# Application of innovative learning models in responding to learning motivation and optimizing students' HOTS

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**ABSTRACT**

Several phenomena that need to be addressed in economic learning, such as the tendency of differences in learning motivation in each student accompanied by problem-solving skills that still need to be accustomed to, show that the achievement of HOTS for them is still far from expectations. Responding to these conditions, an in-depth study is needed to implement an innovative learning model by paying attention to the differences in learning motivation in each student. This study was undertaken in experimental research by conducting trials of different innovative learning models, with the hope of accommodating differences in learning motivation that arise during learning. In the interest of this research, the *Project Based Learning model and* the Guided Inquiry *learning model* were determined. Both learning models are innovative learning models of the 21st century that are often recommended in learning in various curricula that apply today. This innovative learning model also has the potential to trigger the achievement of HOTS for students. This study uses a quantitative method with a type of pseudo-experiment (*pseudo-experiment)* which involves 3 variables, namely independent variables, attribute variables and non-free variables (bound). In this design, each variable has two levels, namely the learning model (A) as a treatment-free variable, which consists of *the Project Based Learning* (A1) model and *the Guided Inquiry* (A2) learning model. Furthermore, learning motivation (B) as an attribute variable consisting of high learning motivation (B1) and low learning motivation (B2). While the bound variable is *students' critical thinking* in economics subjects. *This critical thinking* will be analyzed based on student learning motivation data after being sorted from the highest to the lowest data in each treatment group using the applicable rules. The design of this study used *a treatment analysis by level* 2x2. The results of a research study based on several tests conducted showed that there was a significant interaction between innovative learning models and the level of learning motivation on students' HOTS achievement. The effectiveness of learning models in increasing HOTS differs between students with high learning motivation and students with low learning motivation. For students with high learning motivation, it is recommended to use the Project-Based Learning (PjBL) *learning* model in economic learning. Meanwhile, in students with low learning motivation, the Guided Inquiry *learning* model tends to be more effective than the PjBL learning model.

## Introduction

The learning model and the characteristics of students are components that can affect the achievement of HOTS ability. For this reason, educators as learning designers need to pay attention to the characteristics of students when designing their learning, which in turn can determine the choice of innovative learning models that are more suitable to be implemented. Learning models that are in accordance with the characteristics of students can make it easier for educators to achieve learning goals that are oriented towards achieving HOTS. Conditioning the learning model with the characteristics of students in learning further emphasizes that the role of teachers is very important for the success of students in achieving learning goals that are in accordance with the curriculum (Baharuddin, 2021).

The achievement of HOTS (*Higher Order Tinking Skills*) or high-level thinking skills occupies an important position in learning in preparing a competent young generation (Zebua, 2024). The HOTS capabilities that are urgent to be achieved in preparing the 21st century generation include the quality of critical thinking, creative thinking and problem-solving skills (Pratiwi et al., 2019) (Jannah & Atmojo, 2022). The achievement of HOTS or high-level thinking skills is a deep thinking process about information processing in facing and solving complex problems and involves the skills of analyzing, evaluating and creating (Dilah, 2023). In the development of the learning process, the ability of HOTS is an important part that needs attention by considering other components that can be the trigger for its achievement.

The component that needs to be considered is the selection of learning models by considering the characteristics of students. Some innovative learning models in the 21st century that have proven effective in developing critical, creative, and collaborative thinking skills are the project-based learning model (PjBL)(Suhaedin et al., 2024). In addition to critical thinking skills, the PJBL model also has a significant effect on students' communication skills (Astri et al., 2022). Another learning model that is also effective in developing students' critical thinking skills is the *Guided Inquiry learning model* (Ariska et al., 2022) (Siregar et al., 2022) (Harahap et al., 2021).

The ideal conditions above that can be created by educators can provide convenience for students in understanding the material, making them interested in deepening the material being taught, which in turn has the potential to develop HOTS skills. In this case, educators must understand the characteristics of their students, and strive to meet the needs of each individual formed from their characteristics and cognitive structure (Maruwae, 2022). The selection of the right innovative learning model of the 21st century must be followed by consideration of the characteristics of the learner, such as the desire or drive to learn that arises in each learner.

The desire to learn that arises in students is known as learning motivation. Students' critical thinking skills are influenced by high, medium and low learning motivation. Learning motivation is very necessary to arouse students' curiosity about the concepts learned (Sudirman et al., 2019). Critical thinking skills can also be improved if the motivation to learn is increased or strong. In this case, there are research findings that show that there is a fairly strong relationship between students' motivation to learn and their ability to think critically (Dayanti et al., 2024). Ideally, the critical thinking skills of students who have diverse learning motivations can be stimulated by the application of different innovative learning models, as found (Sudirman et al., 2019). Not only that critical thinking skills can increase if their motivation to learn is also increasing (Dayanti et al., 2024).

Differentiation of student characteristics such as different learning motivations often appears in learning. This leads to a condition that the use of various approaches, strategies, methods, and learning models by educators must be adjusted by paying attention to the characteristics of students, such as their learning motivation tendencies (Maruwae, 2022). The

innovative learning model of the 21st century is ideally also able to effectively develop students' critical thinking skills for all character groups, both those who have high learning motivation and those who have low learning motivation.

Paying attention to some of the descriptions of the research findings above and the existence of phenomena that need to be handled in economic learning, especially at SMA Negeri 2 Tilamuta as one of the Partner Schools of the Gorontalo State University (UNG) Teaching MBKM Batch 5 Program, among which there is a tendency for differences in learning motivation in each student. In addition, the achievement of HOTS for them is also far from expectations, this condition needs to be accompanied by habituation of problem-solving skills in the learning process. Responding to these descriptions and conditions, an in-depth study is needed to implement an innovative learning model by paying attention to the differences in learning motivation in each student. In the interest of this study, the *Project Based Learning* (PjBL) learning model and *the Guided Inquiry* Learning model were determined.

Both learning models are innovative learning models of the 21st century that are often recommended in learning in various curricula that apply today. The curriculum is designed to be as appropriate as possible to the times, so that it can give students full freedom to develop their abilities according to their respective talents (Abidah et al., 2020). Thus, this innovative learning model of the 21st century has great potential in triggering the achievement of HOTS for students as expected by the curriculum of its time in developing students' abilities according to their respective talents and characteristics.

The benefits of the PjBL learning model are very good to help develop students' confidence, improve their ability to solve problems and make students habituated to improving their high thinking skills (HOTS) (Fauzi et al., 2019). Meanwhile, the learning process of *the Guided Inquiry* model provides opportunities for students to have a real and active learning experience so that students are trained in solving problems as well as making decisions. The characteristic of *Guided Inquiry* learning is that it emphasizes the activities of students to the maximum to search and find information, activities carried out by all students are directed to find and find their own answers to something that is questioned so as to foster confidence in themselves.

The effectiveness of *the Project Based Learning* (PjBL) model in high school economic learning in the Independent Curriculum has also been proven to have a positive influence on improving cognitive abilities, learning outcomes and achievements, effectively improving high-level, critical and creative thinking skills, and increasing students' confidence, learning motivation and activeness (Pratiwi et al., 2023) (Budayani & Meitriana, 2023). Meanwhile, the application of the *Guided Inquiry model* to economic learning has also been proven to be effective in improving students' critical thinking skills (Mulyati et al., 2023) (Putra, 2021).

The consistency of the relationship and interaction between the learning components that are variables in this research study is also a further concern. This is based on the findings (Sudirman et al., 2019) that there is no interaction between the learning model and learning motivation in influencing students' critical thinking skills, while the findings (Mulyati et al., 2023) actually state that there is an interaction between the learning model and learning motivation. This means that the influence of the learning model on critical thinking skills also depends on the level of students' learning motivation.

## Method

The method used in this study is the pseudo-experiment method which is a development of *true experimental design* that has a control group, but cannot fully control external variables that

affect the implementation of the experiment (Sugiyono, 2019). This study involves 3 variables, namely independent variables, attribute variables and non-free variables (bound). In this design, each variable has two levels, namely the learning model (A) as a treatment-free variable, which consists of *the Project Based Learning* (A1) learning model and *the Guided Inquiry* (A2) learning model. Furthermore, learning motivation (B) as an attribute variable consisting of high learning motivation (B1) and low learning motivation (B2). While the bound variable is *students' critical thinking* in economics subjects. *This critical thinking* will be analyzed based on student learning motivation data after being sorted from the highest to the lowest data in each treatment group using the applicable rules.

Based on the description above, the design of this study is *treatment by level* 2x2 as seen in the table below:

**Table 1. Research Design**

| | | Learning Model (A) | |
|---|---|---|---|
| | | *Project Based Learning* (A1) | *Guided* Inquiry (A2) |
| **Learning Motivation (B)** | Height (B1) | A1B1 | A2B1 |
| | Low (B2) | A1B2 | A2B2 |

Information:
- A1B1 : Critical thinking students who have high learning motivation are taught using *the project-based learning* model.
- A1B2 : Critical thinking students who have low learning motivation are taught using *the project-based learning* model.
- A2B1 : Critical thinking of students who have high learning motivation which is taught using *the guided inquiry* learning model.
- A2B2 : Critical thinking students who have low learning motivation are taught using the *guided inquiry learning model*.

The data analysis in this study was carried out descriptively and inferentially (Sugiyono, 2019). Descriptive analysis is intended to descriptive research data, such as the calculation of frequency distribution, graphs, averages, variances and standard deviations. While inferential analysis is intended for testing research hypotheses. For the purpose of data collection, in the variable of learning motivation, students used questionnaire instruments based on instrument grids. As for the *critical thinking variable,* students used a multiple-choice formative test.

## Result

The results of students' HOTS Achievements in Economics are presented in eight groups

**List of HOTS Student Achievement Results Grouped by Cell**

| No. | Data Hasil Capaian HOTS Mapel Ekonomi | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | $A_1$ | $A_2$ | $B_1$ | $B_2$ | $A_1 B_1$ | $A_2 B_1$ | $A_1 B_2$ | $A_2 B_2$ |
| 1 | 88 | 75 | 88 | 66 | 88 | 75 | 66 | 82 |
| 2 | 88 | 75 | 88 | 71 | 88 | 75 | 71 | 82 |
| 3 | 88 | 75 | 88 | 72 | 88 | 75 | 72 | 83 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 4 | 88 | 75 | 88 | 74 | 88 | 75 | 74 | 83 |
| 5 | 89 | 76 | 89 | 74 | 89 | 76 | 74 | 84 |
| 6 | 89 | 76 | 89 | 75 | 89 | 76 | 75 | 84 |
| 7 | 92 | 77 | 92 | 75 | 92 | 77 | 75 | 85 |
| 8 | 92 | 78 | 92 | 75 | 92 | 78 | 75 | 85 |
| 9 | 94 | 78 | 94 | 77 | 94 | 78 | 77 | 86 |
| 10 | 95 | 79 | 95 | 77 | 95 | 79 | 77 | 87 |
| 11 | 97 | 79 | 97 | 78 | 97 | 79 | 78 | 87 |
| 12 | 66 | 82 | 75 | 82 | | | | |
| 13 | 71 | 82 | 75 | 82 | | | | |
| 14 | 72 | 83 | 75 | 83 | | | | |
| 15 | 74 | 83 | 75 | 83 | | | | |
| 16 | 74 | 84 | 76 | 84 | | | | |
| 17 | 75 | 84 | 76 | 84 | | | | |
| 18 | 75 | 85 | 77 | 85 | | | | |
| 19 | 75 | 85 | 78 | 85 | | | | |
| 20 | 77 | 86 | 78 | 86 | | | | |
| 21 | 77 | 87 | 79 | 87 | | | | |
| 22 | 78 | 87 | 79 | 87 | | | | |

Normality testing of data.

**Case Processing Summary**

| Learning Model | | Cases | | | | | |
|---|---|---|---|---|---|---|---|
| | | Valid | | Missing | | Total | |
| | | N | Percent | N | Percent | N | Percent |
| Critical.Thinking | | 42 | 100.0% | 0 | 0.0% | 42 | 100.0% |
| | Inquiry | 1 | 100.0% | 0 | 0.0% | 1 | 100.0% |
| | PjBL | 1 | 100.0% | 0 | 0.0% | 1 | 100.0% |

**Descriptivesa,b**

| GROUP | | | Statistic | Std. Error |
|---|---|---|---|---|
| VALUE | Mean | | 81.4762 | 1.11439 |
| | 95% Confidence Interval for Mean | Lower Bound | 79.2256 | |
| | | Upper Bound | 83.7267 | |
| | 5% Trimmed Mean | | 81.3862 | |
| | Median | | 80.5000 | |
| | Variance | | 52.158 | |
| | Hours of deviation | | 7.22205 | |
| | Minimum | | 66.00 | |
| | Maximum | | 97.00 | |
| | Range | | 31.00 | |
| | Interquartile Range | | 12.25 | |
| | Skewness | | .260 | .365 |
| | Kurtosis | | -.607 | .717 |

**Tests of Normalityb,c**

| GROUP | Kolmogorov-Smirnova | | | Shapiro-Wilk | | |
|---|---|---|---|---|---|---|
| | Statistic | df | Itself. | Statistic | df | Itself. |
| VALUE | .137 | 42 | .045 | .966 | 42 | .239 |

The results of the normality test using the Shapiro-Wilk Test showed that the p-value was 0.239. Since the p-value is greater than 0.05, it can be concluded that the data is normally distributed. Thus, the normality assumption is met, and this data can be used for subsequent analyses that require normal distribution assumptions.

Descriptive Analysis of HOTS Achievement Results in Economics Subjects.

**Dependent Variable: Critical Thinking Siswa**

| Model.Learning | Motivation.Learning | Mean | Hours of deviation | N |
|---|---|---|---|---|
| Project Based Learning | Higher Learning Motivation | 90.91 | 3.27 | 11 |
| | Low Learning Motivation | 74 | 3.376 | 11 |
| | Total | 82.45 | 9.241 | 22 |
| Guided Inquiry | Higher Learning Motivation | 76.64 | 1.629 | 11 |
| | Low Learning Motivation | 84.36 | 1.804 | 11 |
| | Total | 80.5 | 4.296 | 22 |
| Total | Higher Learning Motivation | 83.77 | 7.727 | 22 |
| | Low Learning Motivation | 79.18 | 5.925 | 22 |
| | Total | 81.48 | 7.19 | 44 |

**Between-Subjects Factors**

| | | Value Label | N |
|---|---|---|---|
| Model.Learning | 1 | Project Based Learning | 22 |
| | 2 | Guided Inquiry | 22 |
| Motivation.Learning | 1 | Higher Learning Motivation | 22 |
| | 2 | Low Learning Motivation | 22 |

Descriptive Statistics

Based on the results of calculation and interpretation of experimental data (two-path variance), it can be described as follows:

Description of Student HOTS Data with the Application of *Project Based Learning* (PjBL) Learning Model

The average overall critical thinking for *the Project Based Learning* learning model was 82.45. A higher standard deviation (9,241) indicated a greater variation between students with high and low motivation.

For students with high learning motivation

Based on the results of the data calculation above, the average *Critical Thinking* of students with *the Project Based Learning* learning model and high learning motivation is 90.91 which shows high critical thinking results. A small standard deviation (3,270) showed that the scores of this group were quite uniform, meaning that students with

high learning motivation when taught using the PjBL learning model had consistent critical thinking results.

For students with low learning motivation

Based on the results of the data calculation above, the average critical thinking of students with low motivation is 74.00, which is lower compared to students who have high motivation in the *Project Based Learning* learning model. This suggests that low motivation negatively impacts students' critical thinking, although the results remain fairly consistent (standard deviation 3,376).

Description of Student HOTS Data With the Application of *the Guided Inquiry Learning Model* The overall average critical thinking for the *Guided Inquiry* learning model was 80.50. Lower standard deviations indicate more consistent results among students. For students with high learning motivation. The average critical thinking in this group was 76.64, lower than the *highly motivated Project Based Learning* learning model . Nonetheless, the very low standard deviation (1,629) suggests that student outcomes in this group are very consistent.

For students with low learning motivation. In the group with the application of this *Guided Inquiry* learning model , students with low learning motivation had a higher average critical thinking (84.36) than students with high motivation. This shows that the *Guided Inquiry* learning model is more successful in improving critical thinking for students who have low learning motivation.

ANOVA Test Results

Dependent variable: Critical Thinking

Test of Between-Subjects Efects

| Source | Type III Sum of Squares | df | Mean Square | F | Itself. |
|---|---|---|---|---|---|
| Corrected Model | 1942.977a | 3 | 647.659 | 92.523 | 0 |
| Intercept | 292096.023 | 1 | 292096.023 | 41728.003 | 0 |
| Model.Learning | 42.023 | 1 | 42.023 | 6.003 | 0.019 |
| Motivation.Learning | 231.841 | 1 | 231.841 | 33.12 | 0 |
| Model.Learning * Motivation.Learning | 1669.114 | 1 | 1669.114 | 238.445 | 0 |
| Error | 280 | 40 | 7 | | |
| Total | 294319 | 44 | | | |
| Corrected Total | 2222.977 | 43 | | | |

The table above the value of .000 shows that the results of this study are very meaningful (or significant). This means that there are clear differences in students' critical thinking skills between groups that use different ways of learning or have different levels of motivation to learn. If this value is less than 0.05, it means that there is an influence of the learning model or learning motivation used.

In the table above, the F value of the learning model is obtained of 6,003. This F value indicates that there is a noticeable difference in students' critical thinking skills between different ways of learning. With a significance value of .019, this means that the way we teach (the learning model) actually affects how well students think critically. So, if we use a different learning model, the students' critical thinking results will also be different.

In the table above, an F value of 33.120 is obtained. This F value indicates that students' learning motivation has a strong influence on their critical thinking skills. With a significance value of .000, it means that this result is very meaningful. This means that students who have high motivation to learn tend to have better critical thinking skills compared to students who have lower motivation. So, the more motivated a student is, the better his critical thinking skills.

This interaction refers to how the two variables affect each other and can have different influences on the achievement of students' *critical thinking* in the Economic Maple. For example, an effective learning model may provide better results only when students are highly motivated. On the other hand, if the student's motivation to learn is low, then the same learning model cannot show the expected results. The results of the Tests of Between-Subjects Effects test showed that there was a significant interaction between the learning model and the level of learning motivation on students' HOTS, with values of F = 238.445 and Sig. = 0.000. This means that the effectiveness of learning models in improving HOTS differs between students who have high learning motivation and those who have low learning motivation .

R Squared = .874 (Adjusted R Squared = .865). This score shows that the model is able to explain about 87.4% of the variance in the achievement of students' critical thinking skills. This high $R^2$ value indicates that the model used is very good at describing the relationships between variables.

## Discussion

The significant influence between the learning model and student learning motivation on the achievement of students' HOTS in Economics provides an idea that the treatment of *the Project Based Learning* (PjBL) learning model and *the Guided Inquiry* model  in students who have high learning motivation and those who have low learning motivation obtain different results in achieving HOTS ability in Economics subjects.

The interaction between the learning model and student learning motivation that has a different influence on the achievement of students' HOTS in Economics subjects, leads to a condition that the learning model applied by teachers must be adjusted by paying attention to student characteristics such as the tendency of student learning motivation. In turn, it implements a learning model that matches the characteristics of the students. In this regard, it is a necessity for teachers to identify as accurately as possible the characteristics of students before determining the learning model to be used.

The learning model is one of the learning components that needs attention from teachers. In designing learning, teachers need to set a model that is in accordance with the learning material. The determination of the learning model must be adjusted to the characteristics of the material and the characteristics of the students. The process of early identification of material characteristics and student characteristics provides opportunities for teachers to more easily present learning materials, besides that students also have the opportunity to achieve optimal HOTS skills.

Learning models and student characteristics are components that can affect the achievement of HOTS abilities. Therefore, teachers as learning designers need to pay attention to the characteristics of their students in determining the choice of a more suitable learning model to be implemented. In this regard, it is necessary to systematically identify the suitability of learning objectives and materials with predetermined innovative learning models that are considered as alternatives in responding to differences in student characteristics such as motivational tendencies that students have in learning.

Based on the description of the results of the research study above, it shows that *the Project Based Learning* (PjBL) learning model is very effective in improving the critical thinking of students who have high learning motivation. The average critical thinking score of students who had high learning motivation in the group that participated in learning with the application of the PjBL model reached 90.91, which was the highest score among other groups. This indicates that the project-based learning model provides students with opportunities to actively engage in the learning process, encourages them to think critically, and applies their knowledge in a practical context.

Referring to the syntax of *the Project Based Learning* model (Budayani & Meitriana, 2023), students have an active role in teaching and learning activities because students construct their own knowledge and skills by working on projects according to the problems presented by the teacher. The process of working on the project will collaborate in groups, expressing opinions with each other so that there is a process of criticizing each other if the opinions submitted are not in accordance with the project made. Students with high motivation are better able to manage projects, dig up information, and complete project-based tasks independently, which encourages them to think more critically and creatively.

The Project Based Learning *learning model* encourages students to collaborate, conduct research, and solve problems, which is critical in developing critical thinking skills. Students who are highly motivated will be better able to take advantage of this opportunity to innovate and solve the challenges faced in each given project. The *Project Based Learning model* has proven to be effective in applying to Economics Subjects. This is supported by research by Yuliana & Widjaja (2021), Wilujeng et al., (2022), and Budayani & Meitriana (2023) that the project-based learning model is suitable to be applied to the economics teaching and learning process to increase students' high-level critical thinking skills.

Other findings that state that the PjBL model is one of the most effective learning bases in developing students' thinking skills (Pratiwi et al., 2023) are evidenced by the findings (Fitriyah & Ramadani, 2021), (Tamboto et al., 2021), (Apsoh et al., 2023), and (Darmuki & Alfin Hidayati, 2023) assuming the same results are based on an increase in high-level thinking skills and active involvement of students in the process Learning.

In the other treatment group, students who participated in learning with the application of *the Guided Inquiry* learning model showed interesting results. Students with low learning motivation in this group had a higher average critical thinking score of 84.36, compared to students with high learning motivation of only 76.64. This shows that the application of *the Guided Inquiry* learning model can provide better support for students who have low/less motivated learning motivation. This condition allows them to be better involved in the learning process.

Students can be guided and realize the importance of the learning process in life through the motivation to learn not only from themselves, but also from others, such as teachers and parents. They can also be people who do not give up easily and are eager to complete tasks. Critical thinking skills can also be improved if their motivation to learn increases or is strong (Dayanti et al., 2024). The learning of the *Guided Inquiry* model based on exploration and gradual guidance is more helpful for students with low motivation to stay engaged in learning, compared to the PjBL model which demands higher independence in working on projects.

The Guided Inquiry *Learning Model* emphasizes more structured guidance and support, which can help low-motivation students feel more confident and capable in the face of challenging tasks. It provides an opportunity for students to discover and explore information independently, albeit with the necessary support. Taking into account these findings, the *Guided Inquiry* learning model has the opportunity to increase the learning motivation of students who are low to become learners who have enthusiasm in completing tasks thanks to structured guidance in learning.

These findings emphasize the role of educators in learning to pay more attention to the application of innovative learning models in accommodating differences in student learning motivation. The strong interaction between the learning model and the learning motivation shows

that in achieving learning goals, educators need to respond to the learning motivation of their students to be adjusted to the established innovative learning model. Dayanti et al., (2024) state that students need motivation to learn, which helps them prioritize certain things in their lives, including participating in learning activities. Motivated behavior is intended to encourage students to know more focused and sustainably during the learning process, encouraging the development of thinking.

Paying attention to these findings, economics teachers can consider the application of the two innovative learning models by paying attention to the available time allocation as an alternative in accommodating the tendency of students' learning motivation as well as for the sake of achieving HOTS in learning. The findings of this research can also be a consideration for educators in developing learning. In the development of the learning process, it is necessary to clearly identify aspects of the learning objectives, types of learning materials, and characteristics of students. Learning objectives provide instructions to identify learning materials, arrange the order of learning topics, allocate time, provide guidance in choosing learning models, consider student characteristics, and provide standards to measure student learning outcomes.

## Conclusion

Based on the results and discussion above, it is concluded that the learning model and learning motivation have a significant effect on students' critical thinking skills. The interaction between these two factors is also very important, showing that the effectiveness of the learning model can be optimized by paying attention to the level of tendency of students' learning motivation in achieving HOTS.

*The Project-Based Learning* (PjBL) learning model provides higher HOTS achievement results for students who have high learning motivation in Economics Subjects compared to the *Guided Inquiry* learning model. In addition, the *Guided Inquiry* learning model actually provides better HOTS achievement results for students who have low learning motivation in Economics Subjects compared to the *Project-Based Learning* (PjBL) learning model.

For students who have high learning motivation, the *Project-Based Learning* (PjBL) model has a more significant impact on the achievement of HOTS than the *Guided Inquiry* model. Meanwhile, for students who have low learning motivation, the *Guided Inquiry* learning model tends to be more effective than the *Project-Based Learning* (PjBL) model in Economics.

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