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Students' Perception Of Increasing Morphology Competence Through Chatgpt: AI – Based Learning

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A R T I C L E I N F O

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A B S T R A C T

Improving students' morphological competence is essential because morphology plays an important role in understanding vocabulary, constructing accurate sentences, and developing overall language skills. However, traditional learning methods often lack personalized support, active engagement, and instant feedback. This study aims to understand students' perceptions of using AI-based ChatGPT in morphology learning and to explore its perceived advantages and disadvantages. This research employed a qualitative method using questionnaires and in-depth interviews with fourth-semester students of the English Education Study Program. The findings reveal that students generally have a positive perception of ChatGPT as a supportive learning tool. They find it helpful, motivating, and flexible, as it provides clear explanations, practical examples, and real-time feedback that support independent study. Despite these advantages, students also recognize several limitations, such as possible inaccuracies, technical restrictions, and the risk of over-reliance that may reduce their critical thinking skills. In conclusion, students suggest that ChatGPT should be used wisely as a complementary tool alongside lecturers' guidance and credible academic resources to maximize learning outcomes in morphology.

INTRODUCTION

Morphology, as a branch of linguistics, plays a vital role in enhancing language skills, particularly in vocabulary comprehension, sentence construction, and overall language proficiency. However, traditional language learning methods, while fundamental, often fall short in providing personalized support, immediate feedback, and active student engagement. This gap becomes even more pronounced when dealing with abstract linguistic concepts such as morphology, which involves the study of word structure and the processes that form them. Consequently, there is a growing need for innovative learning tools that can bridge this gap, offering students a more interactive and personalized learning experience.

In recent years, Artificial Intelligence (AI) has emerged as a transformative force in education, providing new opportunities for more effective learning methods. Among these AI-driven innovations, ChatGPT, a language model developed by OpenAI, has gained significant attention for its potential to enhance learning experiences. This tool, known for its ability to process and generate human-like text, has shown promise in a variety of educational contexts, including language learning. AI-based platforms like ChatGPT are now being explored as potential solutions to the limitations of conventional teaching, offering students more interactive, accessible, and flexible learning experiences.

The primary aim of this research is to explore students' perceptions of using ChatGPT to improve their morphological competence. Morphology, being fundamental to understanding word formation and structure, is a crucial component of language proficiency. Despite its importance, students often find it difficult to fully grasp morphological concepts using traditional teaching methods alone. This study aims to understand whether ChatGPT, by providing personalized, instant feedback and detailed explanations, can facilitate a deeper understanding of these concepts.

Previous studies have demonstrated that AI tools, such as ChatGPT, can assist students in various aspects of learning, including writing assistance, language practice, and even research tasks. ChatGPT, through its natural language processing capabilities, allows for an interactive learning environment where students can ask questions, request explanations, and receive feedback in real-time. This is especially beneficial in language learning, where understanding word forms, affixation processes, and syntactic structures is crucial. With the ability to provide immediate, personalized responses, ChatGPT offers an alternative to the often rigid and impersonal nature of traditional language teaching.

However, while AI tools offer significant advantages, their use is not without challenges. One of the key concerns is the accuracy and reliability of AI-generated content. While ChatGPT can assist with explanations and provide examples, there are instances where its responses may lack precision, particularly in complex linguistic topics. Additionally, students may become overly reliant on AI tools, potentially hindering the development of critical thinking and problem-solving skills that are essential for academic success. Therefore, it is crucial to assess how students perceive the advantages and limitations of ChatGPT in the context of morphology learning.

This study, conducted among fourth-semester students at Universitas Muhammadiyah Sidenreng Rappang, seeks to address these concerns by investigating students'

perceptions of ChatGPT as a supplementary tool for learning morphology. The research employs a qualitative approach, collecting data through questionnaires and in-depth interviews to capture a comprehensive understanding of students' experiences with AI-based learning. By examining both the positive and negative aspects of using ChatGPT, this study aims to provide valuable insights into the tool's effectiveness in improving morphological competence.

The findings of this study will contribute to the growing body of literature on AI-based learning tools, particularly in the context of language education. It will also provide practical recommendations for educators and institutions looking to incorporate AI tools into their teaching practices. By understanding students' perceptions, educators can make informed decisions about how best to integrate technologies like ChatGPT into their curriculum, ensuring that they complement traditional teaching methods and support students in their learning journeys.Ultimately, this research hopes to shed light on the role of AI in modern education, particularly in language learning, and explore how tools like ChatGPT can be used to enhance students' understanding of morphology. It will also examine the potential of AI to transform educational practices, making learning more accessible, interactive, and effective in the digital age.

LITERATURE REVIEW

The role of morphology in language learning is crucial, as it encompasses the study of word structure, which is fundamental to understanding vocabulary, constructing sentences, and enhancing overall language proficiency. Morphological competence allows learners to analyze and comprehend the meanings of complex words by understanding their components, such as roots, prefixes, and suffixes. According to Yule (2006), morphology is the study of morphemes, the smallest units of meaning in language, and plays a key role in understanding the structure and meaning of words. However, traditional methods of teaching morphology often struggle to provide sufficient engagement, interactivity, and real-time feedback that learners need to fully grasp the material. As a result, there is an increasing interest in using technology, particularly Artificial Intelligence (AI), to enhance language learning, including the study of morphology.

The introduction of AI in education, particularly in language learning, has sparked significant interest in its potential to address the limitations of traditional teaching methods. AI-based tools such as ChatGPT have shown promise in enhancing student learning by providing personalized, interactive, and immediate feedback. AI technologies use natural language processing (NLP) to understand and generate human-like text, enabling students to engage in meaningful interactions with the system. This allows learners to ask questions, request clarifications, and receive responses tailored to their individual learning needs. Previous studies have demonstrated that AI can be an effective tool for language learners, enhancing their ability to acquire vocabulary, improve grammar, and develop writing skills (Aljanabi et al., 2023; Aydın & Karaarslan, 2022).

ChatGPT, a powerful AI-driven language model developed by OpenAI, has gained widespread use in various educational contexts, particularly in language learning. Research by Gao (2022) highlights the potential of ChatGPT to assist students in writing

tasks by providing feedback on style, coherence, and grammar, which aligns with the AI's capacity to support learners in understanding complex language concepts. Additionally, ChatGPT's ability to generate human-like responses in real-time offers learners an interactive and personalized learning experience. In the context of morphology, ChatGPT can assist students in understanding word formation rules, affixation, and the morphological structure of words by providing relevant examples and explanations. This ability to break down complex language structures into manageable components can significantly enhance students' morphological competence.

The use of AI-based tools like ChatGPT in education is not without its challenges. While these tools offer numerous benefits, there are concerns regarding their accuracy, reliability, and the potential for over-reliance on technology. Studies have shown that AI-generated content may occasionally lack precision, particularly in complex topics where human expertise is required (Suharmawan, 2023). In the context of morphology, for example, while ChatGPT may provide useful explanations of word structures, it may not always offer fully accurate or contextually appropriate examples. Therefore, students must remain critical of AI-generated information and cross-check it with credible academic sources, such as textbooks and lectures, to ensure a comprehensive understanding of the material.

Furthermore, research by Subiyantoro et al. (2023) discusses the potential challenges of integrating AI into language teaching. One of the primary concerns is the risk of diminishing critical thinking and problem-solving skills in students. Overuse of AI tools like ChatGPT may lead to students relying too heavily on technology for answers, reducing their engagement with the learning process and hindering their development of independent learning skills. This is particularly relevant in language learning, where understanding the underlying principles of grammar and morphology requires deep cognitive engagement. Educators must balance the use of AI with traditional teaching methods to ensure that students continue to develop essential cognitive skills, such as analysis, synthesis, and critical thinking.

Despite these challenges, the integration of AI-based tools into language learning offers significant opportunities for enhancing student motivation and engagement. The flexibility and accessibility of AI platforms like ChatGPT allow students to learn at their own pace, outside of the classroom environment. Studies by Diantama (2024) and Yuliani (2023) suggest that AI can increase students' motivation by providing instant feedback, allowing them to explore and interact with the material on their own terms. This sense of autonomy can be particularly empowering for students, as it encourages independent learning and fosters a deeper understanding of the subject matter. Additionally, the use of AI-based tools can help reduce the anxiety students may feel when engaging with difficult linguistic concepts, such as morphology.

In addition to its impact on motivation, AI-based learning tools also offer the potential to enhance the overall effectiveness of language education. As noted by Fitria (2023), AI has the capacity to adapt to individual learning styles, providing personalized support that can address the specific needs of each student. In the context of morphology, this means that ChatGPT can offer explanations at varying levels of complexity, depending on the student's understanding of the material. This personalized approach ensures that learners receive the appropriate level of support, which can lead to improved retention and application of morphological knowledge. Furthermore, the interactive nature of AI-

based platforms encourages active learning, which is essential for long-term mastery of linguistic concepts.

Despite the promising potential of AI tools like ChatGPT, it is essential for educators to consider their limitations and integrate them carefully into the curriculum. As highlighted in the work of Abimanto & Mahendro (2023), AI-based learning tools should not replace traditional instructional methods but should instead complement them. Educators must ensure that students continue to engage with more traditional sources of knowledge, such as textbooks, academic journals, and direct instruction, to provide a well-rounded educational experience. By combining the strengths of AI technology with the guidance of experienced educators, language learning can be enhanced in a way that maximizes student engagement, critical thinking, and long-term success.

METHOD

This study employed a qualitative research approach to investigate students' perceptions of using AI-based ChatGPT to increase their morphological competence. A qualitative approach was chosen as it allows for a deeper understanding of students' experiences, thoughts, and perceptions in relation to the use of AI tools in learning. According to Moleong (2010), qualitative research aims to explore phenomena in a holistic manner, using words and language to describe the experiences and behaviors of participants. By adopting this approach, the researcher sought to capture the nuanced perceptions of students regarding the effectiveness, advantages, and limitations of using ChatGPT in morphology learning.

The research design for this study is descriptive in nature, aiming to describe the phenomenon under investigation—students' perceptions of ChatGPT-based learning. Descriptive research is particularly useful for capturing detailed information about a specific phenomenon and is often employed when the objective is to explore how individuals or groups perceive and interact with a particular tool or technology. The descriptive approach allows for an in-depth examination of the ways in which students engage with ChatGPT in their learning of morphology and the specific aspects of this learning experience that they find most beneficial or challenging.

The participants in this study were fourth-semester students from the English Education Study Program at Universitas Muhammadiyah Sidenreng Rappang. A total of 16 students participated in the research, as they were considered to have sufficient knowledge and experience in language learning, particularly in morphology, to provide valuable insights into the research questions. The selection of participants was based on purposive sampling, where the researcher intentionally selected individuals who could provide rich, relevant data for the study (Wahyuddin, 2010). These students were actively involved in learning morphology as part of their curriculum and had used ChatGPT as a learning tool.

Data for this study were collected using multiple methods to ensure triangulation and enhance the credibility of the findings. The primary data collection instruments were a questionnaire and semi-structured interviews. The questionnaire was designed to capture students' general perceptions of using ChatGPT in morphology learning. It

included both closed and open-ended questions, allowing for both quantitative and qualitative data to be collected. The use of a Likert scale in the questionnaire enabled the researcher to measure the extent of agreement or disagreement with various statements related to ChatGPT's effectiveness, engagement, and ease of use in the context of morphology learning.

In addition to the questionnaire, in-depth semi-structured interviews were conducted with a subset of the participants. The interviews provided an opportunity for the researcher to explore students' perceptions in greater detail, allowing for open-ended responses that could reveal deeper insights into their experiences with ChatGPT. Semi-structured interviews were chosen because they offer flexibility, enabling participants to share their thoughts in their own words while still addressing key research topics (Alshenqeeti, 2014). The interview questions focused on students' experiences with ChatGPT in learning morphology, their perceived advantages and disadvantages, and their suggestions for improving the use of the tool in future learning contexts.

The data collected from the questionnaires and interviews were analyzed using a thematic analysis approach, which involved identifying, analyzing, and reporting patterns or themes within the data. Thematic analysis is particularly useful in qualitative research as it allows for the identification of recurring ideas and concepts across different participants' responses (Braun & Clarke, 2006). In this study, the researcher applied the thematic analysis process to both the questionnaire responses and interview transcripts. The analysis was conducted in three stages: data reduction, data display, and conclusion drawing/verification. Data reduction involved organizing the raw data into categories based on emerging themes, while data display presented the data in a structured format that facilitated interpretation.

For data analysis, the researcher used the flow model proposed by Miles and Huberman (2020), which involves three key steps: data reduction, data display, and conclusion drawing/verification. Data reduction allowed for the simplification and focusing of raw data to identify key themes. The data display was used to present the organized data in an understandable form, such as tables or narratives, to facilitate the identification of patterns. Finally, conclusion drawing involved interpreting the findings in light of the research questions and drawing inferences about the students' perceptions of ChatGPT in morphology learning. Triangulation was employed to ensure the validity of the findings, combining data from the questionnaire, interviews, and relevant literature.Ethical considerations were an integral part of this study. Prior to data collection, informed consent was obtained from all participants, ensuring that they understood the purpose of the study, the procedures involved, and their right to confidentiality. The participants were assured that their responses would remain anonymous and that their participation was voluntary. The researcher also took steps to avoid bias in the data collection and analysis processes, ensuring that the participants' perceptions were accurately captured and represented without influence from the researcher's personal views or expectations.

Result and Discussion

The findings of this study were derived from both the questionnaire and the semi-structured interviews conducted with 16 fourth-semester students from the English Education Study Program at Universitas Muhammadiyah Sidenreng Rappang. The responses were analyzed to determine students' perceptions of using ChatGPT to enhance their morphological competence. The results are presented in both qualitative and quantitative forms to offer a comprehensive understanding of the students' experiences.

The questionnaire results revealed that the majority of students had a positive perception of ChatGPT as a tool for learning morphology. As shown in Table 4.1, 67% of students agreed or strongly agreed that ChatGPT helped them understand morphological concepts better. Many students reported that ChatGPT's ability to provide clear explanations and practical examples made it easier for them to grasp complex morphology topics such as word formation, derivation, and affixation.

Table 4.1: ChatGPT helps me understand morphological concepts better

Answer Category	Frequency (F)	Percentage (%)
Strongly Agree	1	17%
Agree	3	50%
Neutral	1	17%
Disagree	0	0%
Strongly Disagree	1	17%
Total	6	**100%**

Similarly, Table 4.2 shows that 66% of students found ChatGPT's interactive style and real-time feedback to make the learning process more engaging. ChatGPT was seen as a useful resource for turning a complex subject into something more manageable and interesting, with students appreciating its ability to break down complex topics into simpler language.

Table 4.2: The use of ChatGPT in morphology learning makes the learning process more interesting

Answer Category	Frequency (F)	Percentage (%)
Strongly Agree	2	33%
Agree	2	33%
Neutral	1	17%
Disagree	1	17%
Strongly Disagree	0	0%
Total	6	100%

Regarding students' confidence in analyzing word forms after using ChatGPT, Table 4.3 shows that 84% of students agreed or strongly agreed that ChatGPT helped them feel more confident in their ability to analyze morphological structures. This indicates that students not only understood morphological concepts better but also felt more capable of applying these concepts independently.

Table 4.3: I feel more confident in analyzing word forms after using ChatGPT

Answer Category	Frequency (F)	Percentage (%)
Strongly Agree	1	17%
Agree	4	67%
Neutral	1	17%
Disagree	0	0%
Strongly Disagree	0	0%
Total	6	100%

On the topic of motivation, Table 4.8 shows that 66% of students agreed or strongly agreed that ChatGPT motivated them to learn more actively. However, some students expressed neutrality, indicating that while ChatGPT was motivating for some, others found it less impactful on their engagement.

Table 4.8: The use of ChatGPT motivates me to learn more actively

Answer Category	Frequency (F)	Percentage (%)
Strongly Agree	2	33%
Agree	0	0%
Neutral	2	33%
Disagree	1	17%
Strongly Disagree	1	17%
Total	6	100%

Further analysis revealed that students appreciated ChatGPT's accessibility and the flexibility it offered in learning. Table 4.9 shows that 50% of students felt they could access morphology learning at any time with ChatGPT, although some still expressed concerns about limitations, such as internet access and the availability of the free version.

Table 4.9: I can access morphology learning anytime with the help of ChatGPT

Answer Category	Frequency (F)	Percentage (%)
Strongly Agree	1	17%
Agree	2	33%
Neutral	2	33%
Disagree	0	0%
Strongly Disagree	1	17%
Total	6	100%

Overall, the results show that while the majority of students had a positive perception of using ChatGPT to support their morphology learning, they also acknowledged its limitations, such as the possibility of inaccuracies in the AI's responses and the need for human intervention to address more complex learning needs.

Discussion

The findings from this study highlight the overall positive perception of using ChatGPT as an AI-based learning tool to enhance students' understanding of morphology. The results suggest that ChatGPT effectively aids students in grasping complex morphological concepts by providing clear and concise explanations, as well as practical examples. This is consistent with previous research indicating that AI tools, such as ChatGPT, can support language learners by making difficult topics more accessible and engaging (Aljanabi et al., 2023; Aydın & Karaarslan, 2022).

In particular, the data shows that students found ChatGPT to be a useful tool for building confidence in analyzing word forms. By offering immediate feedback and clarifying complex topics in real-time, ChatGPT helped students feel more capable of independently applying their morphological knowledge. This finding aligns with the literature that suggests AI-based platforms enhance students' autonomy in learning, empowering them to take control of their study process (Diantama, 2024).

Moreover, the positive response regarding motivation, as evidenced by Table 4.8, indicates that ChatGPT has the potential to increase students' engagement with morphology learning. The interactive nature of the AI tool, combined with its ability to simplify complex concepts, can make learning feel less intimidating and more approachable for students. However, some students expressed neutrality, suggesting that motivation may depend on individual preferences and learning styles. This highlights the importance of balancing AI tools with other instructional methods to maintain a holistic and motivating learning environment.

In terms of accessibility, the flexibility offered by ChatGPT was highly valued by students. As seen in Table 4.9, the ability to access learning materials at any time and from any place supports independent study, a key factor in modern education. This finding is consistent with studies that emphasize the benefits of AI tools in providing flexible learning opportunities outside of traditional classroom settings (Suharmawan, 2023). However, some limitations related to internet access and technical issues were noted, which suggests that while ChatGPT offers significant advantages, its utility may be constrained by external factors.

Despite the generally positive feedback, the study also revealed some concerns regarding the limitations of ChatGPT. While most students agreed that ChatGPT helped them understand morphological concepts better, some expressed reservations about the accuracy and completeness of its responses. This is consistent with previous research that highlights the potential for inaccuracies in AI-generated content, particularly in complex academic subjects (Widiarto et al., 2018). Students recognized that while ChatGPT could provide valuable insights, it should not replace traditional academic resources, such as textbooks and lectures.

The issue of over-reliance on AI is another important consideration. As noted by some students, excessive use of ChatGPT might reduce critical thinking and independent problem-solving skills. This finding echoes concerns in the literature about the potential for AI tools to diminish cognitive engagement if students become overly dependent on them (Subiyantoro et al., 2023). To mitigate this risk, educators should encourage students to use ChatGPT as a complementary tool rather than a substitute for active learning and critical analysis.

The findings also highlight the need for further refinement of AI tools like ChatGPT. Several students suggested that improvements could be made, such as addressing technical limitations and enhancing the accuracy of responses. Some students also recommended that the AI's language should be less robotic and more conversational, making it easier for learners to interact with the system in a more natural way. These suggestions align with ongoing efforts to improve AI-based tools for education, ensuring that they become more responsive to

students' needs and preferences (Diantama, 2024). this study demonstrates that ChatGPT can be an effective tool for supporting morphology learning, enhancing students' understanding, motivation, and engagement. However, it also underscores the importance of balancing AI-based learning with traditional methods to ensure that students develop critical thinking skills and maintain academic integrity. Future research could explore ways to further integrate AI tools like ChatGPT into language education while addressing their limitations and enhancing their capabilities.

Conclusion

This study has explored students' perceptions of using ChatGPT, an AI-based learning tool, to enhance their morphological competence. The findings indicate that, overall, students have a positive view of ChatGPT's role in learning morphology. The tool was perceived as helpful in simplifying complex morphological concepts, providing clear explanations, and offering practical examples. Students reported increased confidence in analyzing word forms and found ChatGPT to be an engaging and motivating resource that facilitated independent learning outside of the classroom.

However, while ChatGPT proved effective in many ways, the study also highlighted some limitations. These included concerns about the accuracy of AI-generated responses, the potential for over-reliance on the tool, and technical issues such as internet access and limitations with the free version of ChatGPT. Students acknowledged that while ChatGPT can supplement their learning, it cannot fully replace traditional methods like lectures, textbooks, and direct human interaction, especially for more nuanced or complex topics. the study emphasizes the importance of using AI-based tools like ChatGPT as complementary resources in language education, rather than as substitutes for traditional teaching. While these tools can enhance learning and provide personalized, flexible support, educators must ensure that students continue to engage with critical thinking exercises and rely on credible academic sources for comprehensive understanding. The findings of this study offer valuable insights for educators seeking to integrate AI into their teaching practices, ensuring that these technologies effectively support student learning without undermining the development of essential cognitive skills.

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