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Optimization Of Chatgpt Use For Efficient German Vocabulary Compilation On The Quizlet Application

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Abstract

The development of technology has brought significant changes in the world of education, especially in foreign language learning. One of the main challenges in the vocabulary learning process is the time needed to input and organize words into learning media such as flashcards. This research focuses on optimizing vocabulary learning by integrating Chat GPT as an automatic tool in making flashcards in Quizlet application. The method used in this research is an experiment with design one-group *pretest-posttest*, which compares the time efficiency between manual and automatic methods in making flashcards. The results showed that the use of ChatGPT can significantly reduce vocabulary input time and improve learning efficiency and effectiveness. Most respondents stated that this method is more practical, accurate, and helpful in the vocabulary memorization process. Thus, this study confirms that the integration of AI, especially ChatGPT, in learning applications such as Quizlet can be an innovative solution in improving the efficiency and effectiveness of foreign language learning.

Keywords: ChatGPT; Quizlet; Vocabulary; Flashcards, Foreign language; AI

1. INTRODUCTION

The world of education has faced major changes thanks to technological advancements that enable the use of various digital platforms today. These changes cover a number of subject areas

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including foreign language education, which is also evolving rapidly along with the development of technology, so the use of learning media has become increasingly important.

Although learning media is becoming more sophisticated nowadays, there are some applications such as Quizlet that require to users manually input vocabulary to create flashcards, so learners often spend their time just to input vocabulary.

But on the other hand, the presence of Artificial Intelligence is a solution to improve the learning process to be faster and more efficient, including the presentation of learning materials. The use of AI can simplify the creation of materials so that students can focus on their own learning. This development shows that there is an opportunity to optimize language learning, especially in terms of vocabulary memorization.

This article talks about how integrates Chat GPT into the Quizlet app to provide optimal results with less time. By using AI such as Chat GPT, users can generate hundreds of vocabularies from Chat GPT and enter them into Quizlet automatically without the need to enter them manually or one by one.

2. LITERATURE REVIEW

Vocabulary mastery is one of the most important aspects in mastering a foreign language, including German. Various methods and techniques have been improved to facilitate the effectiveness of vocabulary memorization which aims to improve the quality of learning. In recent years Artificial Intelligence has entered the realm of education and made significant progress in the field of foreign language learning. There are many AI-based foreign language learning applications, which make it very easy for users of these applications to learn vocabulary, other examples are Quizlet and Chat GPT.

Previous research shows that Quizlet is an application that aims to improve memorization skills, where students can enter their learning material in the form of cards, or this is known in the world of education as flashcards (Aribowo E, K. 2015) and (Azhari, V., Tanjung, A. R. F., Ginting, R. A. B., & Khoir, M. I. 2023).

However, Quizlet has one drawback, which is that students have to input their vocabulary manually and this takes time that should be used for learning. of the Onebest solutions to the problem is Chat GPT. The disadvantage of Quizlet is not only making Chat GPT as an auxiliary tool, but also making it the main solution that not only reduces input time but also makes it possible to personalize vocabulary precisely and automatically. These shortcomings can be overcome by the Chat GPT, so that the vocabulary input time in the Quizlet application can be reduced, of the oneother advantages of Chat GPT is the rapid automatic personalization of vocabulary.

Feng Zhiwei, Zhang Dengke. (2023) and Shao, K., & Xia, N. (2023) , P. (2023) argue argues that Chat GPT can provide great results in language learning in a short time, which can improve learners' language learning efficiency, and Pontjo Wulanthat Chat GPT can be used to improve learning effectiveness. Ngo, K. T. (2024) revealed that ChatGPT is better and able to

strengthen memory and provide advantages in vocabulary learning compared to conventional tools such as dictionaries. Fahada, N., & Jonris Tampubolon, C. (2023) argued Chat GPT can enhance and facilitate personalized and complex learning, and reduce learning burden. Nurfaiza (2024) and Apriyani el (2024) argue Chat GPT can be an effective and innovative medium in vocabulary translation to provide good vocabulary quality.

According to Nailus and Hasanudin (2023), Chat GPT is used as a medium that can improve learning interaction and provide quick access to information t, one of which is vocabulary. Wardani et al (2024) and Elza et al (2024) argue that Chat GPT can be a useful tool for expanding vocabulary because it can generate vocabulary lists on specific topics and incorporate the vocabulary into example sentences. Whereas according to Shaikh et al. (2023) the use of Chat GPT not only expands vocabulary, but can be personalized by its users to improve writing skills. In another study conducted by Liang & Zhang (2024), Chat GPT can adjust language vocabulary according to the user's language level. While research conducted by Wang (2020), Chat GPT can be used as a translation tool to understand text from a foreign language to another language or vice versa. Ignatovich's research (2021) examines that interactive platforms such as Chat GPT can help foreign language learners to learn the language better through interaction and individualized .learning techniques

From the previous research, it can be concluded that Chat GPT is very possible to be personalized according to the user's wishes, and produce automatic vocabulary, thus increasing the effectiveness of students' vocabulary learning independently.

What makes this study different from other studies is the time efficiency, automatic personalization of German vocabulary and the how to flow or transfer vocabulary from Chat GPT to Quizlet. Therefore, the main focus of this research aims to explain how to generate vocabulary, tidy up the format of vocabulary on Chat GPT so that it can be detected by Quizlet, make good and correct prompting. If students usually have to spend hours to search for vocabulary and input the vocabulary into Quizlet manually, then this can be only done a few minutes by Chat GPT, including the vocabulary has been personalized, and can be detected directly by Quizlet in the vocabulary input feature.

3. METHODOLOGY

Research Design

According to Kerlinger (1986), the experimental method is a method that manipulates the independent variable and observes the dependent variable to understand the cause-and-effect relationship. Meanwhile, Isaac and Michael (1977) explained that experimental research aims to examine the possibility of cause and effect between one treated group and one untreated group. A similar definition is given by Rakhmat (1985) that the experimental method aims to examine the cause and effect between the experimental group and the control group. Meanwhile, Robert Plutchik (1988) argues that experiments are used to determine the cause and effect of an event after identifying variables.

This study uses an **experimental method** with a **one-group pretest-posttest design** that focuses on a approach to **quantitative** measure the time difference after the experiment. The change was measured through observing the time needed to input vocabulary or the number of vocabulary words entered. In addition, this study also used a approach **qualitative** to explore the participants' level of satisfaction with the experiment given through a questionnaire or questionnaire.

Research Population and Sample

The majority of the objects of this study are German language education students at Universitas Pendidikan Indonesia. The sample was taken randomly from students who still use conventional methods in memorizing vocabulary and in making flashcards in the Quizlet application.

Data Collection Technique

1) Demonstration and Experimentation.

Students will watch and try the comparison between using Chat GPT for vocabulary optimization on Quizlet app and without using Chat GPT app. After watching the demonstration, students will practice together with different vocabulary modules.

2) Questionnaire

The questionnaire was used to collect quantitative data with a Likert scale to show the effectiveness of using Chat GPT as the main solution for inputting vocabulary in the Quizlet application.

The questionnaire through Google Forms d was conducted to measure the level of student satisfaction with the method used to facilitate the input of vocabulary using Chat GPT in the Quizlet application.

4. RESULTS AND DISCUSSION

There is a significant difference in results between manual and automatic vocabulary generation using Chat GPT with a personalized table format. In the manual method, when entering vocabulary into the Quizlet application, users must input the vocabulary manually and one by one which is very time-consuming and labor-intensive

On the other hand, when users use ChatGPT to generate vocabulary and personalize it into a table, they can directly input it into the "Input Vocabulary" feature in the Quizlet application. This allows users to quickly create flashcards by simply giving the command, making the process more efficient and convenient. With this method, users can save time and easily organize their vocabulary in a structured way, ensuring an effective and seamless learning experience on Quizlet.

"Give me the A1/A2/B1/ level vocabulary (tidy up the vocabulary I wrote down) and add the plural form for nouns, perfekt form and preteritum for verbs, and then translate it into Indonesian. Make a table for all the vocabulary that has been tidied up. Put all the vocabulary in a two-part table:

the first part contains the German vocabulary, and the second part contains its meaning in Indonesian. Include examples of how the vocabulary is used in German in brackets in the translation column. Work all the way to the end."

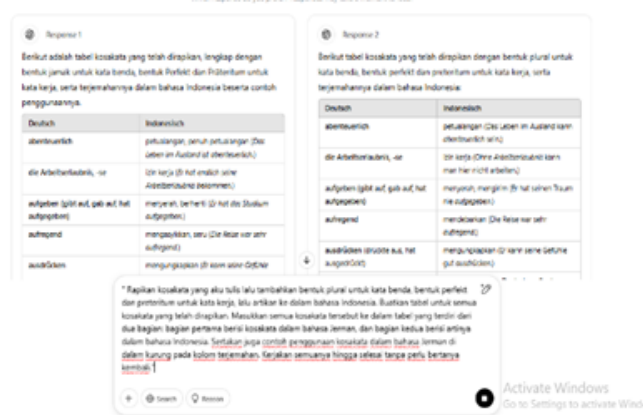


Figure 1 : Prompt Writing

The first step is to write the command that the user wants Chat GPT to respond to. The command must be clear and specific (like the example given) so that the results of the response given by Chat GPT are also good. With this command, Chat GPT can directly understand the user's request and create hundreds of vocabularies in the form of tables for easy input of the vocabulary into the Quizlet application along with the example sentences, so that vocabulary creation becomes much more efficient, accurate, and practical, users can also immediately utilize the results in learning.

Deutsch	Indonesisch
abenteuerrich	petualangan, penuh petualangan (Das Leben im Ausland ist abenteuerrich.)
die Arbeitsstunden, -en	(di kerja (Er hat endlich seine Arbeitsstunden bekommen))
aufgeben (gibt auf, gab auf, hat aufgegeben)	menyerah, berhenti (Er hat das Studium aufgegeben.)
aufregend	mengasyikkan, seru (Die Reise war sehr aufregend.)
aufgrund	mengungkapkan (Er kann seine Gefühle gut ausdrücken.)
außerdem	selain itu (Außerdem mag ich Musik hören.)
bestimmen	menyebut (Ich bestimme meine Entscheidung nicht.)
die Beziehung, -en	hubungan (Sie haben eine gute Beziehung zueinander.)
sich einleben	meresahkan diri (Es dauert eine Weile, bis man sich in einem neuen Land einlebt.)
die Amtssprache, -n	bahasa resmi (Deutsch ist die Amtssprache in Deutschland.)
anerkennen (erkennt an, erkannte an, hat anerkannt)	mengakui (Sein Diplom wurde anerkannt.)
die Elite, -n	elit (Er gehört zur Elite der Universität.)
flächendeckend	secara menyeluruh (Er wurde flächendeckend beschuldigt.)
keine Beziehung, -en	tidak ada hubungan (Meine Beziehung lässt sich in der Stadt nicht aufbauen.)

Figure 2 : How to Copying Text in the tables

For the next step is to copy all the vocabulary that has been given, the way to copy the vocabulary is by highlighting and copying the text in the table, it is not recommended to copy the text with the "copy paste" feature on the Chat GPT application, because it will make the vocabulary messy when inputting on the Quizlet application.



Figure 3 :How to paste all the vocabularies from GPT to Quizlet

The last step is to paste the copied vocabulary into the "Input Vocabulary" feature in the Quizlet app, so that the Flashcards in the Quizlet app can be created precisely, neatly and automatically with the help of Chat GPT.

The main reason for creating a table in Chat GPT is to divide the Flashcards into 2 parts, namely; German vocabulary and its meaning in Indonesian. This also allows the Quizlet application to detect the vocabulary to be inputted.

Here is an example of the flash cards produced:

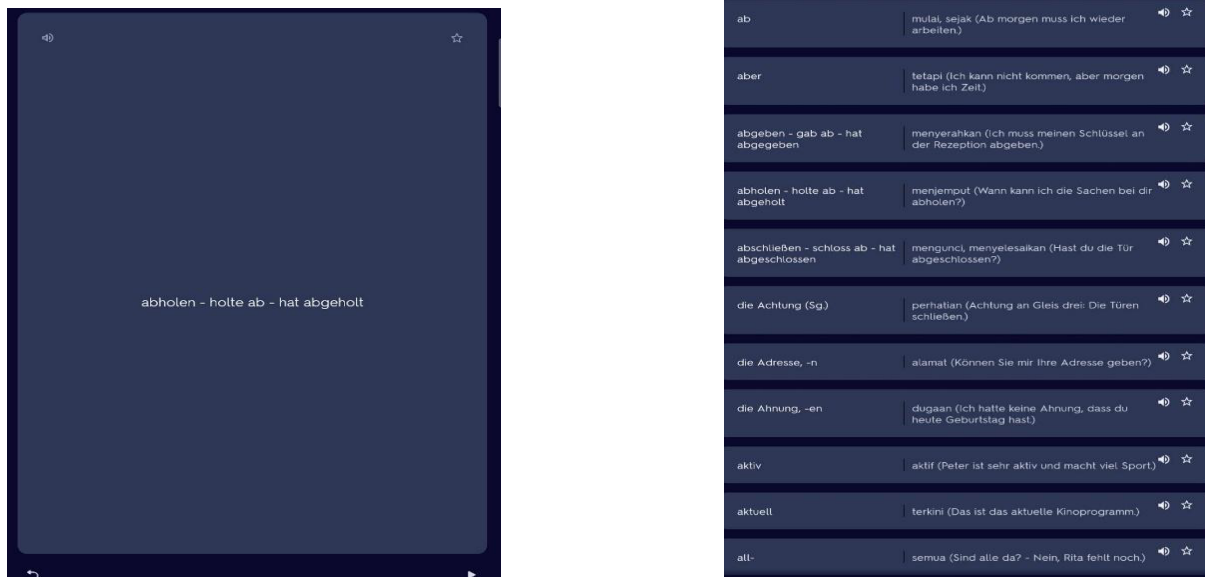


Figure 4 : The Results

The resulting flashcards in the images display German vocabulary along with its conjugation form and meaning in Indonesian. In the first picture, you can see a flashcard containing the verb *abholen* (to pick up), complete with **Präteritum** (*holte ab*) and **Perfekt** (*hat abgeholt*) forms. This Chat

GPT-assisted presentation is very helpful for learners in understanding the changes of verb tenses in various times.

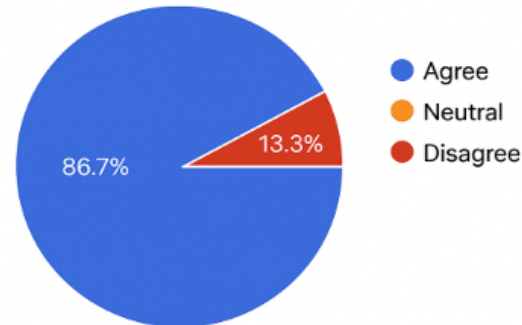
The second picture shows a list of flashcards featuring a variety of German vocabulary, both verbs and nouns. Each flashcard includes the main vocabulary, the conjugation form (for verbs), the meaning in Indonesian, and an example sentence in German. These example sentences provide a clearer picture of how the word is used in everyday contexts. With this systematic format, Chat GPT is a tool to systematically create flashcards for effective learning, especially in strengthening memory through repetition.

The following table shows the significant difference between manual and automatic vocabulary generation using Chat GPT during the experiment.

Aspects	Manual	GPT Chat
Input Process	The user enters the vocabulary one by one manually.	The user just gives the full command, and ChatGPT automatically generates the vocabulary table and the user copies the table to be inserted in the application. Quizlet
Time Required	It takes 10 minutes for the user to create 20 vocabulary words and input them into the Quizlet app.	It took 6 minutes for the user to create a 2-part table containing 100 vocabulary words as well as personalized vocabulary words inputted into the Quizlet app.
Efficiency	Less efficient, especially for large amounts of vocabulary.	Very efficient, especially for large vocabulary numbers.

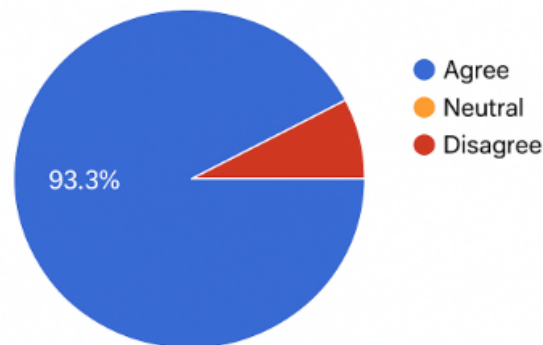
Most of the respondent participants found it helpful with the results provided by Chat GPT during the experiment. Below is the percentage of respondent satisfaction:

Using ChatGPT makes it easier for me
to input vocabulary on the Quizlet app
30 responses



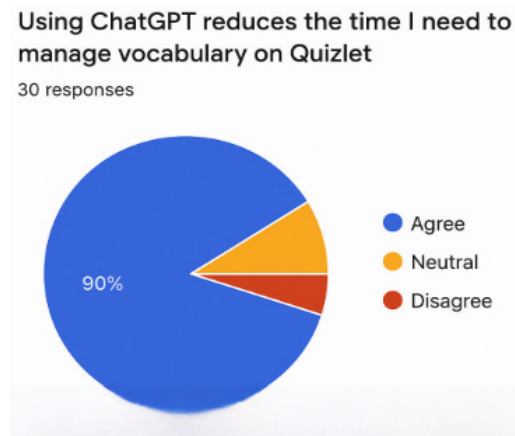
When inputting vocabulary in the Quizlet application that is personalized by Chat GPT, 86.7% of respondents agreed that Chat GPT is not only a medium for providing vocabulary but also a medium for connecting between Chat GPT itself and the Quizlet application.

I feel that inputting Quizlet vocabulary with
the help of ChatGPT is more efficient
compared to the manual method.
30 responses



About 93.3% of respondents agreed that Chat GPT makes the input of vocabulary in the Quizlet application to become flashcards more efficient than the manual method. Because by using Chat GPT as a medium for creating and personalizing vocabulary in the Quizlet application to become

Flashcards, the vocabulary inputted by Chat GPT becomes neater. Vocabulary personalized by Chat GPT also rarely has errors, such as typos and others.



Time comparison is the main focus in assessing the effectiveness between vocabulary input on Quizlet application manually and assisted by Chat GPT. About 90% of experimental participants agreed that they can save more time with the help of Chat GPT to input all vocabulary into flashcards on Quizlet application, thus they can use the time to learn and memorize the vocabulary that has been inputted by Chat GPT on Quizlet application.

The use of Chat GPT as a mediator of vocabulary creation and a tool to integrate the vocabulary in the Quizlet flashcard application received a good response from the 30 respondents. Most of the respondents felt satisfied and helped by ChatGPT in vocabulary learning, because Chat GPT can provide efficiency and convenience in learning German vocabulary. They also feel helped because Chat GPT can be the main solution as an automatic vocabulary input tool in making flashcards in the Quizlet application.

5. CONCLUSION

This study shows that the use of Chat GPT in the creation and personalization of vocabulary on Quizlet application increases the time efficiency and effectiveness of foreign language learning, especially German, this is because the time used is less than the manual method. The vocabulary generated by Chat GPT can also be personalized according to the user's wishes and the user can personalize the vocabulary into a table so that it can be automatically inputted by the Quizlet application to be made into tens or even hundreds of flashcard-shaped vocabulary without having to enter the vocabulary manually.

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