



AI-BASED CHATBOT APPLICATION AS LEARNING MEDIA ON WRITING TEXT DESCRIPTION MATERIAL

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Abstracts

AI technology in chatbot applications can be utilized as a medium learning. Media chatbots can reply to messages automatically with use keywords according to the information needed. In addition, the media it can be accessed anywhere, and anytime. Learning to write description texts you can take advantage of this chatbot application to provide convenience to students in searching for information about objects to be described such as objects schools, tourist attractions, or historical sites. This research aims to describe (1) application of chatbot application as a learning medium to write description text and (2) the benefits of chatbot applications as learning media. This study used a qualitative descriptive approach. Instruments in this research is a lesson implementation plan. Results of this study is an exposure to the advantages of chatbot applications as learning media and implementation.

Keyword:

AI, Chatbot, Descriptive Text, Learning Media

Introduction

Artificial intelligence (AI) is a branch of computer science that focuses on developing computer systems capable of emulating human abilities to think, learn, and make decisions. The main goal of artificial intelligence is to create computer programs that can perform tasks that require human intelligence, such as natural language processing, pattern recognition, decision making, planning and other problems.

Basically, AI includes two main types: Weak AI and Strong AI. Weak Artificial Intelligence refers to AI systems designed to complete certain tasks without awareness or understanding. While Strong Artificial Intelligence describes the concept of AI that is equal to the ability of human intelligence as a whole, even surpasses it in some aspects. One common implementation of artificial intelligence is chatbots. A chatbot is a computer program designed to communicate with humans via a text or voice interface. Chatbots use natural language processing (NLP) technology to understand and respond to questions and requests from users. Chatbot applications have spread widely in various fields, especially in the field of education, namely to make it easier to understand and respond to questions and instructions from users.

Learning media includes all forms and tools used to facilitate the learning and teaching process. Artificial intelligence and chatbots have made a major contribution in developing interactive and adaptive learning media. In the context of learning, chatbots can act as virtual tutors who provide assistance and answers to student questions. They can provide individual support for students, provide additional explanations, ask questions to test understanding, and

provide instant feedback. In addition, learning media based on artificial intelligence can adjust learning materials according to the needs and level of understanding of students. This helps students to learn in a more effective way and according to each individual learning speed.

Learning media in its application acts as a tool used in teaching and learning activities and acts as a stimulus aimed at feelings, concerns, thoughts along with the skills and abilities of a person or group of people so that they can carry out a learning process (Anshori in Santoso, 2021). Chatbot is a program created for the purpose of automatic handling of conversational activities carried out by computer technology against humans. The development of chatbot technology is widely applied to customer service systems in a business institution. There are many advantages to using chatbots, some of which are fast response times and always available at all times, as well as more affordable operational costs when compared to using the services of a human. However, chatbots do not have an emotional level (Santoso, 2021).

The application of AI (Artificial Intelligence) in chatbot technology aims to create a conversation service program that is not only capable of understanding the meaning of a sentence made by a user, but also able to provide relevant responses in a short span of time. This is what is used to develop chatbot applications as learning media. AI Chatbot can be integrated using several types of social media such as telegram, Facebook, Whatsapp, and LINE. Social media as a platform where chatbots will operate. In making a chatbot, we can use various types of Application Programming Interface (API) (Santoso, 2021). Learning media write this description text using the Whatsapp platform.

There are several previous studies that are relevant to the title of this study, including the following. The first research entitled Implementation of English Learning Chatbot using Social Media by Sarosa, et al. in 2020 in the JEPIN Journal (Journal of Education and Informatics Research). The result of this study is that a chatbot with the name ELA-bot can automatically help in the process of learning English structures. The second research entitled Application of Artificial Intelligence in Chatbot Applications as a Media for Information and Learning about National Culture by Santoso, et al. in the Journal of Informatics, University of Pamulang. The result of this research is the application of AI technology in chatbot applications intended as a means of learning about the nation's culture can increase the enthusiasm of the younger generation and make it easier for them to get information and learn various things about Indonesian culture.

The field of artificial intelligence and learning media continues to evolve rapidly. It is expected that further research will continue to focus on optimizing the relationship between artificial intelligence, chatbot applications, and learning media to enhance learning experiences and write better description texts in the future.

This study aims to describe (1) the application of chatbot applications as a learning medium for writing description text and (2) the benefits of chatbot applications as learning media. It is expected that the chatbot application can provide accurate and constructive feedback to assist learners in writing description text. Through this research, it is expected that AI-based chatbot applications as a learning medium can be an effective tool in improving the skills of writing description texts and providing a more interactive and personalized learning experience.

Methods

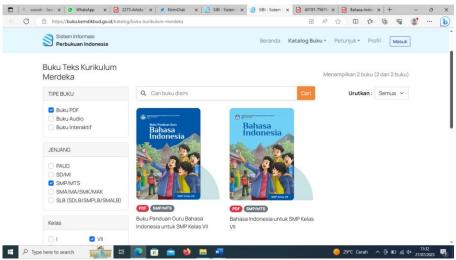
This study used qualitative descriptive research method. This study describes all existing data then analyzed and compared based on ongoing reality and further tries to provide problem solving (Afrianto, 2019). The data collection method used to collect information is by literature study both from books and articles in journals. In addition, it also uses questionnaire techniques by distributing questionnaires online using the Google Form application to material experts, media experts, and students / students to test applications that have been developed.

The software development method used to build chatbot applications uses the waterfall model. According to Afrianto (2019) the Waterfall Model stages are very precise and in accordance with software development whose processes include a) modeling, b) analysis, c) design, d) coding, e) testing, and f) improvement.

Modeling is the stage of translating the analysis data into a form that is easy for users to understand. At this stage researchers are looking for data in the form of material, text examples, and media in the form of images that can be used as inspiration in writing description text. Analysis is the stage of analysis the things needed in the implementation of an application development project. At this stage, researchers are looking for chatbot services that are easy to learning media. Then the application https://wa.kirimchat.xyz/public/login site because it is easy to use. Design is the stage of describing face-to-face designing. At this stage, researchers design a learning implementation plan that contains learning objectives, subject matter, learning steps, and assessment. Encoding is the stage of translating data that has been designed into a specific programming language. At this stage, researchers do coding by entering keywords and material into the application's database. Testing is the stage of testing the application being built. Repair is the stage of repairing an application that is already built. The data analysis technique used uses the Miles and Huberman model data analysis technique with stages of data reduction, data presentation and conclusions.

Results and Discussion Findings

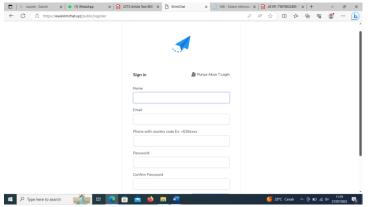
The development of chatbot application media begins with a needs analysis. Needs analysis aims to find information about topics needed to be developed. What researchers do is to conduct a literature study by reading previous studies that are relevant to this research. Next, the researcher analyzed the curriculum. Basic competence was found about writing description texts, namely at the Junior High School Level Class VII. Then collect data in the form of material from student books and teacher books from SIBI - Sistem Informasi Perbukuan (kemdikbud.go.id) which can be accessed from the page https://app.buku.kemdikbud.go.id.



Pictures 1. SIBI page view of the Ministry of Education and Culture

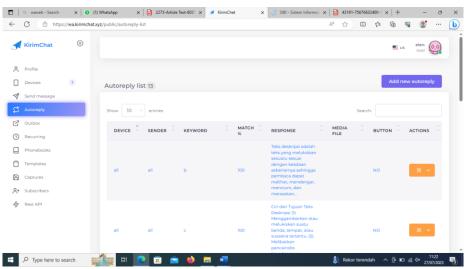
After the data is collected, then look for chatbot applications that are used as learning media. Researchers do not develop this application themselves but rent it on a subscription basis because of limited knowledge of researchers in making applications. The reasons for choosing this application are practical because it is easy to use, has an automatic reply feature that facilitates work, the price is cheap, very easy to apply on whatsapp, no need to install any

application, can be accessed anywhere and anytime, Then the application is selected on the site https://wa.kirimchat.xyz/public/login with the following view.



Pictures 2. Chatbot registration page kirimchat.xyz

Next, register an account by entering your email address and cellphone number. In addition, also subscribe as long as this application is used. After registering, this application can only be used by logging in with the display below.



Pictures 3. Application start page kirimchat.xyz

The next thing to do is to make a design by designing a learning implementation plan about writing a description text which includes the identity of the educational unit, learning outcomes, learning objectives, learning materials, learning steps, and learning assessments. Next, compile a chatbot design by dividing several points that will be included in the main menu, which are as follows.

- a. Learning objective of writing description text
- b. Definition of description text
- c. The purpose of writing the description text
- d. Language characteristics of description text
- e. Sample description text
- f. Use of periods and commas
- g. Preposition writing
- h. Practice writing description text from photos/images
- i. Inspiration to write a description text about culinary places in Kediri from Instagram
- j. Inspiration to write description text about tourist attractions in Kediri from Instagram

- k. Write a simple description text about your favorite place
- 1. Peer assessment rubric

The next step is to do the coding by coding the keyword and its reply, as in the following table.

Table 1. Data Encoding

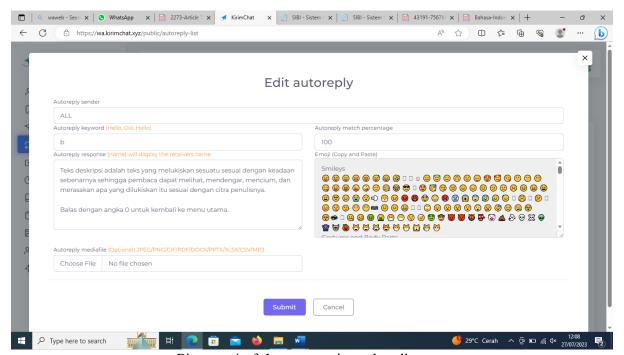
Informaci				
Kata kunci	Informasi yang dibutuhkan	Balasan		
Assalamualaikum, pagi, siang, sore, malam, tes, menu, assalamu'alaikum, selamat pagi, selamat siang, selamat sore, selamat malam,	Daftar menu	Assalamualaikum Wr. Wb. Selamat datang di WhatsApp Bot pembelajaran menulis deskripsi. Mari kita mulai dengan berpantun. Pergi ke Semarang naik kereta api. Turun dari kereta naik taksi. Makanan apa yang kalian sukai? Mari kita tulis menjadi teks deskripsi. Silakan pilih menu yang Anda inginkan. a. Tujuan pembelajaran menulis teks deskripsi b. Pengertian teks deskripsi c. Tujuan menulis teks deskripsi d. Ciri bahasa teks deskripsi e. Contoh teks deskripsi f. Pemakaian tanda titik dan tanda koma g. Penulisan kata depan h. Latihan menulis teks deskripsi dari foto/gambar i. Inspirasi menulis teks deskripsi tentang tempat kuliner di Kediri dari instagram j. Inspirasi menulis teks deskripsi tentang objek wisata di Kediri dari instagram k. Menulis teks deskripsi sederhana tentang tempat kuliner/objek wisata favorit l. Rubrik penilaian teman sejawat m. Menu utama Balas dengan ketik huruf yang Anda inginkan. Contoh balas dengan huruf b jika ingin memahami tentang pengertian teks deskripsi.		
a	Tujuan pembelajaran menulis teks deskripsi	 Tujuan pembelajaran menulis teks deskripsi Siswa menyajikan teks deskripsi dengan baik melalui latihan menyunting penggunaan huruf kapital, tanda titik, tanda koma, serta kata depan dalam kalimat dengan tepat. Peserta didik mampu menulis teks deskripsi 		
		sederhana dengan berlatih menjelaskan benda		

		kesukaannya dengan baik, sesuai dengan konteks dan pembaca.	
b	Pengertian teks deskripsi	Balas dengan angka 0 untuk kembali ke menu utama. Teks deskripsi adalah teks yang melukiskan sesuatu sesuai dengan keadaan sebenarnya sehingga pembaca dapat melihat, mendengar, mencium, dan merasakan apa yang dilukiskan itu sesuai dengan citra penulisnya.	
C	Tujuan menulis teks deskripsi	 Balas dengan angka 0 untuk kembali ke menu utama. Ciri dan Tujuan Teks Deskripsi (1) Menggambarkan atau melukiskan suatu benda, tempat, atau suasana tertentu. (2) Melibatkan pancaindra (pendengaran, penglihatan, penciuman, pengecapan, dan perabaan) untuk menggambarkan objek. (3) Bertujuan agar pembaca seolah-olah dapat melihat atau merasakan sendiri objek yang dideskripsikan. (4) Menjelaskan ciri-ciri objek, seperti warna, ukuran, bentuk, dan keadaan suatu objek secara terperinci. 	
		Balas dengan angka 0 untuk kembali ke menu utama.	
d	Ciri bahasa teks deskripsi	Ciri bahasa teks deskripsi: Menggunakan kalimat perincian. Menggunakan kata konkret. Menggunakan majas personifikasi.	
e	Contoh teks deskripsi	Balas dengan angka 0 untuk kembali ke menu utama. Bacalah contoh teks deskripsi berikut ini! Balas dengan angka 0 untuk Kembali ke menu utama.	
f	Pemakaian tanda titik dan tanda koma	 Huruf kapital atau huruf besar dipakai sebagai huruf pertama kata pada awal kalimat. Misalnya: Ardi menikmati kopi gayo. Huruf kapital dipakai sebagai huruf pertama nama geografi. Misalnya: Jakarta, Jalan Dago, Kabupaten Garut, Sungai Musi, Gunung Papandayan. Tanda Koma Tanda koma dipakai di antara unsur-unsur dalam suatu pemerincian atau pembilangan.	

		c. Ta ka Mi me d. Ta un ole sel de tel de me e. Ta ses ha da Bu sel	co, sementara Fajar memilih menikmati cangkir kopi. nda koma dipakai untuk memisahkan anak limat yang mendahului induk kalimatnya. isalnya: Kalau lulus ujian, ayah akan engajak saya ke Pulau Bali. nda koma dipakai di belakang kata atau gkapan penghubung antarkalimat, seperti eh karena itu, jadi, dengan demikian, nubungan dengan itu, dan meskipun mikian. Misalnya: Gunung Papandayan ah meletus beberapa kali. Meskipun mikian, kawah hasil letusan dan hutan mati enjadi daya tarik wisata ini. nda koma dipakai sebelum dan/atau sudah kata seru seperti o, ya, wah, aduh, i. Tanda koma juga dipakai sebelum n/atau sesudah kata sebagai sapaan, seperti a, Dik, atau Nak. Misalnya: Wah, indah kali pemandangan di Pantan Terong! Kamu auju kan, Nak?
g	Penulisan		gan angka 0 untuk kembali ke menu utama. n, seperti di, ke, dan dari, ditulis terpisah
5	kata depan	-	yang mengikutinya. Misalnya:
		a. Di	mana Toko Kopi Djawa?
			a ikut berlibur ke Yogyakarta.
		c. Ia	berasal dari Kota Musik.
			gan angka 0 untuk kembali ke menu utama.
h	Latihan	Tulislah te	eks deskripsi dari gambar berikut ini!
	menulis teks		
	deskripsi dari		
i	foto/gambar Inspirasi	Ini adalah	salah satu link instagram yang bisa
1	menulis teks		salah satu ilik histagrah yang bisa sebagai inspirasi menulis teks deskripsi
	deskripsi		mpat kuliner yang ada di Kediri.
	tentang		r J J 31 222 3121
	tempat	https://ins	tagram.com/kulinerkediri.id?igshid=MzRl
	kuliner di	ODBiNW	
	Kediri dari		
	instagram		gan angka 0 untuk kembali ke menu utama.
j	Inspirasi		salah satu link instagram yang bisa
	menulis teks	•	sebagai inspirasi menulis teks deskripsi
	deskripsi	tentang ob	ojek wisata yang ada di Kediri.
	tentang objek wisata di	https://ing	tagram.com/wisatakediri?igshid=MzRIOD
	Kediri dari	BiNWFlZ	
	instagram	שוויויות	<u> </u>

		https://instagram.com/wisatakabupatenkediri?igshid= MzRlODBiNWFlZA== Pales dangan angka 0 untuk kambali ka manu utama
k	Menulis teks deskripsi sederhana tentang tempat kesukaan	Balas dengan angka 0 untuk kembali ke menu utama. Tentu kalian juga punya tempat favorit yang bisa direkomendasikan kepada teman-teman bukan? Pilih salah satu tempat kuliner kesukaan atau objek wisata kesukaan kalian dan tulislah teks deskripsi sederhana tentang tempat tersebut. Unggah teks tersebut di instagram dan tambahkan foto atau video. Mintalah teman-temanmu untuk berkomentar dan memberikan suka/like.
1	Rubrik penilaian teman sejawat	Mintalah temanmu untuk menilai teks deskripsi yang sudah kamu tulis dengan rubrik penilaian berikut ini ya!

The next step is to enter the data into the application database by filling in keywords and replies that will be sent automatically. The display is as follows.



Pictures 4 of the automatic reply edit page

After the data is entered, the next step is to test the app to see if the replies match the keywords you entered. This chatbot is run through a second-party application, namely whatapps because this whatapps application is very familiar among students. Students can start a chat by entering keywords such as assalamualaikum, good morning, morning, good afternoon, afternoon, good afternoon, good night, evening, hi, hi. By typing these keywords, the display below will appear.

So this chatbot application in learning to write description text can be applied online or offline. In this chatbot, there are materials, examples, exercises, and assessment rubrics so that

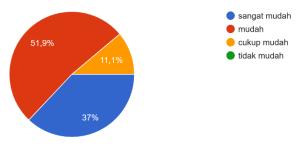
students can learn independently. Students only need to enter keywords according to the information they need.

After the app is developed, the next step is to do some testing. This chatbot test was carried out through questionnaires distributed to material experts, media, and students / students through the Google Form application. The results of this trial are used as material for improvement. The result is as follows.



Pictures 5 Chatbot display on Whatsapp

Bagaimana pendapat Saudara tentang kemudahan dalam mendapatkan informasi melalui media pembelajaran menulis teks deskripsi dengan fitur Chatbot ini? ²⁷ jawaban



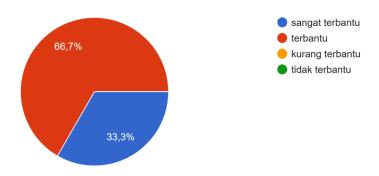
Pictures 6 Questionnaire Results

Based on the picture above, judging from the ease of obtaining information through learning media writing description text using chatbots shows that of 27 respondents 37% chose

very easy, 51.9% chose easy and 11.1% chose quite easy.

Apakah Saudara terbantu dengan materi, contoh teks, dan inspirasi menulis teks deskripsi yang disajikan dalam media pembelajaran menulis teks deskripsi dengan fitur Chatbot ini?

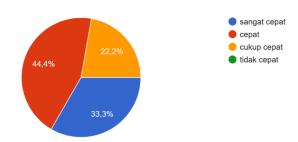
27 jawaban



Pictures 7 Questionnaire Results

Based on the picture above, judging from the presentation of material through learning media writing description text using chatbots, it shows that of 27 respondents, 33.3% chose to be greatly helped and 66.7% chose to be helped.

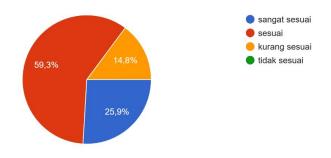
Bagaimana pendapat Saudara tentang kecepatan waktu dalam mendapatkan informasi melalui media pembelajaran menulis teks deskripsi dengan fitur Chatbot ini? 27 jawaban



Pictures 8 Questionnaire Results

Based on the picture above, judging from the speed of time in getting information through learning media writing description text using chatbots shows that of 27 respondents 33.3% chose very fast, 44.4% chose fast and 22.2% chose fast enough.

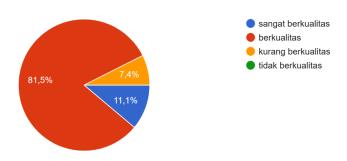
Bagaimana kesesuaian jawaban yang diberikan dengan informasi yang diminta? ²⁷ jawaban



Pictures 9 Questionnaire Results

Based on the picture above, judging from the suitability of the answers with the information requested through the chatbot media shows that of the 27 respondents 25.9% chose very appropriate, 59.3% chose appropriate and 14.8% chose less appropriate.

Bagaimana menurut pendapat Anda tentang kualitas media pembelajaran menulis teks deskripsi dengan fitur Chatbot ini? 27 jawaban

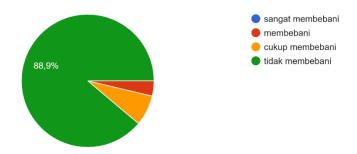


Pictures 10 Questionnaire Results

Based on the picture above, judging from the quality of chatbot media shows that of 27 respondents 11.1% chose very qualified, 81.5% chose quality and 7.4% chose less quality.

Apakah melalui media pembelajaran menulis teks deskripsi dengan fitur Chatbot ini membebani kinerja handphone Saudara?

27 jawaban



Pictures 11 Questionnaire Results

Based on the figure above, a look at the performance load of mobile phones shows that of 27 respondents 88.9% chose not to burden, 3.7% chose to burden, and 7.4% quite burdensome. From these tests, the advantages and disadvantages of this chatbot were found. The advantages include chatbots writing decryption text that are developed this makes it easier for students to get information quickly and accurately. Students feel helped by this chatbot. This chatbot is considered quality and does not burden the performance of students' mobile phones. However, there are shortcomings of this chatbot which is considered incompatible with the information needed. This happens because users don't understand how this chatbot works. When starting a conversation, this chatbot requires users to type keywords that match the keywords created by the app developer. If there is no conformity, the message will not get a reply. Therefore there are some students who do not get a reply due to errors in entering keywords.

Analysis

Application Of Chatbot Application As A Learning Medium To Write Description Text

Learning media is anything that can be used to channel messages and stimulate the mind so that it can attract students' interest in learning. The use of artificial intelligence (AI) in education is growing rapidly and among the most popular technologies to support teaching and learning activities is chatbots. Sofnidar et al. (2023) said that the use of appropriate media can improve learning outcomes. One of the media that can support the learning process in the 21st century is chatbots. Chatbots can potentially be used in a wide variety of ways in learning situations. Chatbot is an interactive mechanism compared to ordinary e-learning systems.

Murad (2019) argues chatbots have the ability to process input from users and generate responses that are then sent back to users. Chatbot is a service powered by artificial intelligence-based machines where users can interact through a text-based or conversational interface. Once the chatbot understands what the user is referring to, it retrieves the necessary information by running an API or performing a search into the database.

Chatbot technology can be an interactive learning media solution in writing description text. The chatbot developed is built from two different but integrated platforms, namely kirimchat.xyz chatbot and whatsapp which can be accessed via smartphone. Chatbots are used by students to learn independently where students can access materials and even exercises.

This is in line with the statement of Yuliani, et al. (2023) who said that the lecture method is less effective in learning because it can make students passive and cannot develop students' thinking which will later be needed by Indonesian society. In addition, students also need observable learning media to describe an object into description text. This problem can be overcome with technology-based learning media such as chatbots because these chatbots are supported by facilities that can attach images or files. This shows a change in the learning approach that originally used the traditional approach to digital-based learning.

The application of this chatbot is quite easy. First of all, to do independent learning, participants do not have to install special applications. If students already have a whatsapp account, students can directly access it by sending a message using the password provided to the mobile number provided. As in the view below. Users will immediately get a reply according to the keywords given.



Picture 12 Chatbot Display on Whatsapp

Alifandra (2022) added that technological developments and the demands of conditions make chatbots a new way to teach in the world of Education. However, chatbots are still rarely used in teaching and learning activities, even though if chatbots are used teaching and learning processes, even though if chatbots are used, the teaching and learning process becomes more effective. Therefore, it is necessary to approach it first, namely by creating a chatbot whose material is light and in great demand. One of them is material about description text. Learning media write description text with this chatbot feature utilizing applications on the web https://kirimchat.xyz. This application is ready to use so that teachers who want to develop it as an educational medium just need to enter the necessary data.

Chatbot kirimchat.xyz it uses OpenAI Chat GPT technology. Open AI is an artificial intelligence (AI) technology for conversations used to interact with customers, automate tedious tasks, experience engaging digital experiences, and make businesses better. This chatbot has several advantages, including being very easy to apply on whatsapp, cheap, accessible anywhere and anytime.

This chatbot contains learning objectives for writing description text, understanding description text, purpose and characteristics of description text, examples of description text, use of punctuation and writing prepositions, writing inspiration, and practice writing description text. In addition, it is also equipped with a peer assessment rubric to measure the ability of students to write description text. According to Fauziah (2021), chatbots in learning function as a means of virtual learning guidance that directs students to solve problems.

The Benefits of Chatbot Applications as Learning Media

The combination of artificial intelligence and learning media has opened the door to the development of more interactive, responsive, and personalized learning systems. This is an important development that continues to evolve and has the potential to improve the efficiency and quality of education at various levels and fields of study.

The combination of artificial intelligence, chatbot applications, and learning media can provide significant benefits in learning description text. With the support of this technology, students can improve their writing skills efficiently and effectively, as well as gain a deeper understanding of good and correct description texts. The three combinations above are very useful in the implementation of education, especially learning Indonesian writing description texts, including (1) Provision of instant information and assistance: Artificial intelligence, especially chatbot applications, can provide instant help and information to students who learn to write description texts. When students encounter difficulties or questions, they can ask questions to chatbots that have been programmed to provide additional guidance, examples, and explanations quickly; (2) Interactive Learning: Artificial intelligence-based learning media can present description text learning materials in a more interactive format. For example, students can participate in description-writing exercises and receive instant feedback from AI systems based on their text analysis. This helps students to improve their writing skills in a more involved way; and (3) Unlimited Access: Artificial intelligence-based learning media can be accessed anytime and anywhere, as long as it is connected to the internet. It allows students to learn and practice writing description texts without time and space restrictions, which can increase flexibility and learning efficiency. This makes it easier for teachers to provide feedback and assess student progress in writing description text without the need to spend a lot of time in the assessment process.

The results of the questionnaire distribution show that this chatbot makes it easier for students to get information quickly and accurately. Students feel helped by this chatbot. This chatbot is considered quality and does not burden the performance of students' mobile phones. The results obtained from each question shared through the questionnaire show that the chatbot system can be accepted by users / students, which means that users agree with the development of learning media with these features.

This is as revealed by Murad (2019) that teaching and learning innovations in the form of chatbots are very supportive of students and teachers, chatbots make it easier for students to read material and do practice questions. The convenience provided has an impact on students' interest in learning.

To overcome the lack of appropriate information needed, it can be overcome by training. Alifandra (2022) said chatbot training is proven to change user perception. Users feel interested and comfortable using chatbots because users do not feel they are learning but like they are chatting with relatives.

Conclusion

Chatbot technology can be an interactive learning media solution in writing description text. The application of this chatbot is quite easy. First of all, to do independent learning, participants do not have to install special applications. If students already have a whatsapp account, students can directly access it by sending a message using the password that has been provided to the mobile number that has been given.

The use of chatbots as a learning medium has many benefits and advantages including 1) Chatbots provide instant information and assistance: Artificial intelligence, especially chatbot applications, can provide instant help and information to students who learn to write description texts. When students encounter difficulties or questions, they can ask questions to chatbots that have been programmed to provide additional guidance, examples, and explanations quickly; (2) Interactive Learning: Artificial intelligence-based learning media can present description text learning materials in a more interactive format. For example, students can participate in description-writing exercises and receive instant feedback from AI systems based on their text analysis. This helps students to improve their writing skills in a more involved way; and (3) Unlimited Access: Artificial intelligence-based learning media can be accessed anytime and anywhere, as long as it is connected to the internet.

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