International Journal of Current Science Research and Review
ISSN: 2581-8341
Volume 08 Issue 03 March 2025
DOI: 10.47191/ijcsrr/V8-i3-29, Impact Factor: 8.048
IJCSRR @ 2025
www.ijcsrr.org

# Different Learning, Learning Interests, and The Use of Technology in Learning on Economic Learning Outcomes: An Empirical Study with Family Support as Mediation on High School Students

**Annisa Rezki Ramadhani[1], Chalid Imran Musa[2], Muhammad Rakib[3*], Najamuddin[4]**
[1,4] Graduate Program, Universitas Negeri Makassar, Indonesia
[2,3] Faculty of Economics and Business, Universitas Negeri Makassar, Indonesia

**ABSTRACT:** This study aims to analyze the influence of Differentiated Learning, Learning Interest, and Technology Utilization on Economic Learning Outcomes among students at SMA Negeri 11 Makassar, with Family Support as a mediating variable. Using a quantitative approach with a descriptive method, data were collected through questionnaires, interviews, and documentation. The research sample consisted of 92 students, selected through stratified sampling from a population of 1,120 students using the Slovin formula. Data analysis was conducted using SmartPLS to examine the relationships between variables. The findings indicate that Differentiated Learning significantly affects Economic Learning Outcomes (β = 0.183; p = 0.018). Learning Interest has the strongest influence (β = 0.382; p = 0.001), followed by Technology Utilization (β = 0.171; p = 0.012). Family Support plays a crucial role in improving students' learning outcomes (β = 0.293; p = 0.000) and mediates the influence of other variables on economic learning outcomes. The mediation effect of Family Support strengthens the impact of Differentiated Learning (β = 0.098; p = 0.042), Learning Interest (β = 0.177; p = 0.004), and Technology Utilization (β = 0.152; p = 0.008) on students' economic learning outcomes. The results of this study emphasize that diverse learning approaches, strong family support, high learning interest, and optimal technology utilization significantly enhance students' economic learning outcomes. These findings have implications for educators and parents in developing more effective learning strategies both in school and at home.

**KEYWORDS:** Differentiated Learning, Economic Learning Outcomes, Family Support, Learning Interest, Technology Utilization.

## INTRODUCTION

Education is considered one of the main pillars in developing high-quality and competitive human resources amidst global dynamics. In Indonesia, Senior High School plays a central role in shaping students' knowledge and skills foundation. However, students' academic achievement in Senior High School is not solely determined by internal factors such as individual abilities but is also influenced by external conditions, including Differentiated Learning, learning interest, and technology integration in the learning process. The goal of education is to holistically develop each individual's potential, encompassing cognitive, affective, and psychomotor aspects (Hasniati A, Rakib M, Rahmatullah, Najamuddin, 2024). To achieve this, Differentiated Learning serves as a relevant and effective approach. Differentiated Learning adapts teaching methods to the needs, interests, and abilities of each student, allowing them to learn at a pace that aligns with their unique characteristics. By considering individual differences, this approach not only enhances academic achievement but also supports students' emotional and physical development. Through Differentiated Learning, each student can reach their maximum potential in a flexible and responsive learning environment.

This research aims to explore the implementation of Differentiated Learning in formal education and how this approach supports holistic educational goals. A high level of learning interest tends to increase students' motivation and commitment to the learning process, ultimately positively impacting their academic performance. Conversely, a lack of learning interest can hinder students' progress and create gaps in academic achievement. In this digital era, the use of technology in learning has become a crucial focus in improving the effectiveness of the teaching and learning process. Technology integration can enhance accessibility to learning materials, expand teaching methods, and enrich students' learning experiences. However, the level of technology utilization in learning is influenced by various factors, including the availability of technological infrastructure and

International Journal of Current Science Research and Review
ISSN: 2581-8341
Volume 08 Issue 03 March 2025
DOI: 10.47191/ijcsrr/V8-i3-29, Impact Factor: 8.048
IJCSRR @ 2025
www.ijcsrr.org

students' technological skills. Education plays a crucial role in shaping the nation's future, with the primary goal of achieving optimal learning outcomes for every student. However, these learning achievements are influenced by various internal and external factors. This study aims to explore the impact of Differentiated Learning on economic learning outcomes of students at Senior High School, with family support as a mediating variable. Differentiated Learning is a teaching approach that adapts teaching methods and materials to the needs, abilities, interests, and learning styles of each student.

Differentiated Learning involves modifying content, processes, products, and learning environments to meet individual students' learning needs (Wahyuni, 2023). In Indonesia, this approach is gaining increasing attention as it enhances student engagement in learning and helps them reach their maximum potential. Differentiated Learning helps students understand subjects in ways that align with their abilities and interests They emphasize the importance of teachers recognizing students' individual differences and designing teaching strategies that accommodate these differences (Ruben, 2013).Family support is a significant external factor influencing students' economic learning outcomes. This support includes various aspects, such as financial, emotional, and educational support. Strong family support can enhance students' learning motivation and help them overcome various challenges in the learning process (Lin et al., 2023). The effectiveness of Differentiated Learning support, such as the availability of educational resources at home, is highly influenced by family conditions. Families with good economic conditions can provide adequate learning facilities, aiding students in their studies. Additionally, parental involvement in their children's education—through encouragement, guidance, and supervision—can boost students' confidence and motivation to learn. Parents' educational background also affects students' economic learning outcomes, as more educated parents are generally better able to assist their children in completing school assignments and understanding academic materials. Differentiated Learning is expected to have a positive impact on students' economic learning outcomes. By tailoring teaching methods to individual student needs, Differentiated Learning can enhance students' understanding and engagement in the learning process. At schools, the implementation of Differentiated Learning is anticipated to help students achieve better academic results. Family support plays a crucial role as a mediator in the relationship between Differentiated Learning and student learning outcomes. Family support strengthens the positive effects of Differentiated Learning by providing students with the resources, encouragement, and guidance they need to succeed.

Based on initial observations conducted by the researcher on July 10 and 14, 2024, at Senior High School, it was found that some teachers had started implementing Differentiated Learning. These teachers used various teaching methods tailored to students' abilities, interests, and learning styles, such as project-based and problem-based learning, which increased student engagement and skills. However, the main challenges in implementing Differentiated Learning include limited school resources and facilities, as well as teachers' heavy workloads. A rigid curriculum and limited time also make effective implementation difficult. Family support plays a crucial role; students who receive full support from their families—whether financially, emotionally, or educationally—tend to achieve better learning outcomes. Conversely, students from economically disadvantaged families often face limited access to educational resources and additional household responsibilities that reduce their study time.
These findings confirm that Differentiated Learning has the potential to improve students' learning outcomes at school. In classroom observations of economic subjects, it was evident that the implementation of Differentiated Learning was not yet optimal. Teachers struggled to tailor their teaching methods to the diverse needs of students. For instance, some students who required deeper explanations often fell behind because the approach used was more general and did not account for variations in learning abilities. This led to gaps in students' understanding of the material. Moreover, the limited use of diverse media to support different learning styles—such as visual or kinesthetic learning—made it difficult for some students to grasp abstract economic concepts. The inability to adjust materials to individual learning styles resulted in uneven and less effective learning, ultimately affecting overall learning outcomes.

Differentiated Learning in children's education has several key elements. First, educators develop content, processes, and learning products tailored to children's interests and learning profiles. Second, this concept aligns with the characteristics of the independent curriculum, emphasizing individual character development and child-centered learning. Third, the principles of Differentiated Learning help educators facilitate students optimally before, during, and after learning (Mukhibat, 2023). The implementation of Differentiated Learning positively impacts students' behavior in the learning process. Observations indicate that students become more active and creative in completing assignments, leading to learning outcomes that align with educational

International Journal of Current Science Research and Review
ISSN: 2581-8341
Volume 08 Issue 03 March 2025
DOI: 10.47191/ijcsrr/V8-i3-29, Impact Factor: 8.048
IJCSRR @ 2025
www.ijcsrr.org

objectives. Teachers also need to respond to students' needs by paying attention to the preparation, implementation, and assessment of Differentiated Learning.

This research highlights that Differentiated Learning brings positive changes to students' behavior and learning outcomes, provided it is implemented with appropriate steps. The application of Differentiated Learning in children's education has several fundamental reasons (Rosalina Hutbah Ritonga, 2024). First, this approach enables educators to adapt learning content, processes, and outcomes to each child's interests and learning profile, creating a more engaging and relevant learning experience. Second, this concept aligns with the independent curriculum, emphasizing individual character development and focusing on children's needs, ensuring each child can develop according to their potential. Additionally, Differentiated Learning allows educators to play an optimal role as facilitators. Despite demonstrating the successful implementation of this approach, the main challenge is ensuring that educators have adequate competence to manage classroom diversity and provide appropriate support for each child.

Learning interest plays a crucial role in achieving optimal learning outcomes for students at School. High learning interest encourages students to be active in the learning process, including asking questions and completing assignments with enthusiasm. Observations at this school show that students with strong learning interest tend to be more focused and diligent in understanding lesson materials. They are also more proactive in seeking additional explanations or reading materials to support their learning. Thus, high learning interest is significantly positively correlated with students' academic achievement, reinforcing the argument that this intrinsic motivation plays a crucial role in learning success (Đurišić & Bunijevac, 2017).

Low learning interest is a significant challenge in achieving optimal learning outcomes at Senior High School, particularly in economics subjects. Observations indicate that students with low learning interest tend to be passive during the learning process. They rarely engage in discussions or question-and-answer activities, which are essential for understanding complex subjects such as economics. This lack of enthusiasm is also evident in the minimal initiative to seek additional materials or ask teachers about unclear topics. When students are not motivated to learn, they tend to absorb information superficially, negatively impacting their academic achievement. Therefore, increasing learning interest is crucial to ensuring students' active participation and deeper understanding of lesson materials.

Besides learning interest, technology utilization is also a crucial pillar in improving students' learning outcomes at Senior High School. Modern technology, such as computers and the internet, provides unlimited access to information and broader educational resources. The use of technology in economics learning at Senior High School still faces several challenges. Although the school has provided access to technology such as computers and the internet, observations show that students have not fully utilized these facilities to support their learning. Technology use remains limited to simple activities, such as searching for information online, while its potential for more interactive activities, such as economic simulations or educational applications, has not been fully explored. Additionally, some teachers still lack confidence in integrating technology into the curriculum. Traditional teaching methods still dominate, resulting in a lack of variety and interactivity in learning. Consequently, opportunities to create a more dynamic and relevant learning experience are limited, ultimately affecting students' learning outcomes.

The importance of technology utilization in education, which can bring positive changes to the learning environment (London & Royse, 2023; Rakib, 2018). To ensure technology is optimally utilized, both students and educators must use it appropriately. The application of procedural learning theory and cognitive load theory has proven effective. Technology must be adapted to students' experience levels by managing cognitive load through intrinsic load regulation, minimizing extraneous load, and maximizing germane load to enhance learning outcomes. Technology utilization in education not only facilitates independent learning but also increases students' motivation by presenting lesson materials in a more engaging and interactive format.

At Senior High School, the implementation of technology has shown that technology utilization in economics learning still faces several challenges. Although the school has provided access to technology such as computers and the internet, observations show that students have not fully utilized these facilities to support their learning. Technology use remains limited to simple activities, such as searching for information online, while its potential for more interactive activities, such as economic simulations or educational applications, has not been fully explored. Additionally, some teachers still lack confidence in integrating technology into the curriculum. Traditional teaching methods still dominate, resulting in a lack of variety and interactivity in learning. Consequently, opportunities to create a more dynamic and relevant learning experience are limited, ultimately affecting students' learning outcomes and their ability to deepen their understanding.

International Journal of Current Science Research and Review
ISSN: 2581-8341
Volume 08 Issue 03 March 2025
DOI: 10.47191/ijcsrr/V8-i3-29, Impact Factor: 8.048
IJCSRR @ 2025
www.ijcsrr.org

In relation to this, my reason for researching the influence of Differentiated Learning, learning interest, and technology utilization in learning on economics learning outcomes with family support as mediation at Senior High School is to identify how these learning approaches can positively affect students' learning outcomes. This study will explore the extent to which Differentiated Learning can adjust teaching methods to students' diverse learning needs. Additionally, this research will assess the role of students' learning interest and technology utilization in improving academic achievement. By considering family support as mediation, this research will also explore how the interaction between the family environment and these learning factors can influence students' learning outcomes. Through this study, I hope to contribute to the development of more effective and inclusive learning strategies at Senior High School, as well as provide insights for educators and education stakeholders in understanding the factors influencing education quality at the high school level. Based on this background, the researcher is interested in conducting a study entitled "The Influence of Differentiated Learning, Learning Interest, and Technology Utilization in Learning on Economics Learning Outcomes with Family Support as Mediation at Senior High School."

## METHOD

This research is quantitative research aimed at analyzing data in the form of numbers and interpreting them through calculating the score or average value of each variable. Furthermore, statistical analysis is carried out to test the influence between observed variables. The data in this study were collected in numerical form and analyzed using the Structural Equation Modeling-Partial Least Square (SEM-PLS) method through SmartPLS software. This method is used to test direct and indirect relationships between variables, including the influence of mediation in the research model. This research was conducted at SMAN 11 Makassar, with a research population of 1,120 students. To determine the number of representative samples, the Stratified Sampling technique was used with calculations based on the Slovin formula. From these calculations, 92 respondents were obtained as research samples. The mediation method in this study aims to analyze how mediating variables play a role in bridging the relationship between independent and dependent variables, thus providing a deeper understanding of the mechanism of influence between variables in this study.

## RESULT AND DISCUSSION

### A. Measurement Model (Outer Model)

1. Convergent Validity Test

Convergent validity is tested by analyzing the loading factor values of each indicator on its construct. This process is conducted by reviewing the outer loadings results for each indicator. If the outer loadings value is greater than 0.70, the construct can explain more than 50%.

**Table I. Results of the Convergent Validity Test**

| Variable | Indicator | *Loading Factor* | *Cut Value* | AVE | Validation Convergent |
|---|---|---|---|---|---|
| Differentiated Learning ( X1) | X1.1 | 0,791 | 0,70 | 0,581 | Valid |
| | X1.2 | 0,783 | 0,70 | | Valid |
| | X1.3 | 0,745 | 0,70 | | Valid |
| | X1.4 | 0,765 | 0,70 | | Valid |
| | X1.5 | 0,726 | 0,70 | | Valid |
| Learning Interest (X2) | X2.1 | 0,748 | 0,70 | 0,644 | Valid |
| | X2.2 | 0,827 | 0,70 | | Valid |
| | X2.3 | 0,801 | 0,70 | | Valid |
| | X2.4 | 0,832 | 0,70 | | Valid |
| Technology Utilization in Learning (X3) | X3.1 | 0,722 | 0,70 | 0,624 | Valid |
| | X3.2 | 0,803 | 0,70 | | Valid |
| | X3.3 | 0,830 | 0,70 | | Valid |
| | X3.4 | 0,826 | 0,70 | | Valid |
| | X3.5 | 0,821 | 0,70 | | Valid |
| | X3.6 | 0,729 | 0,70 | | |

International Journal of Current Science Research and Review
ISSN: 2581-8341
Volume 08 Issue 03 March 2025
DOI: 10.47191/ijcsrr/V8-i3-29, Impact Factor: 8.048
IJCSRR @ 2025
www.ijcsrr.org

| | | | | | |
|---|---|---|---|---|---|
| Economics Learning Outcome (Y) | Y1 | 0,843 | 0,70 | | Valid |
| | Y2 | 0,807 | 0,70 | | Valid |
| | Y3 | 0,853 | 0,70 | 0,647 | Valid |
| | Y4 | 0,734 | 0,70 | | Valid |
| | Y5 | 0,780 | 0,70 | | Valid |
| Family Support (Z) | Z1 | 0,829 | 0,70 | | Valid |
| | Z2 | 0,824 | 0,70 | | Valid |
| | Z3 | 0,878 | 0,70 | 0,697 | Valid |
| | Z4 | 0,841 | 0,70 | | Valid |
| | Z5 | 0,791 | 0,70 | | Valid |

**Source:** Data Processing Results, 2025.

2. Discriminant Validity Test

Discriminant validity is tested to ensure that each concept in the latent variable has a clear distinction from other variables. A model is considered to have good discriminant validity if the square root of the AVE value of each exogenous construct is greater than the correlation between that construct and other constructs. The results of the discriminant validity test are as follows.

**Table II. Fornell-Larcker Criterion Values**

| Variabel | (X1) | (X2) | (X3) | (Y) | (Z) |
|---|---|---|---|---|---|
| Differentiated Learning (X1) | 0,762 | | | | |
| Learning Interest (X2) | 0,800 | 0,803 | | | |
| Technology Utilization in Learning (X3) | 0,695 | 0,762 | 0,790 | | |
| Economics Learning Outcome (Y) | 0,757 | 0,873 | 0,808 | 0,805 | |
| Family Support (Z) | 0,512 | 0,734 | 0,750 | 0,795 | 0,835 |

**Source:** Data Processing Results, 2025.

Based on the discriminant validity test results in the table above, the square root of the AVE value for each construct is greater than the correlation coefficient between that construct and other constructs. Thus, it can be concluded that all constructs in th**is** PLS model meet the established discriminant validity criteria.

*1) Composite Reliability*

Construct reliability can be assessed using Cronbach's alpha and composite reliability values for each construct. The recommended threshold for composite reliability and Cronbach's alpha is greater than 0.70.

**Table III. Construct Reliability Values**

| **Variabel** | ***Cronbach's Alpha*** | ***Composite Reliability*** | ***Average Variance Extracted* (AVE)** |
|---|---|---|---|
| Differentiated Learning (X1) | 0,820 | 0,874 | 0,581 |
| Learning Interest (X2) | 0,815 | 0,879 | 0,644 |
| Technology Utilization in Learning (X3) | 0,879 | 0,908 | 0,624 |
| Economics Learning Outcome(Y) | 0,863 | 0,902 | 0,647 |
| Family Support (Z) | 0,891 | 0,920 | 0,697 |

**Source:** Data Processing Results, 2025.

Based on the analysis results in the table above, the composite reliability and Cronbach's alpha values for all constructs exceed 0.70. This indicates that all constructs meet the required reliability and validity criteria.

International Journal of Current Science Research and Review
ISSN: 2581-8341
Volume 08 Issue 03 March 2025
DOI: 10.47191/ijcsrr/V8-i3-29, Impact Factor: 8.048
IJCSRR @ 2025
www.ijcsrr.org

*2) Structural Model (Inner Model)*

The analysis of the inner model aims to predict the relationship between latent variables. The inner model is a structural model used to analyze causal relationships between latent variables. In this study, the model is applied to identify the influence of independent variables on the dependent variable.

*3) Coefficient of Determination (R Square)*

The R-square coefficient provides an overview of how well the model explains the variance in the dependent variable, although its value can be influenced by the number of variables in the model. In a structural model, an R-square value of 0.67 or higher indicates that the exogenous variables have a strong influence on the endogenous variable. Meanwhile, an R-square value of 0.33 is categorized as moderate, whereas a value of 0.19 is considered weak (Ghozali, 2021).

**Table IV. Coefficient of Determination (R Square) Values**

| Variabel | R *Square* | Adjusted R *Square* |
|---|---|---|
| Economics Learning Outcome(Y) | 0,843 | 0,835 |
| Family Support (Z) | 0,664 | 0,652 |

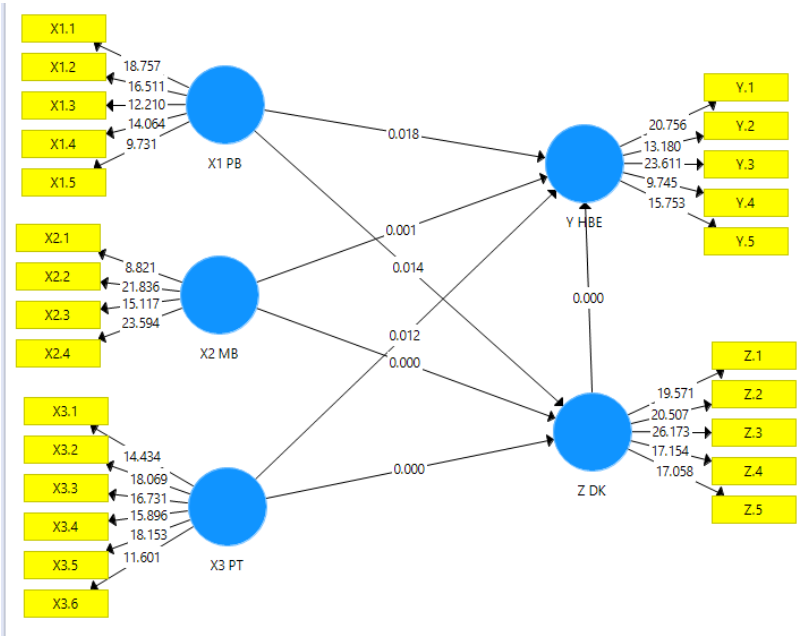
**Source:** Data Processing Results, 2025.

Table 4 shows that the variables Differentiated Learning, learning interest, technology utilization, and family support explain 84.3% of the variation in students' economics learning outcomes, with an adjusted value of 83.5%. Meanwhile, family support is explained by other variables by 66.4%, with an adjusted value of 65.2%. This indicates that the research model has a strong explanatory power in identifying factors affecting economics learning outcomes.

**B. Hypothesis Testing**

The bootstrapping method generates t-statistics for each relationship in the model, which are used in hypothesis testing. This testing is conducted by reviewing the p-value and t-statistic values. At a 5% significance level, a p-value is considered significant if < 0.05, while the t-Table value for alpha 5% is 1.96. The decision criteria for hypothesis testing are as follows, Accept Ha and reject H0 if t-statistic > 1.96. Using the probability approach, Ha is accepted when p-value < 0.05 (Prayogi & Ikatrianasari, 2020).

- If p-value < 0.05, the effect is significant**.**
- If p-value > 0.05**,** the effect is not significant.




**Picture 1. Estimation PLS-SEM Bootstrapping Values**

International Journal of Current Science Research and Review
ISSN: 2581-8341
Volume 08 Issue 03 March 2025
DOI: 10.47191/ijcsrr/V8-i3-29, Impact Factor: 8.048
IJCSRR @ 2025
www.ijcsrr.org

**Table V. Bootstrapping *Values***

| Variabel | Original Sample | Sample *Mean* (M) | Standart Deviation (STDEV) | T *Statistic* (O/STDEV) | P Values |
|---|---|---|---|---|---|
| Differentiated Learning (X1) -> Economics Learning Outcome(Y) | 0.183 | 0.178 | 0.077 | 2.380 | 0.018 |
| Learning Interest (X2)-> Economics Learning Outcome(Y) | 0.382 | 0.400 | 0.115 | 3.334 | 0.001 |
| Technology Utilization in Learning (X3)-> Economics Learning Outcome(Y) | 0.171 | 0.172 | 0.068 | 2.522 | 0.012 |
| Family Support (Z) -> Economics Learning Outcome(Y) | 0.293 | 0.279 | 0.081 | 3.601 | 0.000 |
| Differentiated Learning (X1) -> Family Support (Z) -> Hasil Belajar (Y) | 0,098 | -0,098 | 0,048 | 2,040 | 0,042 |
| Learning Interest (X2)-> Family Support (Z) Economics Learning Outcome(Y) | 0,177 | 0,173 | 0,061 | 2,885 | 0,004 |
| Technology Utilization in Learning (X3)-> Family Support (Z) Economics Learning Outcome(Y) | 0,152 | 0,148 | 0,058 | 2,648 | 0,008 |

**Source:** Data Processing Results, 2025.

## DISCUSSION

*1. Differentiated Learning and Economics Learning Outcomes*

The path coefficient test results indicate that Differentiated Learning (X1) has a significant effect on Economics Learning Outcomes (Y), with a coefficient of 0.183, a T-Statistic of 2.380, and a p-value of 0.018. This suggests that the better the implementation of differentiated learning, the higher the students' Economics Learning Outcomes. These findings highlight the significant impact of this method on students' Economics Learning Outcomes at Senior High School.

This result aligns with the fundamental principles of Jean Piaget's Constructivism Theory, which states that learning tailored to students' needs and abilities should enhance understanding and academic achievement. A possible explanation for these findings is that the implementation of Differentiated Learning may not be optimal or fully aligned with students' needs in the research setting. Differentiated Learning had a positive effect on student learning outcomes in other subjects, such as mathematics. This discrepancy may be attributed to contextual factors such as student characteristics, social background, or differences in subject matter (Liou et al., 2023).

In the context of economics education at Senior High School, this strategy can be implemented through diverse teaching methods, including group discussions, case studies, and the use of interactive media. A more flexible approach enables students to better comprehend economic concepts and gain confidence in applying them to real-life situations. Furthermore, this study reinforces previous research findings, which indicate that Differentiated Learning positively contributes to student learning outcomes. Proper implementation can help reduce gaps in student understanding, increase learning motivation, and create a more meaningful learning experience. Therefore, teachers are encouraged to optimize the application of Differentiated Learning to improve the quality of economics education in schools.

*2. Learning Interest and Economics Learning Outcomes*

The analysis results indicate that Learning Interest (X2) has the most significant influence on Economics Learning Outcomes (Y) compared to other variables, with a coefficient of 0.382, a T-Statistic of 3.334, and a p-value of 0.001. This demonstrates that the higher the students' Learning Interest, the better their Economics Learning Outcomes. A high level of Learning Interest motivates students to be more engaged in understanding the material, participating in class discussions, and exploring concepts beyond school hours. Therefore, teachers and schools need to create a learning environment that is engaging and relevant to students' lives to foster their interest in economics.

International Journal of Current Science Research and Review
ISSN: 2581-8341
Volume 08 Issue 03 March 2025
DOI: 10.47191/ijcsrr/V8-i3-29, Impact Factor: 8.048
IJCSRR @ 2025
www.ijcsrr.org

Learning Interest is a crucial psychological factor in the learning process. Learning Interest drives students to focus, actively participate, and enjoy the learning process, ultimately improving their academic performance (Rahmah et al., 2024). This theory is further supported by Han & goleman, daniel; boyatzis, Richard; Mckee, (2019) in *Motivation Theory and Its Measurement*, which asserts that students with high Learning Interest tend to have intrinsic motivation that significantly influences their academic success. However, this theory also emphasizes that the effect of Learning Interest on learning outcomes is not direct or absolute but is influenced by other factors such as teacher competence, applied teaching methods, and the learning environment (Alif et al., 2020).

In the context of economics education at SMA 11 Makassar, these findings reaffirm the importance of the role of teachers and schools in creating a learning environment that is both stimulating and relevant to students' lives. Teachers can adopt innovative teaching strategies such as project-based learning, real-world economic case studies, or the integration of digital technology in lesson delivery. By adopting approaches that align with students' needs and interests, their engagement in learning can be enhanced, ultimately leading to improved Economics Learning Outcomes.

*3. Technology Utilization in Learning and Economics Learning Outcomes*

The analysis results reveal that Technology Utilization in Learning (X3) also has a significant influence on Economics Learning Outcomes, with a coefficient of 0.171, a T-Statistic of 2.522, and a p-value of 0.012. This indicates that the more effectively technology is utilized in learning, the better the students' learning outcomes. Technology facilitates interactive learning experiences, such as through simulations, educational videos, and digital learning platforms, which enhance students' understanding of economic concepts. Therefore, schools should encourage the integration of technology in the learning process to help students grasp the material more effectively and improve their academic performance.

This aligns with the Attention element in the ARCS Motivation Theory developed by John M. Keller (Indriyani et al., 2022), where technology, such as simulations and educational videos, enhances students' attention to economic subjects. Additionally, the Relevance element is evident when technology helps students understand economic concepts in real-world contexts, such as through digital learning platforms and interactive case studies. Moreover, the improvement in learning outcomes facilitated by technology can be explained through the Confidence element, as technology enables students to engage in self-directed learning and assess their comprehension through interactive exercises. Finally, the Satisfaction element is reflected in how technology provides immediate feedback, such as automated quiz results or progress tracking analyses, which enhance student satisfaction and encourage continuous learning. Thus, the ARCS Motivation Theory supports the findings of this study, as technology integration in economics education not only boosts student motivation but also has a positive impact on their learning outcomes.

*4. Family Support for Economics Learning Outcomes*

The analysis results show that the P-value for the relationship between Family Support (Z) also contributes significantly to students' Economics Learning Outcomes, with a coefficient of 0.293, a T-Statistic of 3.601, and a p-value of 0.000. This indicates that students who receive family support, such as assistance in studying, motivation, and adequate educational facilities, tend to have better learning outcomes. Family Support can take the form of assistance in completing assignments, providing moral encouragement, and offering access to additional learning resources. Thus, parents play a crucial role in improving their children's academic achievements. Family Support can include attention to learning needs, motivation, and supporting facilities such as books or access to technology. Family Support plays an essential role in creating a conducive learning environment (Ndani, 2019). Parents' attention, motivation, and learning facilities help children achieve better learning outcomes (Alimuddin, Rakib, M., Rahman, 2023).

The study results indicate that Family Support significantly affects Economics Learning Outcomes. This is consistent with the theory of (Wiseman et al., 2024), stating that parents providing positive support, constructive feedback, and avoiding excessive pressure can enhance students' self-confidence and motivation in learning. This support enables students to be more motivated and feel valued, contributing to improved learning outcomes. In line with the Family-School Partnership Theory by (Smith et al., 2020), family involvement in children's education is crucial for their academic achievement.

*5. Differentiated Learning through Family Support for Economics Learning Outcomes*

The analysis results show that Family Support serves as a mediator in the relationship between Differentiated Learning, Learning Interest, and Technology Utilization in Learning with students' Economics Learning Outcomes. The influence of

International Journal of Current Science Research and Review
ISSN: 2581-8341
Volume 08 Issue 03 March 2025
DOI: 10.47191/ijcsrr/V8-i3-29, Impact Factor: 8.048
IJCSRR @ 2025
www.ijcsrr.org

Differentiated Learning on learning outcomes through Family Support has a coefficient of 0.098, a T-Statistic of 2.040, and a p-value of 0.042. This indicates that the better Differentiated Learning is implemented, the higher the Family Support received by students, ultimately improving their learning outcomes. These findings align with research analyzing how external and internal factors interact to influence student learning outcomes. Theoretically, these findings support Vygotsky's Social Theory, which emphasizes the importance of social factors in learning, and Piaget's Constructivism Theory, which considers learning more effective when tailored to individual students' needs and abilities.

These results highlight that to improve student learning outcomes at Senior High School, the Differentiated Learning approach must be complemented by intensive Family Support. Families play an essential role in providing a supportive learning environment at home, including motivation, learning facilities, and direct involvement in children's education (Flores & Perez, 2022). This also demonstrates that efforts to improve education quality cannot solely rely on teachers or schools but must also involve families in supporting students' academic success. Logically, this significant influence can be explained by how Differentiated Learning provides a more personal and relevant learning experience for students. Differentiated Learning is an approach that emphasizes providing learning experiences tailored to each student's needs and abilities. According to Sarnoto (2024), Differentiated Learning focuses on ensuring that every student receives education aligned with their learning style, interests, and proficiency level at the right time. This learning approach acknowledges student differences and aims to provide equal opportunities for each individual to grow.

Some key principles in Differentiated Learning include valuing student differences, continuous evaluation, curriculum modifications to meet diverse student needs, self-motivation, and collaboration between students and teachers. Differentiated Learning also prioritizes creating an effective learning environment that supports each student in reaching their full potential. Family Support can reinforce this mindset by providing motivation and encouragement for students to continue striving toward their academic goals. Overall, Differentiated Learning aims to maximize each student's potential (Shengyao et al., 2024). Through a flexible and student-centered approach, along with family support, this learning method can create a more inclusive environment that supports optimal learning outcomes. Thus, Differentiated Learning, supported by families, can have a significant positive impact on students' Economics Learning Outcomes at Senior High School.

*6. Learning Interest through Family Support for Economics Learning Outcomes*

The analysis results show that the P-value for the relationship between Learning Interest through Family Support with students' Economics Learning Outcomes at Senior High School has a coefficient of 0.177, a T-Statistic of 2.885, and a p-value of 0.004. This indicates that Learning Interest, mediated by Family Support, significantly influences students' Economics Learning Outcomes. Therefore, hypothesis H6 is accepted, meaning that the role of families in supporting students' Learning Interest can enhance their academic performance in economics. These findings align with the study's objective of understanding how external factors, such as family support, can strengthen the influence of internal factors, such as students' Learning Interest, on their learning outcomes. Theoretically, these findings reinforce the Self-Determination Theory developed by (Howard et al., 2021), which explains that external support, including family support, can enhance students' motivation to learn.

Additionally, Learning Interest driven by Family Support positively impacts students' academic achievement, particularly in economics. Compared to previous research, these findings are consistent with the study conducted by Rahmah et al. (2024), which found that students' Learning Interest, supported by a positive family environment, significantly affects their academic achievement. This study confirms that families play a major role in fostering students' interest and motivation to learn, which in turn positively impacts their learning outcomes. It emphasizes that the role of families in supporting students' Learning Interest can provide a positive impact on academic performance, particularly in economics. Learning Interest itself is a crucial factor in the education process, as students with high Learning Interest tend to be more motivated to put in maximum effort in learning, ultimately improving their understanding and academic achievements (Hu & Cai, 2023).

Family support, including providing motivation, learning facilities, and supervision of academic progress, can help direct and maintain students' Learning Interest. The Learning Interest Theory suggests that students' interests are directly related to their level of engagement in the learning process, and families play a crucial role in influencing and strengthening that interest. A previous study by (Lubis et al., 2021) also showed a positive relationship between Learning Interest, learning motivation, and learning outcomes, where well-supported student interest leads to better results. Therefore, the role of families in supporting

International Journal of Current Science Research and Review
ISSN: 2581-8341
Volume 08 Issue 03 March 2025
DOI: 10.47191/ijcsrr/V8-i3-29, Impact Factor: 8.048
IJCSRR @ 2025
www.ijcsrr.org

students' Learning Interest is essential in creating an environment that supports the learning process, ultimately resulting in optimal learning outcomes.

*7. Technology Utilization in Learning through Family Support on Economics Learning Outcomes*

The analysis results show that the P-value for the relationship between Technology Utilization in Learning through Family Support on Economics Learning Outcomes of students at SMA 11 Makassar has a coefficient of 0.152, a T-Statistic of 2.648, and a p-value of 0.008. This indicates that Technology Utilization in Learning, mediated by Family Support, significantly influences Economics Learning Outcomes. Therefore, hypothesis H7 is accepted, meaning that although technology is used in learning, Family Support is strong enough to enhance its impact on students' learning outcomes.

These findings lead to the understanding that while Technology Utilization in Learning has the potential to improve learning outcomes, the role of family support in facilitating its use was not found to be significant in this study. This also suggests that technology alone is not always sufficient to create significant changes in learning outcomes without other supporting factors, such as students' internal motivation or the quality of technology use itself. Theoretically, these findings can be explained through the Technology Integration and Learning Theory, which states that technology must be effectively used and integrated with pedagogical approaches to yield optimal results. Family Support in technology use influences academic achievement, but the results of this study indicate that other factors may also play an important role in maximizing the potential of technology, such as adequate facilities or better training for students and their families (Đurišić & Bunijevac, 2017).

Conversely, A study showed more positive results, where the use of technology in education significantly improved students' learning outcomes, particularly in developing cognitive and critical thinking skills (Haleem et al., 2022). Technology can enhance the efficiency and effectiveness of the learning process, although challenges and risks must be managed. While both studies highlight technology utilization, the main difference lies in the role of Family Support in facilitating the learning process. Albert Bandura's Social Cognitive Theory (as cited in Muchtar et al., 2018) also explains that social support, such as from family, plays an essential role in shaping students' attitudes and motivation for learning. In this case, while technology offers great potential, family influence is not always sufficient to strengthen the impact of technology if there is no effective integration into the learning system (Alimuddin, Rakib, M., & Rahman, 2023). Both studies conclude that while technology in education has great potential to improve learning outcomes, its effectiveness depends heavily on how it is integrated into the learning process and the support students receive, whether from their families or other educational environments.

## CONCLUSION

This study shows that Differentiated Learning (X1) significantly influences Economics Learning Outcome (Y) with a coefficient of 0.183, a T-Statistic of 2.380, and a p-value of 0.018. This means that the better the implementation of differentiated learning, the higher the students' Economics Learning Outcomes. Learning Interest (X2) has the greatest influence, with a coefficient of 0.382, a T-Statistic of 3.334, and a p-value of 0.001. Students with high Learning Interest tend to be more active in understanding the material and participating in learning, resulting in better Economics Learning Outcomes.

Technology Utilization in Learning (X3) also has a significant impact, with a coefficient of 0.171, a T-Statistic of 2.522, and a p-value of 0.012. Technology in learning helps students understand economic material more interactively, thereby improving their learning outcomes. Family Support (Z) contributes significantly to students' learning outcomes, with a coefficient of 0.293, a T-Statistic of 3.601, and a p-value of 0.000. Students who receive family support, such as study assistance and motivation, achieve better learning outcomes. Additionally, Family Support mediates the relationship between other variables and economic learning outcomes. The effect of Differentiated Learning on learning outcomes through Family Support has a coefficient of 0.098, a T-Statistic of 2.040, and a p-value of 0.042. Learning Interest mediated by Family Support has a coefficient of 0.177, a T-Statistic of 2.885, and a p-value of 0.004. Meanwhile, Technology Utilization in Learning mediated by Family Support has a coefficient of 0.152, a T-Statistic of 2.648, and a p-value of 0.008. Thus, Family Support strengthens the influence of differentiated learning, learning interest, and Technology Utilization in Learning on students' Economics Learning Outcomes.

International Journal of Current Science Research and Review
ISSN: 2581-8341
Volume 08 Issue 03 March 2025
DOI: 10.47191/ijcsrr/V8-i3-29, Impact Factor: 8.048
IJCSRR @ 2025
www.ijcsrr.org

**REFERENCES**

1. Alif, H. M., Pujiati, A., & Yulianto, A. (2020). The Effect of Teacher Competence, Learning Facilities, and Learning Readiness on Students' Learning Achievement Through Learning Motivation of Grade 11 Accounting Lesson in Brebes Regensy Vocational High School. *Journal of Economic Education*, *9*(2), 150–160. https://doi.org/10.15294/jeec.v9i2.40155
2. Alimuddin, Rakib, M., & Rahman, N. (2023). The Influence of Learning Motivation and Family Environment on Learning Outcomes Through Student Learning Activities in Social Studies Subjects at SMPN 4 Mangarabombang. *Journal Syntax Idea*, *5*(9), 1231–1248. https://doi.org/10.46799/syntax-idea.v5i9.2500
3. Đurišić, M., & Bunijevac, M. (2017). Parental Involvement as a Important Factor for Successful Education. *C e p s Journal*, *7*(3), 137–153. https://doi.org/10.26529/cepsj.291
4. Flores, D. R., & Perez, H. D. (2022). Parent-School-Community Involvement in the Academic Performance of Senior High School Students-GAS (Grade 11 and 12) in One Public High School in the New Normal: Towards Project ISLA. *American Journal of Interdisciplinary Research and Innovation*, *1*(1). https://doi.org/10.54536/ajiri.v1i1.466
5. Haleem, A., Javaid, M., Qadri, M. A., & Suman, R. (2022). Understanding the role of digital technologies in education: A review. *Sustainable Operations and Computers*, *3*(February), 275–285. https://doi.org/10.1016/j.susoc.2022.05.004
6. Han, E. S., & goleman, daniel; boyatzis, Richard; Mckee, A. (2019). Teori Motivasi dan Pengukurannya. *Journal of Chemical Information and Modeling*.
7. Hasniati A, Rakib M, Rahmatullah, Najamuddin, & Sanusi. D. A. (2024). Application of Problem Based Learning and Learning Motivation in Immproving Student Learning Outcomes in Economics Subjects: A Quasi-Experimental Research. *Internasional Journal of Research and Innovation in Social Science (IJRISS)*, *VIII*(III), 1077–1086. https://doi.org/10.47772/IJRISS.2024.803080
8. Howard, J. L., Bureau, J., Guay, F., Chong, J. X. Y., & Ryan, R. M. (2021). Student Motivation and Associated Outcomes: A Meta-Analysis From Self-Determination Theory. *Perspectives on Psychological Science*, *16*(6). https://doi.org/10.1177/1745691620966789
9. Hu, S., & Cai, D. (2023). Development of Perceived Family Support and Positive Mental Health in Junior High School Students: A Three-Year Longitudinal Study. *Journal of Early Adolescence*, *43*(2). https://doi.org/10.1177/02724316221101534
10. Indriyani, S., Rakib, M., Hasan, M., Mustari, M., & Dinar, M. (2022). Pengaruh Literasi Kewirausahaan, Ekspektasi Pendapatan Dan Aktualisasi Diri Terhadap Minat Berwirausaha Mahasiswa Fakultas Ekonomi dan Bisnis Universitas Negeri Makassar. *Eklektik : Jurnal Pendidikan Ekonomi Dan Kewirausahaan*, *5*(2), 229. https://doi.org/10.24014/ekl.v5i2.18577
11. Lin, X., Hu, Y., Chen, C., & Zhu, Y. (2023). The Influence of Social Support on Higher Vocational Students' Learning Motivation: The Mediating Role of Belief in a Just World and the Moderating Role of Gender. *Psychology Research and Behavior Management*, *16*(April), 1471–1483. https://doi.org/10.2147/PRBM.S402643
12. Liou, S. R., Cheng, C. Y., Chu, T. P., Chang, C. H., & Liu, H. C. (2023). Effectiveness of differentiated instruction on learning outcomes and learning satisfaction in the evidence-based nursing course: Empirical research quantitative. *Nursing Open*, *10*(10), 6794–6807. https://doi.org/10.1002/nop2.1926
13. London, D. A., & Royse, L. A. (2023). The Evidence Basis for Learning Theory and Technology in Surgical Skills Training. In *Journal of the American Academy of Orthopaedic Surgeons* (Vol. 31, Issue 12). https://doi.org/10.5435/JAAOS-D-23-00021
14. Lubis, W., Sagala, S., Saragih, A. H., & Sagala, G. H. (2021). Measuring valuable antecedents of instructional leadership in educational organisations. *International Journal of Management in Education*, *15*(1). https://doi.org/10.1504/IJMIE.2021.111815
15. Muchtar, Y., Aziz, M., & Rakib, M. (2018). Pengaruh Lingkungan Tempat Tinggal, Intensitas Pendidikan Ekonomi Keluarga, dan Pembelajaran Kewirausahaan Terhadap Minat Berwirausaha Mahasiswa (Studi di Fakultas Ekonomi Universitas Negeri Makassar). *Jurnal Economix*, *6*(2), 46–55.

International Journal of Current Science Research and Review
ISSN: 2581-8341
Volume 08 Issue 03 March 2025
DOI: 10.47191/ijcsrr/V8-i3-29, Impact Factor: 8.048
IJCSRR @ 2025
www.ijcsrr.org

16. Mukhibat, M. (2023). Differentiate Learning Management to Optimize Student Needs and Learning Outcomes in An Independent Curriculum. *QALAMUNA: Jurnal Pendidikan, Sosial, Dan Agama*, *15*(1), 73–82. https://doi.org/10.37680/qalamuna.v15i1.2386
17. Ndani, M. N. (2019). Parental involvement and family support in creating conducive preschool physical environments in Kiambu County, Kenya. *International Journal of Humanities and Social Science*, *5*(8), 128–135. www.ijhssnet.com
18. Rahmah, N. A., Vhalery, R., & Sefudin, A. (2024). The Impact of the Family Environment on the Academic Achievements of Students in a Classroom Setting. *Journal of Education: Development and Review (JEDAR)*, *01*(July), 79–83.
19. Rakib, M. (2018). Entrepreneurship Education Analysis and Its Effect on Entrepreneural Intentions ( a Study on Economics Education Students At Faculty of Economics in State University of Makassar ). *Proceeding*, *November*, 804–816.
20. Rosalina Hutbah Ritonga, H. (2024). The Application of Differentiated Learning in Improving Students' Learning Activeness and Creativity. *CAKRAWALA: Journal of Citizenship Teaching and Learning*, *1*(2), 31–39. http://aspublisher.co.id/index.php/cakrawala%0AE-ISSN
21. Ruben, G. (2013). Differentiated Instructional Strategies to Accommodate Students with Varying Needs and Learning Styles. *Journal of Chemical Information and Modeling*, *15*(2), 9–25.
22. Shengyao, Y., Salarzadeh Jenatabadi, H., Mengshi, Y., Minqin, C., Xuefen, L., & Mustafa, Z. (2024). Academic resilience, self-efficacy, and motivation: the role of parenting style. *Scientific Reports*, *14*(1), 1–14. https://doi.org/10.1038/s41598-024-55530-7
23. Smith, T. E., Sheridan, S. M., Kim, E. M., Park, S., & Beretvas, S. N. (2020). The Effects of Family-School Partnership Interventions on Academic and Social-Emotional Functioning: a Meta-Analysis Exploring What Works for Whom. *Educational Psychology Review*, *32*(2). https://doi.org/10.1007/s10648-019-09509-w
24. Wahyuni, S. (2023). The Implementation of Differentiated Learning in Merdeka Curriculum In Learning English at High School. *Journal of Applied Linguistics and English …*, *1*(01), 27–33. https://jurnal.unipasby.ac.id/index.php/jalle/article/view/8695%0Ahttps://jurnal.unipasby.ac.id/index.php/jalle/article/download/8695/5252
25. Wiseman, R., Fisher, D., Frey, N., & Hattie, J. (2024). The Distance Learning Playbook for Parents: How to Support Your Child's Academic, Social, and Emotional Development in Any Setting. In *The Distance Learning Playbook for Parents: How to Support Your Child's Academic, Social, and Emotional Development in Any Setting*. https://doi.org/10.4135/9781071838723

***Cite this Article: Ramadhani, A.R., Musa, C.I., Rakib, M., Najamuddin (2025). Different Learning, Learning Interests, and The Use of Technology in Learning on Economic Learning Outcomes: An Empirical Study with Family Support as Mediation on High School Students. International Journal of Current Science Research and Review, 8(3), pp. 1263-1274. DOI: https://doi.org/10.47191/ijcsrr/V8-i3-29***