mastery ability is categorized as low. Therefore, it is crucial to revitalize regional languages that are packaged more contemporary and follow the times (Terupun & Lampoliu, 2023; Yulia et al., 2023).

The language revitalization movement, by utilizing technology, can be started by learning in schools. One of the materials in Sundanese language learning is fairy tales, which are usually interesting for students because they contain folklore and noble values that can shape student character (Annisya & Baadilla, 2022). However, when learning fairy tales takes place, teachers tend to tell stories by not using media that is attractive to students (Ahmad, 2023). The average student's ability to listen to fairy tales using traditional media is shown to be 67.2, while when audiovisual media is involved, the average student's ability to listen to fairy tales increases to 84.53 (Nurani et al., 2018). Hence, it can be concluded that students' ability to understand Sundanese fairy tales with traditional media tends to be low. This can also be influenced by the use and ability of Sundanese in everyday life. Therefore, to make learning fairy tales more interesting for students, it is necessary to involve

interesting learning media, such as audiovisual forms, so that learning is not monotonous and motivates students (Rosyidah et al., 2023; Setiyaningsih et al., 2023). The media can be made by utilizing technology.

One of the developments in digital technology that can be used to improve the quality of learning is augmented reality (Pangestu & Rahmi, 2022). Augmented reality can be used as a variety of interactive learning media as an innovation in the field of education. The selection of learning media to convey material must be appropriate to attract students' learning motivation and make students more active in learning (Putri & Guspatni, 2023; Wulandari et al., 2023). By using augmented reality, students can get real learning experiences. In learning in this digital era, students must also have competencies that are considered important, namely 4C competencies (critical thinking, creative thinking, collaboration, and communication). Meanwhile, the utilization of augmented reality not only improves learners' understanding of various subjects but also motivates them to engage more actively in learning (Kuswinardi et al., 2023). Augmented reality can also help students improve their 4C competencies through motivation and activeness in learning. Therefore, based on some of these advantages, augmented reality can be utilized as a language learning medium, including Sundanese, especially in the material of fairy tales. Fairy tales can be transformed into augmented reality, which is audiovisual as a medium for learning Sundanese fairy tales.

Before using augmented reality as a learning media, it is necessary to design in advance according to the material and learning objectives to be achieved. Learning media design must go through the media development stage so that it can be used. Research on the development of augmented reality learning media design is not new. Previously, several studies on the design of augmented reality learning media development have been conducted. In the research of Setiawan et al. (2023), augmented reality was developed for English learning media at the elementary school level. Furthermore, in the research of Titiana et al. (2022), augmented reality was developed in the form of English storybooks for early childhood. In Kamaruddin et al.'s research (2019), augmented reality was developed to improve students' Arabic language acquisition skills. In the research of Pamungkas et al. (2022), the Indonesian-language Reog Ponorogo folklore was developed in augmented reality. Moreover, in the research of Mambu and Chirst (2021), the folklore of North Sulawesi was developed in the form of augmented reality.

Based on previous research, augmented reality has begun to be developed in the field of language and literature. Augmented reality has been developed for learning in language Indonesian, English, and other foreign languages, as well as in Sundanese language learning. In the research of Zikra et al. (2021), AR was developed for basic Sundanese language learning by introducing the names of fruits and vegetables. Furthermore, in the research of Hidayat et al. (2022), AR was designed to learn media for Sundanese script at the junior high school level. A study (Hakim, 2021) also used augmented reality to introduce Sundanese traditional ceremonies through applications.

In light of several of these investigations, augmented reality is not a new thing that is used in Sundanese language learning, but augmented reality has not been developed in Sundanese language fairy tales, which can also be used for learning media. Also, based on the results of field observations and interviews with six Sundanese language teachers and 24 elementary school students, learning media began to use technology, but it has not yet been in the form of attractive audiovisual media. This aligns with the finding that the media used by teachers in learning fairy tales is not interesting for students (Ahmad, 2023). Therefore, this research needs to be done to develop interactive learning media for Sundanese fairy tales in the form of augmented reality in accordance with Sundanese learning materials so that it can be used as a learning medium. The novelty in this research lies in the

augmented reality developed for learning media for Sundanese fairy tales. Augmented reality was designed in such a way that students can visualize the contents of fairy tales and increase their understanding of the contents so that learning objectives can be achieved. Therefore, this study aims to describe the needs analysis, design, and testing of augmented reality learning media development in Sundanese fairy tale material.

RESEARCH METHODS

The method used in this research was the R&D research method. This kind of research is conducted to produce a product design, which is then internally validated (Sugiyono, 2016). The development research model chosen was the ADDIE development model (analysis, design, development, implementation, evaluation) (Winaryati, 2021). In accordance with its extension in the ADDIE development model, five stages guide development research: the analysis, design, development, implementation, and evaluation phases (Rayanto & Sugianti, 2020). Due to the limited time and ability of researchers, the stages of the model used only included three stages, namely analysis, design, and development.

In this study, several participants were involved as sources of research data. At the analysis stage, interviews were conducted with data sources from six elementary school Sundanese language subject teachers and 24 students. The samples were selected based on the categories of excellent, good, and good enough school accreditation. The next data sources were two media experts, two literature learning material experts, and 24 elementary school students, who were the sources at the internal validation stage.

The data collection techniques employed questionnaires, interviews, and observations. The research instruments used in this study were questionnaires, interview guides, and tests. Questionnaires were used to determine the feasibility level of augmented reality media for Sundanese fairy tales from experts and the practicality of media from students. Furthermore, interviews were used in the early stages, namely field analysis related to the use of learning media. The instrument chosen for expert validation, media practicality, and user response was a questionnaire. The validation instrument was arranged in such a way with the following grid:

Table 1. Media validity grid

No.	Aspects	Indicator	Question Item Number
1.	View	Accuracy of learning media layout elements	1
		The accuracy of color selection in the developed multimedia	2
2.	Image	Accuracy of image selection	3 & 4
		Image selection quality	5 & 6
3.	Packaging	Appropriateness of appearance with content	7, 8, & 9
		Media quality	10 & 11

Modified from Nurhasan (2021) and Pribowo (2018)

Table 2. Material validity grid

No.	Aspects	Indicator	Question Item Number
1.	Curriculum	Suitability of KI/KD (Core Competencies/Basic Competencies)	1 & 2

		Accuracy of the material	3 & 4
2.	User	Suitability of media with the development of learners	5, 6, 7, & 8
3.	Contents	Accuracy of the order of presentation of the material	9
		Clarity of material content	10

Modified from Nurhasan (2021) and Pribowo (2018)

Table 3. User validity grid

No.	Aspects	Indicator	Question Item Number
1.	Content and purpose	Completeness and purpose	1 & 2
2.	Learning	Provide learning opportunities, interest, and attention	3
3.	Aesthetics	Display quality and concept suitability	4 & 5

Modified from Nurhasan (2021) and Pribowo (2018)

Furthermore, the data generated were processed using quantitative descriptive analysis techniques, which were then interpreted qualitatively. After validation and product improvement from the validation results, the learning media becomes an internally tested product design (Sugiyono, 2016). The results of the questionnaire were categorized based on the percentage of feasibility produced, and the category was divided into five ranges in the table below.

Table 4. Feasibility conversion

Percentage	Category
81%-100%	Very good
61%-80%	Good
41%-60%	Good enough
21%-40%	Not good
< 21%	Not very good

Source: (Nurhasan, 2021)

The development of augmented reality learning media was designed using the ADDIE model, which has five stages of development. Nevertheless, in this research, the ADDIE model was used only until the development stage.

Figure 1: Research flow

The first was the needs analysis stage in the field, followed by the second stage, namely the design of learning media. The design of augmented reality media was based on the characteristics of fourth-grade elementary school students, learning materials, and the achievements and learning objectives of Sundanese fairy tales. The design of fairy tales in the form of augmented reality included visualization of fairy tale characters, visualization of the setting, a series of scenes and storylines, and

sound to fill the story. The design was then developed in the third stage to become augmented reality learning media for learning Sundanese fairy tales. After this augmented reality media had been developed, validation was carried out by media experts, material experts, and user responses from fourth-grade students in one of the elementary schools in Bandung City. Furthermore, data analysis was carried out using quantitative descriptive analysis so that the media design was internally tested.

RESULTS AND DISCUSSION

Need Analysis

The design of augmented reality learning media for fairy tales must go through three stages to become a product design. The first stage was a needs analysis conducted through interviews and observations. Preliminary studies were carried out in elementary schools in Bandung City with a sample distribution of six elementary school Sundanese language subject teachers and 24 students from elementary schools with excellent, good, and good enough accreditation. The results of the interviews conducted uncovered that the learning media used in Sundanese language learning began to use technology such as projectors to display material. The variety of media used also began to vary in the form of images or audio. Based on the preliminary study, it was found that the language learning media used had begun to utilize technology, but the media was only in the form of images or audio, not yet in the form of audiovisual combinations. Hence, it is necessary to develop fairy tale learning media using audiovisual media, namely augmented reality. Therefore, this research created a design in the form of augmented reality-based interactive learning media in Sundanese fairy tale material to become a variety of Sundanese language learning media.

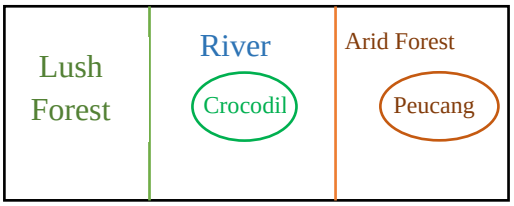
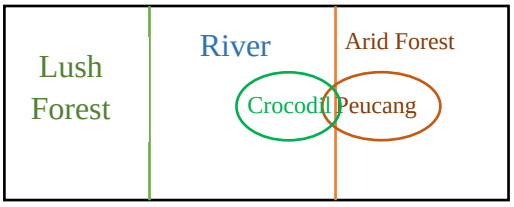
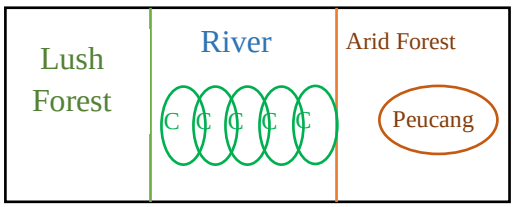
Design

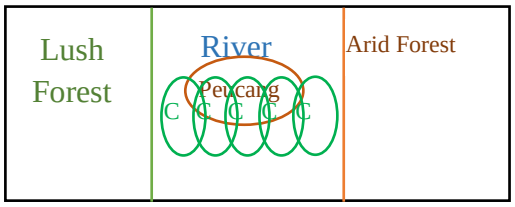
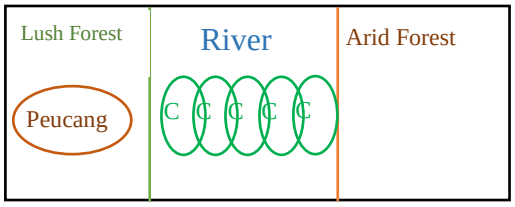
Augmented reality media was designed through three stages, namely concept formulation, storyboard design, and determining media components (Mustika et al., 2018; Pandansari & Gafur, 2016).

In formulating the media concept, the augmented reality media to be created was formulated in accordance with the learning objectives and target users. In this research, the media was designed to teach fairy tales at the elementary school level. Based on the learning outcomes of Sundanese language subjects at the elementary school level, the fairy tale material presented was a fable, so a fable entitled "Sakadang Peucang Ngalawan Buaya" was chosen.

In designing a storyboard, the next stage of media design preparation was the creation of scenarios for each scene in augmented reality visualization. The fairy tale text "Sakadang Peucang Ngalawan Buaya" was divided into six scenes. Here is the storyboard of augmented reality media.

Table 5. Storyboard of the fairy tale

Scene	Design	Description/script
Scene 1		• Visualization of the setting of "peucang" is a forest in an arid state, a river, and a fertile forest across the river. • There is a forest background sound and a narrator voiceover. • There is a play button to run each scenario.
Scene 2		• The visualization of the unbearably hungry “peucang" has the urge to cross but is aware that many crocodiles are waiting for prey in the river. • There is a forest background sound and a narrator voiceover. • There is a play button to run each scenario.
Scene 3		• The visualization of when the "peucang" tries to cross, but his leg is bitten by the crocodile, so the deer cleverly avoids it. • There is a forest background sound and a narrator voiceover. • There is a play button to run each scenario.
Scene 4		• A display where the crocodile leader dives in to call his friends at the command of "peucang," and the crocodiles emerge in a row to the surface of the river. • There is a forest background sound and a narrator voiceover. • There is a play button to

		run each scenario.
Scene 5		• A display of "peucang" jumping over the backs of crocodiles one by one to cross the river • There is a forest soundtrack and the narrator's voiceover. • There is a play button to run each scenario.
Scene 6		• In the scene where the "peucang" manages to cross the river with the help of the crocodile, he taunts the crocodile for falling for his clever trick. • There is a forest background sound and a narrator voiceover. • There is a play button to run each scenario.

Suitable components were prepared and determined to visualize each story character in the assemblr EDU application. In addition to character visualization, there was also a selection of components for visualizing the setting and other complements to be displayed in augmented reality media. To complete the augmented reality display of fairy tales, forest background sounds, narrator voices, and character voices based on the content of the story were also added to bring the media to life.

Development

The development stage came down to combining components. After selecting the components to be used, each component was arranged per scene in the assemblr EDU application. The fairy tale "Sakadang Peucang ngalawan Buaya" was transformed into augmented reality in six scenes. The following is a view of each scene.

Table 6. Augmented reality media display

Scene	View
Scene 1	

Scene 2

Scene 3

Scene 4

Scene 5

Scene 6

At the development stage, not only product development was carried out, but internal validation was also performed by experts. Internal validation was conducted so that after validation, the resulting product became an internally tested design (Sugiyono, 2016). The validation carried out on this augmented reality fairy tale learning media was media validation, material validation, and user validation. Media validation was carried out by two media experts, material validation was carried out by two experts, and user responses were carried out by 24 students. The results of the media expert validation can be seen in the diagram below.

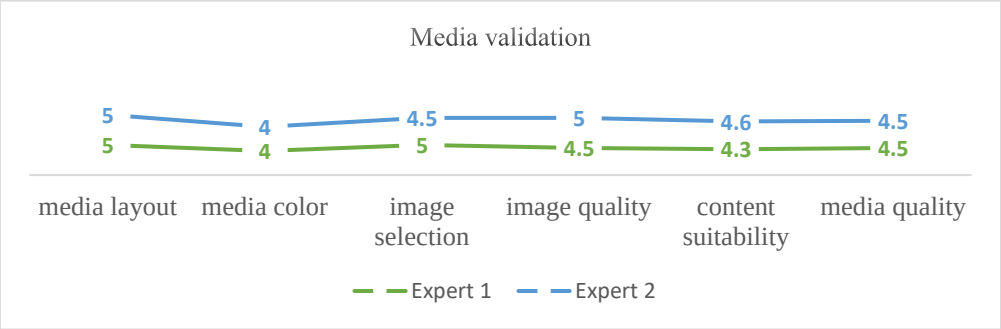


Figure 2. Diagram of media validation

Based on Figure 2, the average value of media validation from two experts was 4.6. Then, the percentage of the feasibility of augmented reality media design of fairy tales was 93.2%, belonging to a very good category. Therefore, augmented reality learning media of Sundanese fairy tales could be implemented in Sundanese language learning. Next, material experts validated the material to see its suitability with fairy tale learning material at the elementary school level. The results of the validation are described in the diagram below.

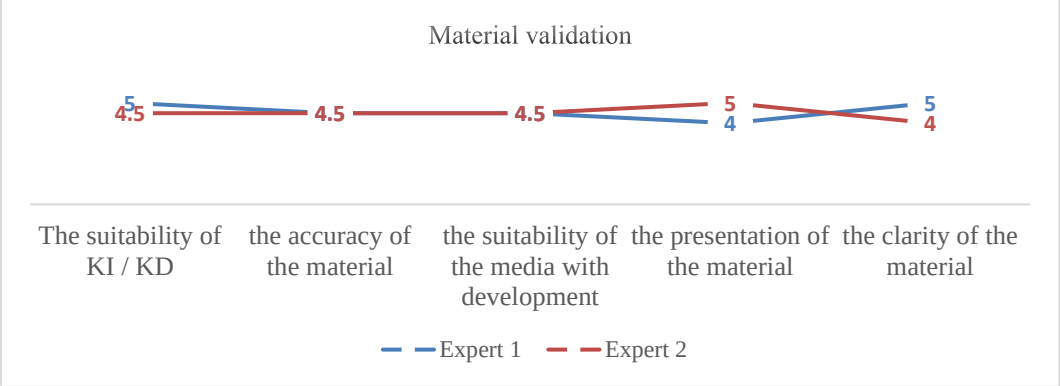


Figure 3. Diagram of material validation

Judging from the data generated in Figure 3, the average material validation value of augmented reality media was 4.55. Then, the percentage of the feasibility of learning media based on material experts was 91%, which was a very good category. Therefore, the feasibility of the material contained in the media had been internally tested and could be implemented in learning. In addition to media and material validation by experts, tests were also conducted to see user responses to this AR fairy tale learning media. The users chosen to express the response were fourth-grade students, with a total of 24 people. The following are responses from users regarding AR fairy tale learning media.

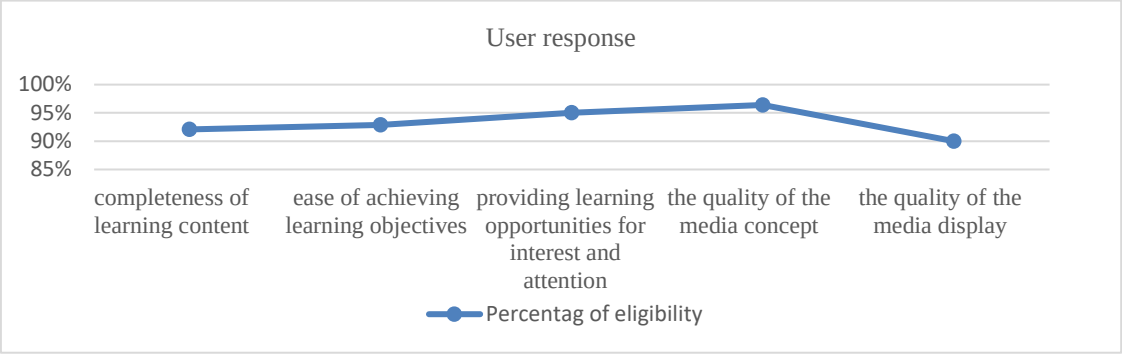


Figure 4. User response diagram

The diagram illustrates that the average percentage of the feasibility of the responses given by students to augmented reality learning media was 93%, with a very good category. From the three validation results above, the augmented reality media of Sundanese fairy tales had a very good feasibility category. Therefore, the learning media for fairy tales in the form of augmented reality could begin to be implemented in Sundanese language learning, especially fairy tale material.

Fundamentally, in the Sundanese language learning process, support and facilities that can attract attention to achieve learning goals are needed. This augmented reality learning media for Sundanese fairy tales was designed to be a variation of Sundanese language learning media. This AR media can be used to make learning more interesting and increase students' learning motivation (Carolina, 2022; Gumilang, 2023; Indahsari & Sumirat, 2023). Motivation is needed so that students can achieve learning completeness; therefore, supporting media is required to facilitate this goal. Augmented reality can help students achieve learning completeness indicators (Wati et al., 2023). With this goal, augmented reality media can begin to be developed to become learning media, including Sundanese language learning.

Augmented reality is a technology that combines two-dimensional or three-dimensional virtual objects into a three-dimensional real environment and then projects these virtual objects in real-time and real places (Gumilang, 2023; Gunawan, 2023; Sari et al., 2022). Students will feel the real experience when augmented reality is used to describe learning materials. Moreover, the augmented reality media design is accompanied by the addition of audio story content, which makes the product include interactive audiovisual media. Virtual objects that are the implementation of learning materials can be seen, listened to, and used as if they are real so that they can attract the attention of students. This augmented reality learning media product of Sundanese fairy tales is not only interesting but also in accordance with learning materials at the elementary school level so that the material can be conveyed and the lesson objectives can be achieved. This can be seen from the validation results of media and material experts who gave a percentage of eligibility of 93.2% and 91% in the very good category on this Sundanese fairy tale AR media. Thus, it is expected that augmented reality can help improve students' understanding, stimulate mindsets, improve critical thinking skills, and implement material in everyday life (Dewi & Sahrina, 2021; Socrates & Mufit, 2022; Zulfa et al., 2023).

Since augmented reality-based learning media for learning Sundanese fairy tales have not been developed, it is necessary to develop them to help learning activities become more interesting while conveying the material and learning objectives. As such, the design of augmented reality fairy tales needs to be continued until the implementation stage to see the effect of media on learning. Based on validation conducted by media experts, material experts, and users of augmented reality, the media

design developed could be categorized as very good, with an average percentage of eligibility reaching 92.4%. According to the results of validation data processing, the quality of this Sundanese fairy tale augmented reality media could help improve students' understanding of Sundanese fairy tale material. It implies that using augmented reality media can color the use of digital media in Sundanese language learning as an alternative solution to improving students' ability to understand Sundanese fairy tales. Therefore, the products resulting from this research can be implemented in Sundanese language learning at the elementary school level as interactive learning media. In this study, the stages were taken only up to the development stage to produce ready-to-be-tested products.

CONCLUSIONS AND RECOMMENDATIONS

To achieve learning objectives and indicators of learning completeness, adequate learning facilities are needed. One of these facilities is learning media. Variations in learning media used can improve students' motivation and quality of learning. Augmented reality is one option that can be used as learning media, providing a real experience in learning. This Sundanese fairy tale AR media design can be used to support learning on fairy tale material so that students can see the scene directly from the contents of the fairy tale. The product produced in this study was augmented reality media of Sundanese fairy tales at the elementary school level. The resulting product was internally validated by media experts, material experts, and users, with an average percentage of eligibility of 92.4% in the very good category. Therefore, this augmented reality-based learning media product can begin to be used in the world of education. In this study, the stages carried out were only up to the development stage, which produced learning media products. Therefore, it is expected that future research will focus on the implementation and trial of augmented reality learning media in Sundanese language learning.

REFERENCES

Ahmad, R. (2023). Penerapan Pendekatan Komunikatif dapat Meningkatkan Penguasaan Siswa Menceritakan Isi Dongeng. *Jurnal Inovasi Pendidikan Dan Pengajaran*, *3*(1).

Aljamaliah, S. N. M., & Darmadi, D. M. (2021). Penggunaan Bahasa Daerah (Sunda) Di Kalangan Remaja Dalam Melestarikan Bahasa Nasional Untuk Membangun Jati Diri Bangsa. *Sarasvati*, *3*(2), 123. https://doi.org/10.30742/sv.v3i2.1740

Annisya, S., & Baadilla, I. (2022). Analisis Nilai Karakter melalui Media Animasi Fabel dalam Pembelajaran Bahasa Indonesia pada Siswa Sekolah Dasar. *Jurnal Basicedu*, *6*(5), 7888–7895. https://doi.org/10.31004/basicedu.v6i5.3648

Carolina, Y. Dela. (2022). Augmented reality sebagai media pembelajaran niteraktif 3D untuk meningkatkan motivasi belajar siswa digital native. *Ideguru: Jurnal Karya Ilmiah Guru*, *8*(1), 10–16. https://doi.org/10.51169/ideguru.v8i1.448

Dewi, K., & Sahrina, A. (2021). Urgensi augmented reality sebagai media inovasi pembelajaran dalam melestarikan kebudayaan. *Jurnal Integrasi Dan Harmoni Inovatif Ilmu-Ilmu Sosial (JIHI3S)*, *1*(10), 1077–1089. https://doi.org/10.17977/um063v1i10p1077-1089

Fitri, S. F. N. (2021). Problematika kualitas pendidikan di Indonesia. *Jurnal Pendidikan Tambusai*, *5*(1), 1617–1620.

Gumilang, R. (2023). Simulasi terjadinya hujan menggunakan teknologi augmented reality. *Jurnal Teknologi Pintar*, *3*(3). http://teknologipintar.org/index.php/teknologipintar/article/view/373

Gunawan, H. (2023). *Implementasi metode sobel pada pengenalan teknik dasar kendang berbasis augmented reality*. *4*(1), 130–139.

Hakim, R. L. (2021). *MÉDIA APLIKASI AUGMENTED REALITY DINA NGAWANOHKEUN BUDAYA SUNDA*. Universitas Pendidikan Indosesia.

Hidayat, A. A., Sutedi, A., & Gunadhi, E. (2022). Media Pembelajaran Aksara Sunda Menggunakan Augmented Reality Berbasis Android. *Jurnal Algoritma*, *19*(2), 505–514. https://doi.org/10.33364/algoritma/v.19-2.1135

Indahsari, L., & Sumirat, S. (2023). Implementasi teknologi augmented reality dalam pembelajaran interaktif. *Cognoscere: Jurnal Komunikasi Dan Media Pendidikan*, *1*(1), 7–11. https://doi.org/10.61292/cognoscere.v1i1.20

Kamaruddin, M., Zakiah Bardan, S., Ain, N. F., Baharuddin, Ibrahim, N. H., & Wahid, N. H. A. (2019). 3D Bahasa Arab Augmented Reality (3D Baar) Membantu Meningkatkan Penguasaan Bahasa Arab Pelajar. *Innovative Teaching and Learning Journal*, *2*(2), 17–31.

Kemendikbud. (2020). *Gambaran kondisi vitalitas bahasa daerah di Indonesia: berdasarkan data Tahun 2018–2019*. Pusat Data Informasi dan Teknologi, Kementerian Pendidikan dan Kebudayaan.

Kuswinardi, J. W., Rachman, A., Taswin, M. Z., Pitra, D. H., & Oktiawati, U. Y. (2023). *Pemanfaatan aplikasi augmented reality (AR) dalam pembelajaran di SMA*. *6*(3), 556–563.

Layaliya, F. N., Haryadi, H., & Setyaningsih, N. H. (2021). Media pembelajaran bahasa dan sastra (studi pustaka). *Jurnal Pendidikan Bahasa Dan Sastra Indonesia Metalingua*, *6*(2), 81–84. https://doi.org/10.21107/metalingua.v6i2.12392

Mambu, J. Y., & Chirst, M. Y. (2021). Aplikasi Pengenalan Cerita Rakyat Sulawesi Utara "Burung Kekekow" Menggunakan Augmented Reality Berbasis Android. *Jurnal Informatika Kaputama (JIK)*, *5*(2), 356–364. https://doi.org/10.59697/jik.v5i2.270

Miasari, R. S., Indar, C., Pratiwi, P., Purwoto, P., Salsabila, U. H., Amalia, U., & Romli, S. (2022). Teknologi pendidikan sebagai jembatan reformasi pembelajaran di Indonesia lebih maju. *Jurnal Manajemen Pendidikan Al Hadi*, *2*(1), 53. https://doi.org/10.31602/jmpd.v2i1.6390

Mustika, Sugara, E. P. A., & Pratiwi, M. (2018). Pengembangan Media Pembelajaran Interaktif dengan Menggunakan Metode Multimedia Development Life Cycle. *Jurnal Online Informatika*, *2*(2), 121. https://doi.org/10.15575/join.v2i2.139

Nurani, R. Z., Nugraha, F., & Sidik, G. S. (2018). Penggunaan Media Audio Visual Dalam Pembelajaran Menyimak Dongeng Di Era Digital. *EduHumaniora | Jurnal Pendidikan Dasar Kampus Cibiru*, *10*(2), 78. https://doi.org/10.17509/eh.v10i2.10867

Nurhasan, M. (2021). Pengembangan media permainan ular tangga berbasis android pada pembelajaran fisika. In *Universitas Muhammadiyah Metro* (Vol. 3, Issue 1). http://journal.unilak.ac.id/index.php/JIEB/article/view/3845%0Ahttp://dspace.uc.ac.id/handle/123456789/1288

Pamungkas, A. R., Rachmatullah, R., & Huda, M. (2022). Aplikasi Cerita Rakyat Reog Ponorogi Berbasis Augmented Reality. *Go Infotech: Jurnal Ilmiah STMIK AUB*, *28*(1), 43–53. https://doi.org/10.36309/goi.v28i1.165

Pandansari, P., & Gafur, A. (2016). Pengembangan Multimedia Interaktif Untuk Pembelajaran Desain Busana Di Smk. *Jurnal Inovasi Teknologi Pendidikan*, *3*(2), 237.

https://doi.org/10.21831/jitp.v3i2.11014

Pangestu, D. M., & Rahmi, A. (2022). Metaverse : Media pembelajaran di era society 5.0 untuk meningkatkan kualitas pendidikan indonesia. *Journal of Pedagogy and Online Learning*, *1*(2), 52–61. https://doi.org/10.24036/jpol.v1i2.17

Pribowo, S. F. P. (2018). Pengembangan instrumen validasi media berbasis lingkungan sekitar. *Jurnal Pendidikan Dan Ilmu Pengetahuan*, *18*(1), 1–12. http://journal.um-surabaya.ac.id/index.php/didaktis/article/download/1355/1153

Putri, A., & Guspatni, G. (2023). Desain media pembelajaran interaktif menggunakan augmented reality pada materi sifat keperiodikan unsur. *Jurnal Pendidikan Tambusai*, *7*(2), 15034–15045.

Rayanto, Y. H., & Sugianti. (2020). *Penelitian pengembangan model ADDIE dan R2D2: Teori dan praktek*. Lembaga Academic & Research Institute.

Riowati & Yoenanto, N. H. (2022). Peran guru penggerak pada merdeka belajar untuk memperbaiki mutu pendidikan di Indonesia. *JOEAI (Journal of Education and Instruction)*, *5*(8.5.2017), 2003–2005. https://doi.org/https://doi.org/10.31539/joeai.v5i1.3393

Rosyidah, A., Hasanudin, C., & Marzuki, I. (2023). *Pemanfaatan Media YouTube untuk Pembelajaran Mendongeng Era Digital*. *2*(April 2023), 8–15.

Safitri, A. O., Yunianti, V. D., & Rostika, D. (2022). Upaya peningkatan pendidikan berkualitas di Indonesia: Analisis pencapaian Sustainable Development Goals (SDGs). *Jurnal Basicedu*, *6*(4), 7096–7106. https://doi.org/10.31004/basicedu.v6i4.3296

Sari, I. P., Batubara, I. H., Hazidar, A. H., & Basri, M. (2022). Pengenalan bangun ruang menggunakan augmented reality sebagai media pembelajaran. *Hello World Jurnal Ilmu Komputer*, *1*(4), 209–215. https://doi.org/10.56211/helloworld.v1i4.142

Setiawan, F. N., Abidin, M. Z., & Ratnawati, D. (2023). Pengembangan aplikasi augmented reality pada mata pelajaran bahasa inggris untuk kelas 1 sekolah dasar. *Jurnal Teknologi*, *16*(1), 48–54. https://doi.org/10.34151/jurtek.v16i1.4237

Setiyaningsih, S., Yuwana, S., & Hendratno. (2023). Peningkatan Keterampilan Bercerita Siswa Setelah Menggunakan Media Animasi Audio Visual Dongeng Binatang Berbasis Canva. *Jurnal Elementaria Edukasia*, *6*(2), 618–624. https://doi.org/10.31949/jee.v6i2.5452

Sianipar, V. D., Erlina, E., & Lestari, I. (2023). Profil kemampuan literasi digital pada mahasiswa pendidikan kimia FKIP Untan sebagai calon guru. *Hydrogen: Jurnal*, *11*(August). https://e-journal.undikma.ac.id/index.php/hydrogen/article/view/8067%0Ahttps://e-journal.undikma.ac.id/index.php/hydrogen/article/download/8067/4832

Siregar, Y. A., Matondang, A. M., & Ammy, P. M. (2023). Development of digital-based numeracy literacy capabilities and increasing the resilience self-efficacy of elementary school teachers. *DINAMISIA: Jurnal Pengabdian Kepada Masyarakat*, *7*(5), 1248–1255.

Socrates, T. P., & Mufit, F. (2022). Efektivitas penerapan media pembelajaran fisika berbasis augmented reality: Studi literatur. *EduFisika: Jurnal Pendidikan Fisika*, *7*(1), 96–101. https://doi.org/10.59052/edufisika.v7i1.19219

Subroto, D. E., Supriandi, Wirawan, R., & Rukmana, A. Y. (2023). Implementasi teknologi dalam pembelajaran di era digital: tantangan dan peluang bagi dunia pendidikan di Indonesia. *Jurnal Pendidikan West Science*, *1*(07), 473–480. https://doi.org/10.58812/jpdws.v1i07.542

Sugiarto, & Farid, A. (2023). Literasi digital sebagai jalan penguatan pendidikan karakter di era society

5.0. *Cetta: Jurnal Ilmu Pendidikan*, *6*(3), 580–597. https://doi.org/10.37329/cetta.v6i3.2603

Sugiyono. (2016). *Metode penelitian & pengembangan* (2nd ed.). Penerbit Alfabeta.

Suharmawan, W. (2023). Pemanfaatan Chat GPT dalam dunia pendidikan. *Education Journal : Journal Educational Research and Development*, *7*(2), 158–166. https://doi.org/10.31537/ej.v7i2.1248

Terupun, F. N., & Lampoliu, E. (2023). Strategi pemertahanan bahasa sunda di kawasan transmigrasi kampung aimasi distrik prafi Kabupaten Monokwari Papua Barat: Kajian sosiolinguistik. *BISAI: Jurnal Bahasa, Sastra, Dan Pengajaran*, *2*(2), 90–103. https://doi.org/10.30862/bisai.v2i2.238

Titiana, E. S., Dewi, F., & Maranatha, J. R. (2022). Analisis Konten Potensi Buku Cerita Berbasis Augmented Reality Dalam Pengenalan Kosakata Bahasa Inggris Untuk Anak Usia Dini. *Prosiding Nasional PGPAUD UPI*, 1–9. http://proceedings.upi.edu/index.php/semnaspgpaudpwk/article/view/1772%0Ahttp://proceedings.upi.edu/index.php/semnaspgpaudpwk/article/download/1772/1693

Wati, E. S., Rahmah, M., & Nurlaela, S. (2023). Upaya peningkatan hasil belajar dengan menerapkan model project based learning melalui media augmented reality. *Nautical: Jurnal Ilmiah Multidisiplin Indonesia*, *2*(2), 93–99. https://jurnal.arkainstitute.co.id/index.php/nautical/article/view/711

Winangsih, E., & Harahap, R. D. (2023). Analisis Penggunaan Media Pembelajaran pada Muatan IPA di Sekolah Dasar. *Jurnal Basicedu*, *7*(1), 452–461. https://doi.org/10.31004/basicedu.v7i1.4433

Winaryati, E. (2021). *Cercular model of RD & D*. Penerbit KBM Indonesia.

Wulandari, A. P., Salsabila, A. A., Cahyani, K., Nurazizah, T. S., & Ulfiah, Z. (2023). Pentingnya media pembelajaran dalam proses belajar mengajar. *Journal on Education*, *5*(2), 3928–3936. https://doi.org/10.31004/joe.v5i2.1074

Yulia, B., Wahidah, K., & Putra, A. D. (2023). *Sosialisasi penggunaan bahsa Sasak sebagai media bercerita pada anak usia dini untuk pemertahanan bahasa daerah*. *01*(01), 26–30.

Zikra, F. A., Kurniawan, A. P., & Sularsa, A. (2021). *Penerapan teknologi augmented reality (AR) pada aplikasi belajar bahasa Sunda untuk kelas satu sekolah dasar (SD) Application of Augmented Reality (AR) Technology in Sunda Learning application for First Class on Elementary School*. *7*(5), 2290–2298.

Zulfa, L., Ermawati, D., & Reswari, L. A. (2023). *Efektivitas media pembelajaran berbasis augmented reality*. *6356*, 509–514.

How to cite: Dzakiah, S. N., Nugraha, H.S., Kosasih, D., & Widyastuti, T. (2024). Design of Augmented Reality Interactive Learning Media in Learning Sundanese Fairy Tales. *Teknodika, 22 (1)*, 11-25. DOI: https://dx.doi.org/10.20961/teknodika.v22i1.81744