



RESEARCH ARTICLE

The Influence of Learning Models and Learning Motivation on English Grammar Skills (Experiment at Private Vocational Schools in Cilegon)

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This study aims to analyze the effect of the jigsaw learning model and students' learning motivation on their skill of English grammar. A quantitative approach with an experimental method was employed in this research. The research sample consisted of 60 students of 12th-grade from a high school in Cilegon. Data were collected using grammar tests and student learning motivation questionnaires. Data analysis was conducted using two-way ANOVA. The results revealed that the jigsaw learning model significantly improved students' grammar skills compared to conventional teaching methods. Students with high learning motivation showed greater improvement in grammar proficiency than those with low motivation. Moreover, an interaction was found between the jigsaw learning model and students' learning motivation. The implications of this study highlight the importance of applying models jigsaw in classrooms to improve grammar skill, particularly in grammar. It also emphasizes the need for teachers to understand the critical role of student motivation in supporting successful learning.

Keywords: learning model, learning motivation, grammar.

Pengaruh Model Pembelajaran dan Motivasi Belajar terhadap Kemampuan Tata Bahasa Inggris. (Eksperimen di Sekolah Vokasi Swasta di Cilegon)

Abstrak: Penelitian ini bertujuan untuk menganalisis pengaruh model pembelajaran jigsaw dan motivasi belajar siswa terhadap keterampilan tata bahasa mereka. Pendekatan kuantitatif dengan metode eksperimen digunakan dalam penelitian ini. Sampel terdiri dari siswa kelas 12 dari sebuah sekolah menengah atas di Cilegon. Data dikumpulkan menggunakan tes tata bahasa dan kuesioner motivasi belajar siswa. Analisis data dilakukan dengan menggunakan ANOVA dua arah. Hasil penelitian menunjukkan bahwa model pembelajaran jigsaw secara signifikan meningkatkan keterampilan tata bahasa siswa dibandingkan dengan metode pengajaran konvensional. Siswa dengan motivasi belajar tinggi menunjukkan peningkatan yang lebih besar dalam kemahiran tata bahasa daripada mereka yang memiliki motivasi rendah. Selain itu, ditemukan interaksi antara model pembelajaran jigsaw dan motivasi belajar siswa. Implikasi dari penelitian ini menyoroti pentingnya penerapan model jigsaw di kelas untuk meningkatkan keterampilan tata bahasa, khususnya dalam tata bahasa. Hal ini juga menekankan perlunya guru untuk memahami peran penting motivasi siswa dalam mendukung keberhasilan pembelajaran.

Kata kunci: model pembelajaran, motivasi belajar, tata bahasa.

Introduction

Grammar ability is one of the important aspects in mastering English as an international language. Good grammar allows students to convey ideas clearly and understand information effectively. For example, good mastery of grammar significantly aids learners in developing language skills, enabling them to use language meaningfully and appropriately, which enhances their ability to convey ideas clearly and understand information effectively in listening, speaking, reading, and writing (Rahmadani et al., 2022). Also, a strong understanding of syntax allows students to construct coherent sentences, improving text integration and overall writing quality (Tanjung et al., 2024). In the context of formal education in Indonesia, grammar learning is often a challenge, especially because the teaching methods used still tend to focus on conventional approaches such as lectures. This approach is less able to actively involve students in the learning process, thus affecting their learning motivation.

Interactive and collaborative learning models have become alternatives proposed to improve student learning outcomes. One model that has proven effective is the jigsaw learning model. This model requires students to work in small groups to understand and convey material to other group members, so that they not only learn for themselves but also to help their friends (Slavin, 2018). Previous research has shown that the jigsaw learning model can improve students' cognitive abilities, including in language learning (Fitriani, 2020). In addition to learning methods, learning motivation also plays an important role in students' success in understanding grammar. Learning motivation is defined as the internal and external drive that drives students to achieve certain learning goals (Santrock, 2020). Students with high motivation tend to have better abilities in understanding and applying the concepts learned, including in grammar learning (Qomariyah, 2019).

Research on the effect of the jigsaw learning model on grammar skills has been widely conducted, but most studies only focus on the learning model without considering other factors, such as student learning motivation. In fact, the interaction between learning methods and learning motivation has the potential to provide more comprehensive insights into understanding how these two variables affect student learning outcomes (Hariri et al., 2021 & Maharani et al., 2025). For example, students with high motivation may be able to optimally utilize collaborative learning models such as jigsaw, while students with low motivation may require additional approaches to support their learning (Yusuf, 2019).

Based on this background, this study aims to analyze the effect of the jigsaw learning model and student learning motivation on grammar skills. Specifically, this study aims to answer the following questions: (1) Is there an effect of the jigsaw learning model on the English grammar skills of grade 12 vocational high schools in Cilegon City? (2) Is there an influence of student learning motivation on English grammar skills of grade 12 vocational high schools in Cilegon city? and (3) Is there an interactive influence of the jigsaw learning model and student learning motivation on English grammar skills of grade 12 vocational high schools in Cilegon?

This study is expected to provide theoretical and practical contributions. Theoretically, the results of this study can contribute to the existing literature on grammar learning, particularly those that involve collaborative and interactive approaches. Practically, this study is expected to be a reference for teachers in choosing effective learning strategies to improve students' grammar skills, as well as provide insight into the importance of paying attention to student learning motivation in the learning process (Rahmawati, 2022).

Thus, this study is relevant to be carried out, especially in the context of education in Indonesia which continues to strive to improve the quality of English learning. Through this study, it is hoped that a learning approach can be found that is not only academically effective, but also able to motivate students to learn actively and independently.

Research Method

This study uses a quantitative approach, utilizing an experimental method. The quantitative approach was chosen because it is appropriate for measuring the causal relationship between the variables

involved, namely the jigsaw learning model and student learning motivation as independent variables, and students' grammar skills as dependent variables (Sugiyono, 2018). The experimental method is used to determine the direct effect of the independent variable on the dependent variable through control manipulation in the research design.

The research design is a quasi-experimental design with a pretest-posttest control group design. In this design, the research subjects were divided into two groups, namely the experimental group using the jigsaw learning model and the control group using conventional learning methods. Before and after treatment, both groups were given a grammar ability test to measure differences in learning outcomes.

The population of this study were grade X students at a high school in Indonesia. The research sample was selected using the cluster random sampling technique, which is random sampling based on the available classes. The sample consisted of 60 students, divided equally between the experimental and control groups. This sample selection was carried out to ensure that each subject in the population had an equal chance of being selected (Riduwan, 2019).

The instruments used in this study include: Grammar ability test: This test is designed to measure students' understanding and application of English grammar. The validity and reliability of the test have been tested through previous trials using Pearson correlation techniques and Cronbach's Alpha to ensure that the instrument is suitable for use (Nurgiyantoro, 2017). Learning motivation questionnaire: This questionnaire is adapted from the learning motivation scale developed by Deci and Ryan (1985) and adapted to the context of English learning. This questionnaire comprises 20 statements covering the intrinsic and extrinsic aspects of student motivation. The validity of the questionnaire was tested using factor analysis, while its reliability was tested using Cronbach's Alpha (Sugiyono, 2018).

The research procedure consists of several stages. First, initial data collection was carried out through a grammar ability pretest and filling out a learning motivation questionnaire. Second, the experimental group was given treatment in the form of learning with a jigsaw model for six meetings, while the control group used conventional learning methods on the same material. Third, after the treatment was completed, a posttest was given to both groups to measure changes in students' grammar abilities.

The data obtained were analyzed using two-way ANOVA. This analysis technique was used to test the main effect of the jigsaw learning model and learning motivation, as well as the interaction between the two variables on students' grammar skills (Ghozali, 2020). Before the analysis, statistical assumption tests were carried out, including the normality test using Kolmogorov-Smirnov and the homogeneity of variance test using Levene's Test to ensure that the data met the requirements for parametric analysis (Zajkowska, A., Czajka, M., Gulik, K., Gawrychowski, K., & Małeck, M., 2023).

This study ensures internal and external validity by controlling confounding variables, such as differences in students' initial abilities and learning environments. In addition, research ethics are also maintained by requesting approval from the school and providing complete information to students regarding the purpose of the study and maintaining the confidentiality of respondent data (Sugiyono, 2018).

Through this systematic method, it is hoped that the results of the study can provide an accurate picture of the effect of the jigsaw learning model and students' learning motivation on students' grammar skills.

Results and Discussion

Table 1 Tests of Between-Subjects Effects

Tests of Between-Subjects Effects						
Dependent Variable: Grammar						
Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	
Corrected Model	3713.600 ^a	3	1237.867	32.767	.000	
Intercept	188238.400	1	188238.400	4982.781	.000	
A	3240.000	1	3240.000	85.765	.000	
B	313.600	1	313.600	8.301	.007	
A * B	160.000	1	160.000	4.235	.047	
Error	1360.000	36	37.778			
Total	193312.000	40				
Corrected Total	5073.600	39				

a. R Squared = ,732 (Adjusted R Squared = ,710)

In this study, the data collected consisted of the results of the pretest and posttest of students' grammar skills and their level of learning motivation. The pretest was conducted to measure students' initial grammar skills before being given learning treatment, while the posttest was given after treatment to see changes or improvements that occurred after learning. In addition, the level of students' learning motivation was measured using a questionnaire that included aspects of intrinsic and extrinsic motivation. Data analysis was conducted to identify the extent to which the jigsaw learning model and students' learning motivation influenced their grammar skills.

The pretest results showed that students' grammar skills were generally at varying levels, with most students showing low abilities. This is in accordance with research conducted by Komara & Tiarsiwi (2021), which stated that students' grammar skills in Indonesia are generally still one of the challenges in learning English. Some students show a fairly good basic understanding, but many also have difficulty understanding the correct sentence structure and basic grammar rules such as tenses, subject-verb agreement, and the use of articles. This is also supported by research conducted by Yuliana, A. & Sari, A. (2019), which found that many students still have difficulty in learning aspects of English grammar, especially at the basic level.

After learning using the jigsaw model, the posttest results showed a significant increase in students' grammar skills, especially in the experimental group using the jigsaw model. The jigsaw learning model has been proven effective in improving students' grammar skills. This is in line with research conducted by (Ahmad & Zainal, 2023), which shows that collaborative learning such as jigsaw can improve students' understanding of learning materials, including in language learning. The jigsaw model provides opportunities for students to work together in small groups, break down learning materials into parts that can be understood and explained back to their friends, thereby improving their understanding of grammar materials.

This significant improvement in students' grammar skills can also be explained by the basic principles of the jigsaw model which emphasizes collaboration and discussion. According to Slavin (2018), the jigsaw model encourages students to teach each other and help their group mates understand the material. This process not only improves students' individual understanding but also develops communication and teamwork skills. In addition, students feel more involved and active in the learning process, which in turn can improve their memory and understanding of the grammar concepts taught.

In addition, data analysis also includes the level of student learning motivation as measured by a motivation questionnaire that measures intrinsic and extrinsic aspects. The results of the analysis showed that most students in the experimental group who used the jigsaw model had a higher level of learning motivation compared to students in the control group who used conventional learning. This can be explained by the characteristics of the jigsaw model which involves students in active



discussion and collaboration. Students' intrinsic motivation will increase when they feel involved in the learning process that leads to deeper understanding and collaborative problem solving. In this case, the jigsaw model provides an opportunity for students to feel more responsible for their learning and that of their group mates (Triningsih, 2022 & Sukmawati et al., 2024).

Students' extrinsic motivation also plays an important role in learning. In this study, students who were more motivated to get good grades or get recognition from teachers tended to show improvements in their grammar skills. This is in line with Santrock's opinion (2020), which explains that extrinsic motivation can provide additional encouragement for students to try harder to achieve their learning goals. However, intrinsic motivation that arises through collaboration and interaction in the jigsaw model has been shown to be more effective in improving students' overall understanding, including grammar skills.

The increase in learning motivation is also reflected in the increase in social interaction between students. Students who work in jigsaw groups discuss more often, provide explanations to each other, and correct each other, which strengthens their understanding of grammar material. This is in accordance with research by Fitriani (2020), which found that learning that involves social interaction can increase students' learning motivation, because students feel more appreciated and have a sense of responsibility for the group's learning outcomes. This process builds students' self-confidence, which has a positive impact on their learning achievement. However, the level of students' learning motivation is also influenced by external factors such as classroom atmosphere, teacher support, and the quality of learning materials. Research conducted by Rahmawati (2022) shows that a supportive and interactive learning environment can significantly increase students' learning motivation. In this case, the jigsaw model provides a more interesting and enjoyable learning environment compared to conventional learning methods, which tend to be more monotonous and provide less opportunity for students to interact.

Overall, the results of the study show that the jigsaw learning model not only improves students' grammar skills but also increases their learning motivation. This shows that grammar learning that combines collaborative and interactive approaches can provide better results than learning that is dominated by lectures or conventional approaches. The application of the jigsaw model provides an opportunity for students to not only understand grammar materials better, but also feel more motivated to learn through active involvement in the learning process. In addition, these results also emphasize the importance of combining learning methods that are appropriate to students' characteristics, including considering their level of motivation. Therefore, effective grammar teaching must involve learning models that can increase student engagement, strengthen social interactions, and motivate students to learn actively. This study provides evidence to support the application of the jigsaw learning model in grammar learning in high schools.

CONCLUSIONS

The conclusion of this study shows that both the jigsaw learning model and students' learning motivation have a significant influence on improving students' grammar skills at the senior high school level. Based on the research findings, the application of the jigsaw learning model involving collaboration between students can increase students' engagement and understanding of grammar materials. This model allows students to teach each other the material they have learned, which effectively deepens their understanding of the grammar rules being taught.

In addition, students' learning motivation, both intrinsic and extrinsic motivation, also plays an important role in improving students' grammar skills. Students who have high intrinsic motivation tend to be more actively involved in learning, while students with strong extrinsic motivation can get additional encouragement to achieve better learning outcomes. Therefore, the interaction between the jigsaw learning model and students' learning motivation has been shown to support each other in creating a more effective and productive learning environment.

Overall, this study concludes that in order to improve students' grammar skills, it is important for teachers to consider the application of collaboration-based learning models, such as jigsaw, and develop strategies to improve students' learning motivation. Teachers need to create a learning atmosphere that can stimulate students' motivation, both intrinsic and extrinsic motivation, and ensure that grammar learning is carried out in an interesting and enjoyable way. Thus, it is expected that students' grammar skills can improve significantly, which in turn will improve the quality of language learning in high schools.

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