

## THE EFFECTIVENESS OF THE DISCOVERY LEARNING MODEL USING DISCUSSION METHOD COMPARED TO LECTURE METHOD ON STUDENTS' LEARNING OUTCOMES IN ENGLISH SUBJECT ON JOB APPLICATION LETTER MATERIAL

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### Article History

Received: 14-05-2026

Revision: 26-05-2026

Accepted: 29-05-2026

Published: 02-06-2026

**Abstract.** This study aims to analyze the effectiveness of the Discovery Learning model through discussion and lecture approaches in improving students' English learning outcomes on job application letters. The study used a quasi-experimental method with a pre-test and post-test control group design involving two grades of 12 at SMA Negeri 3 Pamekasan, each consisting of 27 students. Data collection was carried out using a learning outcome test that had been tested for validity and reliability to measure students' abilities before and after treatment. Data analysis was carried out using the SPSS program through a normality test to determine data distribution, a homogeneity test to test the equality of variance between groups, and an independent sample t-test to determine differences in learning outcomes between the discussion group and the lecture group. The results showed that the data met the assumptions of normality and homogeneity. In addition, there were significant differences in student learning outcomes, where the group using the discussion approach achieved higher results than the lecture group. These findings indicate that interactive and student-centered learning is more effective in improving students' English comprehension and learning outcomes.

**Keywords:** Discovery learning, Discussion Method, Job Application Letter

**Abstrak.** Penelitian ini bertujuan untuk menganalisis efektivitas model *Discovery Learning* melalui pendekatan diskusi dan ceramah dalam meningkatkan hasil belajar Bahasa Inggris siswa pada materi surat lamaran pekerjaan. Penelitian menggunakan metode kuasi eksperimen dengan desain *pre-test* dan *post-test control group design* yang melibatkan dua kelas XII di SMA Negeri 3 Pamekasan, masing-masing terdiri atas 27 siswa. Pengumpulan data dilakukan menggunakan tes hasil belajar yang telah diuji validitas dan reliabilitasnya untuk mengukur kemampuan siswa sebelum dan sesudah perlakuan. Analisis data dilakukan menggunakan program SPSS melalui uji normalitas untuk mengetahui distribusi data, uji homogenitas untuk menguji kesamaan varians antar kelompok, serta uji *independent sample t-test* untuk mengetahui perbedaan hasil belajar antara kelompok diskusi dan kelompok ceramah. Hasil penelitian menunjukkan bahwa data memenuhi asumsi normalitas dan homogenitas. Selain itu, terdapat perbedaan yang signifikan pada hasil belajar siswa, di mana kelompok yang menggunakan pendekatan diskusi memperoleh hasil lebih tinggi dibandingkan kelompok ceramah. Temuan ini menunjukkan bahwa pembelajaran interaktif dan berpusat pada siswa lebih efektif dalam meningkatkan pemahaman dan hasil belajar Bahasa Inggris siswa.

**Kata Kunci:** *Discovery Learning*, Metode Diskusi, Surat Lamaran Pekerjaan

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**How to Cite:** Uyun, Q., Handayani, K. P., Setiyawan, A., Raziqah., & Slamet. (2026). The Effectiveness of The Discovery Learning Model Using Discussion Method Compared to Lecture Method on Students' Learning Outcomes in English Subject on Job Application Letter Material. *PEDAGOGIC: Indonesian Journal of Science Education and Technology*, 6 (3), 636-644. <http://doi.org/10.54373/ijset.v6i3.5781>

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## INTRODUCTION

Learning within the Merdeka Curriculum emphasizes student-centered learning (*deep learning*) and the development of twenty-first century competencies, including higher-order thinking skills, communication, collaboration, and problem-solving abilities (Hidayat et al., 2025). In English language instruction at the secondary level, the implementation of the Merdeka Curriculum encourages teachers to integrate contextual learning and flexible instructional strategies to strengthen students' competencies and the Pancasila Student Profile (Astri et al., 2025). One of the important materials taught in Grade XII English learning is the job application letter because it is closely related to students' future academic and professional needs (Budi et al., 2023). However, many students still experience difficulties in understanding the structure, language features, and organization of job application letters due to limited vocabulary mastery and low engagement during the learning process (Syukur et al., 2025). Therefore, teachers are required to implement instructional models that encourage students to actively construct knowledge and participate in learning activities.

One instructional model considered suitable for this purpose is Discovery Learning, which emphasizes students' active involvement in observing, identifying problems, collecting data, and drawing conclusions independently (Widari, 2023). Theoretically, Discovery Learning supports higher cognitive engagement because students are encouraged to discover concepts through exploration and verification processes (Nuryakin, 2025). During the PLP program conducted in Grade XII at SMA Negeri 3 Pamekasan, several learning problems were identified. Most students tended to rely heavily on teacher explanations, showed limited participation, and experienced difficulties in identifying the structure and functions of paragraphs in job application letters. This condition was influenced by the dominance of one-way instruction and limited exposure to authentic learning materials, which reduced students' motivation to explore and develop their writing skills independently (Sutaryo et al., 2025).

Previous studies have demonstrated that Discovery Learning positively affects students' writing achievement and engagement (Suraidah et al., 2023). The integration of technology, collaborative strategies, and teacher feedback within Discovery Learning has also been proven to improve students' grammar, vocabulary, motivation, and writing quality (Flora et al., 2020; Sumiyani, 2025). In addition, the use of guided discovery strategies and digital learning media has been shown to enhance students' self-efficacy and learning outcomes in English writing classes (Mardiani Masuku Loso et al., 2025; Puspita et al., 2025). However, most previous studies mainly compared Discovery Learning with other instructional models, while limited research has specifically examined the effectiveness of different instructional methods

implemented within the same Discovery Learning model. The novelty of this study lies in comparing two instructional methods, namely lecture and discussion methods, within the Discovery Learning model in teaching job application letter material. This study explicitly examines how different methods as instructional delivery mechanisms may influence students' engagement and learning outcomes, even when applied under the same learning model. Discussion methods tend to encourage collaborative knowledge construction, while lecture methods are generally more teacher-centered and information-transmission oriented (Albina et al., 2022; Ayu et al., 2024; Wardani et al., 2025).

Based on the background and research gap described above, this study is directed toward examining the implementation of the Discovery Learning model through lecture and discussion methods in teaching job application letter material at SMA Negeri 3 Pamekasan. The study specifically focuses on comparing the effectiveness of both instructional methods within the same learning model in improving students' English learning outcomes and classroom engagement. Therefore, the objective of this study is to analyze and compare the effectiveness of Discovery Learning implemented through lecture and discussion methods on students' achievement in learning job application letters, as well as to provide practical insights for teachers in selecting appropriate instructional methods within student-centered learning practices under the Merdeka Curriculum.

## **METHOD**

This study adopted a quantitative approach with a quasi-experimental design, employing a pre-test–post-test framework across two groups to evaluate the effectiveness of the Discovery Learning model implemented through a discussion-based approach in comparison with a lecture-based method on students' learning outcomes in English job application letter instruction (Angel et al., 2025). The participants in this study were twelfth-grade students of SMA Negeri 3 Pamekasan. Two classes were selected as research groups, namely XII D1 and XII D2. Class XII D1 served as the experimental group and was instructed using the Discovery Learning model with a discussion-based approach, whereas class XII D2 functioned as the comparison group and was taught using the same model with a lecture-based approach. Although both groups were exposed to different instructional treatments, the underlying learning model applied in both cases remained discovery learning.

This study utilized purposive sampling, in which the researcher intentionally selected two classes as the sample based on predetermined criteria, including their alignment with the research objectives and classroom conditions that enabled the implementation of distinct instructional treatments. The instrument employed in this study was a learning achievement test comprising items related to job application letter material in English instruction. The assessment was administered in the form of a pre-test and a post-test, where the pre-test was conducted prior to the instructional intervention to identify students' initial proficiency, and the post-test was administered following the implementation of different instructional approaches to evaluate students' learning outcomes after the treatment (Siregar et al., 2023).

Before being employed in the study, the test instrument was validated and reliable. The validity test was carried out to establish the extent to which each test item measured what it was supposed to measure (Januwariska et al., 2020). Validity was assessed using the SPSS application through correlation analysis between individual item scores and the total score, while reliability testing was conducted to evaluate the consistency of the research instrument (Forester et al., 2024). If an instrument delivers consistent results when used for measurement, it is termed dependable. The reliability test was carried out using the Cronbach's Alpha method with the assistance of SPSS.

Statistical analyses were carried out using the Statistical Package for the Social Sciences (SPSS). The procedure initially involved testing the distributional assumption through a normality assessment, followed by an evaluation of variance equivalence between groups using a homogeneity test. Once these prerequisites were satisfied, an independent samples t-test was employed to investigate the presence of a statistically significant difference in learning outcomes between students instructed through a Discovery Learning framework incorporating a discussion-oriented approach and those receiving instruction through the same framework delivered via a lecture-oriented approach on the topic of job application letters

## **RESULTS AND DISCUSSION**

### **Description of Research Subjects and Sample Representation**

This study was conducted at SMA Negeri 3 Pamekasan, involving Grade XII students as the target population, which was divided into two observed groups, namely class XII D1 and class XII D2. In detail, the number of students in class XII D1 was recorded at 29 students, while class XII D2 consisted of 27 students. Both classes were selected as research subjects using purposive sampling, considering that they possessed relatively comparable pedagogical

characteristics and a level of initial ability homogeneity that met the predetermined research requirements.

However, during the implementation of the post-test, a sample attrition phenomenon (subject mortality) occurred, in which two students from class XII D1 were unable to participate due to unavoidable circumstances, such as illness or official permission. This condition resulted in incomplete observational data for these students in the planned evaluation process. Therefore, to maintain the internal validity of the study, the data used in the analysis were limited to students who fully participated in the post-test, totaling 27 students from class XII D1. Meanwhile, all 27 students in class XII D2 successfully completed the entire evaluation process. Thus, the inferential data analysis in this study was based on  $n = 27$  students from class XII D1 and  $n = 27$  students from class XII D2, resulting in an identical sample size (balanced design) for further analysis.

### **Assumption Testing: Normality and Homogeneity**

Based upon the outcomes of data analysis with SPSS, the researcher conducted a normality test using the Shapiro–Wilk test, considering that the sample size was relatively small ( $n < 50$ ), to determine whether the obtained data met the assumption of normal distribution. The results indicated that the significance value (p-value) for class XII D1 was 0.539, and for class XII D2 it was also 0.539. Both results exceeded the significance level ( $\alpha = 0.05$ ), indicating that students' learning outcomes in both classes were regularly distributed. Therefore, the data met the basic assumption criteria for the application of parametric statistical analysis in the subsequent stage.

Furthermore, homogeneity was assessed using Levene's Test to examine whether the deviations of the two groups were equal. The results indicated a significance value of 1.000, exceeding the 0.05 threshold. Thus, it can be concluded that the deviations of the two groups were homogeneous. This indicates that the level of precision and data distribution between class XII D1 and class XII D2 were relatively equivalent. With these results, the data fulfilled the requirements to proceed to hypothesis testing using the t-test.

### **Comparative Analysis of Learning Outcomes and Hypothesis Testing**

After confirming that the data satisfied the normality and homogeneity assumptions, the researcher proceeded to hypothesis testing using the Independent Sample T-Test. This test was performed to determine whether a significant difference existed in the mean learning outcomes between the two groups subjected to different instructional treatments. The analysis yielded a

significance value (Sig. 2-tailed) of 0.000, which is below the 0.05 threshold, thereby leading to the rejection of the null hypothesis ( $H_0$ ) and the acceptance of the alternative hypothesis ( $H_a$ ). These findings indicate a statistically significant difference in learning outcomes between students taught through discussion-based methods and those instructed using lecture-based approaches, suggesting that variations in instructional strategies exert a substantial effect on students' academic achievement in the material under investigation.

The findings of this study provide empirical evidence of a statistically significant difference in learning outcomes between students instructed using the Discovery Learning model through the discussion method and those taught using the lecture method. This indicates that the instructional approach selected by the teacher acts as an important determinant of students' academic achievement, even when the overarching learning model remains the same. The same instructional syntax can produce significantly different outcomes when supported by different interaction strategies (methods) in delivering the content to students.

### **Discussion and Theoretical Implications**

This difference can be analyzed from the perspective of social constructivism, where the discussion method tends to promote students' cognitive and expressive engagement in the education process (Witasari, 2024). Students are not positioned as passive recipients of teacher-delivered information but are actively involved in processes of dialogue, meaning negotiation, idea articulation, and peer collaboration. This active engagement facilitates deeper internalization of concepts, as students construct their own knowledge schemas through social interaction. In contrast, the lecture method tends to involve a one-way (top-down) transmission of knowledge. Although this method is considered more practical and efficient in terms of time management, it limits students' opportunities for cognitive exploration. Students have fewer opportunities to express their opinions or engage in active discussion, resulting in a more superficial level of understanding (surface learning). This condition may reduce students' intrinsic motivation and long-term information retention, which is ultimately reflected in lower evaluation scores.

Therefore, the disparity in learning results between the two groups indicates that instructional methods that actively engage students, such as discussion, have a more superior impact compared to lecture methods. Through interaction and active participation, students' cognitive load is more effectively distributed through peer support, leading to more optimal comprehension of the material.

These findings are consistent with learning theories that emphasize the effectiveness of the Student-Centered Learning (SCL) paradigm in promoting self-regulated learning compared to teacher-centered approaches. Within the SCL framework, students act as active and dynamic learners. They are encouraged to think critically, engage in discussion, and independently construct their understanding of the material with the teacher acting as a facilitator. Moreover, these results are corroborated by prior research indicating that the implementation of the Discovery Learning model, particularly when combined with interactive strategies such as discussion, can significantly enhance students' higher-order thinking skills (HOTS), as this approach enables learners to critically reflect on both their own perspectives and those of their peers. The synergy between the discovery process and group interaction creates a learning environment that is conducive to improving academic performance. Thus, it can be concluded that incorporating the discussion method into the Discovery Learning model demonstrates higher efficacy compared to the lecture method in improving students' learning outcomes on the job application letter material. These findings recommend that educators be more selective in integrating active learning methods to maximize students' cognitive potential in English language learning

## **CONCLUSION**

The synthesis of the empirical findings in this study confirms that the use of the Discovery Learning model integrated with the discussion method demonstrates significantly higher efficacy compared to the conventional didactic approach through the lecture method in enhancing students' learning outcomes on the job application letter material. The inferential validity of this study is supported by the fulfillment of statistical assumptions, where the data were proven to be normally distributed and exhibited homogeneous variance (homoscedasticity). Through the application of the Independent Sample T-Test, a highly significant disparity in academic performance was identified, with a probability value (p-value) of 0.000 ( $p < 0.05$ ). This finding provides strong justification for rejecting the null hypothesis and confirms that the discussion method intervention substantially improves students' competency achievement. Conceptually, this effectiveness is rooted in the ability of the discussion method to activate cognitive engagement and to create a dialogic learning space for students, enabling a deeper and more optimal internalization of the material compared to one-way communication patterns. Therefore, the adoption of the discussion method within the Discovery Learning framework is recommended as a progressive instructional strategy to enhance the quality of learning outcomes at the secondary education level.

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