



# The Influence of Teacher Competence on Student Learning Outcomes in Product, Creativity, and Entrepreneurship Subjects with Learning Discipline Mediation

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**Abstract:** The problem in this study is the learning discipline and student learning outcomes of class XI students at the SMK Muhammadiyah in Kuningan which are not optimal. This is shown from the scores of students who have scores below the KKM, this shows that student learning outcomes are still low. The purpose of this research is to find out the description of teacher competence, learning outcomes and learning discipline of Muhammadiyah Vocational High School students in Kuningan. The method used in this research is survey method and descriptive research and mediation method. The sample used was 191 class XI students at SMK Muhammadiyah in Kuningan. The results showed that the effect of teacher competence on learning outcomes was known. The results of testing and analysis showed that teacher competence was significant for learning outcomes with a significance value of 0.010 and a regression coefficient ( $c$ ) = 0.185; the effect of teacher competence on learning discipline it is known that the results of testing and analysis show that teacher competency is significant for learning discipline with a significance value of 0.030 and the regression coefficient ( $a$ ) = 0.157; Learning Discipline mediates the influence of Teacher Competence on Learning Outcomes, it is known that the results of testing and analysis show that teacher competence is significant for learning outcomes, after being mediated by learning discipline with a significance value of 0.031 and a regression coefficient ( $b$ ) = 0.191; The effect of Teacher Competence on Learning Outcomes is reduced ( $c'$  = 0.155 <  $c$  = 0.185) and significant 0.031 after being mediated by learning discipline. It can be concluded that this model is included in partial mediation or partial mediation occurs, meaning that learning discipline partially mediates the influence of teacher competence on learning outcomes.

**Keywords:** Learning Discipline; Learning Outcomes; Teacher Competence

## Introduction

Education is a crucial part of enabling children to grow and develop according to their potential (Pardede et al., 2024; Sudargini & Purwanto, 2020). Optimal education is believed to produce superior, intelligent, and high-achieving children (Yelfianita et al., 2023). Currently, parents, educators, education observers, and even the government are actively considering and addressing issues in education with the goal of

optimizing children's learning outcomes. This can be seen in the numerous educational institutions, from pre-schools to universities, which provide comprehensive facilities, a superior curriculum, professional teachers, and strict student discipline to ensure maximum success.

The learning process is the process of receiving information or stimuli from the environment (input) through the senses, such as the eyes and ears (Berliana & Andriani, 2025; Septiawan & Nandiyanto, 2022). This is

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then processed in the brain to produce output in the form of behavior that aligns with the learning objectives. Through the learning process, children can acquire information and knowledge they previously did not know. A learning process supported by competent teachers will enhance learning, with competent teachers, intellectual insight and a strong sense of responsibility are fostered, fostering discipline in teachers (Nisah et al., 2023; Surtini & Muhtar, 2024). Disciplined teachers will undoubtedly have a positive influence on student discipline in learning (Erita et al., 2024).

Discipline in learning can be defined as obedient, compliant, or orderly behavior in relation to rules in the classroom and in the learning environment (Dako et al., 2025; Dewi et al., 2021; Oktarian & Amaliyah, 2024). When teachers encourage students to be disciplined, this will undoubtedly improve their learning. This discipline empowers students to use their study time regularly and with discipline, thus hopefully influencing their academic success. This is in line with Suartini & Suarni (2024) opinion that good learning outcomes are achieved not only through intelligence but also through discipline in school and good behavior of each individual.

The following is the Mid-Semester Assessment (PTS) data for the Product, Creativity, and Entrepreneurship subject for grade XI at SMK Muhammadiyah 2 Kuningan.

**Table 1.** Results of the 11<sup>th</sup> grade PTS (Private Examination) at Muhammadiyah 2 Kuningan Vocational School

Class	Number of Students	>KKM	%	<KKM	%
XI TKR 1	20	7	35	13	65.00
XI TKR 2	16	5	31	11	68.75
Total	36	12	36	24	66.67

Based on pre-research observations at SMK Muhammadiyah 2 Kuningan, low learning outcomes remain a problem. This is evident in the low mid-semester assessment (PTS) scores of 24 students, or 66.67%, out of two classes with a total of 36 students. This indicates low student learning outcomes. This can be caused by various factors, including teachers' lack of variety in delivering material and their continued use of conventional methods, inappropriate learning media, and limited opportunities for students to ask questions. Many students still do not participate effectively in the learning process, skipping class, not completing assignments, and arriving late to class.

Student success in learning is influenced by many factors, including student motivation, teachers, facilities, curriculum, discipline, and many more (Rejeki, 2024). However, of these factors, only two are considered crucial and can impact learning outcomes: student

discipline and teacher competence. Discipline in learning is essential, as is students' understanding of all school regulations. School regulations serve as a means for students to be responsible and disciplined in various aspects. Aryadiningrat et al. (2023); Santosa et al. (2025) states that discipline is the training of the heart and character to ensure that all actions are always within the rules.

Teachers play a crucial role in learning in schools; the success or failure of learning depends on the teacher themselves (Nisa et al., 2022). To achieve optimal student life goals, teachers are needed to support their development. As we all know, humans, as social beings, need others in their development.

Teacher competence is the manifestation or realization of teacher potential, which must be developed (Bunga et al., 2025). Teachers are the spearhead of various innovations in educational development. As the leading providers, teachers are required to possess strong and reliable competencies to produce a generation with comprehensive and specific life skills. Teacher competence is the result of a teacher's professional education, which includes pedagogical competence, personality competence, social competence, and professional competence (Law No. 14/2005). Teacher competence must be developed beyond the actual concept of education. Without teacher competence, the concepts and approaches used in the classroom are of no value. If teachers master these four competencies, it is inevitable that changes in learning outcomes will occur.

## Method

The methods used in this study were survey, descriptive research, and mediation. The population was 367 students, with a sample size of 191 eleventh-grade students at Muhammadiyah Vocational High School in Kuningan.

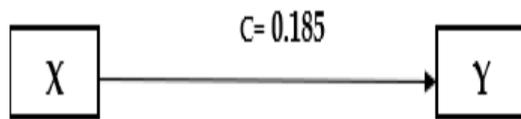
The data analysis used descriptive correlational analysis. By using descriptive correlational methods, this study will provide a clear picture of teacher competence, learning discipline, and learning outcomes, as well as the relationships between them. The collected data will be analyzed to determine the extent of the relationship between these variables and provide a deeper understanding of the phenomenon being studied. Descriptive research aims to test hypotheses or answer questions related to the object of study. Correlational research, on the other hand, aims to determine whether there is a correlation between the variables of teacher competence (X), learning discipline (M), and learning outcomes (Y). This analysis is used to determine the effect of teacher competence on student

learning outcomes and the mediation of learning discipline on teacher competence on student learning outcomes.

*Research Data Analysis*

*The Effect of Teacher Competence on Learning Outcomes*

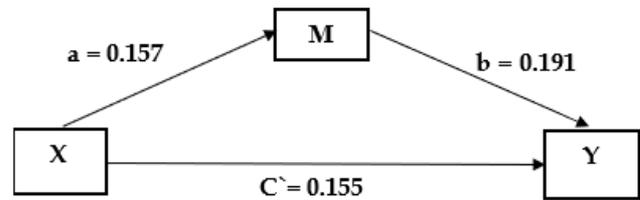
Based on the analysis and testing results, teacher competence has a direct, positive effect on learning outcomes. This indicates that the higher the teacher's competence, the higher the student's learning outcomes. The simple regression equation for the effect of teacher competence (Variable X) on learning outcomes (Variable Y) shows that teacher competence significantly influences learning outcomes, with a significance value of  $0.010 < \alpha = 0.050$  and a regression coefficient ( $c$ ) = 0.185.



**Figure 1.** The Effect of Teacher Competence on Learning Outcomes (Unmediated Model)

The results of the study indicate a suboptimal effect of teacher competence on student learning outcomes. This indicates that teachers lack comprehensive teacher competence indicators, or in other words, teachers have not demonstrated improved skills in developing learning. This is evident in the fact that some teachers still consider teachers the sole source of knowledge in the learning process and the limited use of learning media. The above facts indicate that the competencies possessed have not been fully implemented in the field. Teacher competence includes implementing an active and enjoyable learning process, explaining material in a structured manner, and conducting appropriate evaluations, resulting in a higher-quality and effective learning process. This is in line with the research findings of Pradja et al. (2023), which found that teacher competence, student motivation, and student learning styles all impact learning outcomes. Similarly, the research findings of Pahrudin et al. (2016) revealed several reasons why the learning process has not been running smoothly. One of these factors is the teacher's failure to implement student-centered learning. Consequently, the teacher's competencies have not been optimally applied, resulting in suboptimal learning outcomes.

*Learning Discipline Mediates the Effect of Teacher Competence on Learning Outcomes*



**Figure 2.** Schem of learning discipline data

Mediated Model of the Effect of Teacher Competence on Learning Outcomes through Learning Discipline. Based on testing and analysis, it was found that learning discipline mediated the effect of teacher competence on learning outcomes by 0.155, with a significance value of  $0.031 < 0.05$ . Furthermore, a direct effect of  $c'$  was found at 0.155, which is smaller than  $c = 0.185$ . The effect of teacher competence on learning outcomes decreased ( $c' = 0.185 < c = 0.155$ ) and was significant ( $0.031 < 0.05$ ) after being mediated by learning discipline. It can be concluded that this model is a partial mediation, meaning that learning discipline partially mediates the effect of teacher competence on student learning outcomes.

To determine the magnitude of the influence of teacher competence and learning discipline on learning outcomes, the coefficient of determination  $R^2_{yxm} = 0.070$ , or 7%. This means that the influence of teacher competency and learning discipline on learning outcomes is 7%. Therefore, it can be concluded that 7% of the learning outcome variable is influenced by teacher competency and learning discipline, while the remaining 93% is influenced by other variables not examined.

Furthermore, teacher competency also has a positive indirect influence on learning outcomes through learning discipline. This indicates that as teacher competency increases, supported by strong learning discipline, student learning outcomes will also improve. The research findings align with Mulyasa (2019) opinion that competency is a key component of standards, alongside the code of ethics of a profession and a specific supervisory system. This demonstrates the fundamental importance of teacher competency.

**Result and Discussion**

Behaviorist learning theory is a teaching in psychology that focuses solely on physical appearance and ignores the mental aspects of a person. Furthermore, behaviorism is understood to imply that individuals are not recognized as possessing their own intelligence, talents, interests, and feelings when learning. Learning

trains a person to do things automatically until they become habits.

Cognitive Learning Theory according to Piaget, a pioneer of constructivism. His numerous contributions are often used as references in discussions of cognitive development. Piaget's individual cognitive development encompasses at least four phases: sensorimotor, preoperational, concrete operational, and formal operational. Another Piaget's idea, regarding the reconstruction of individual knowledge, involves accommodation and assimilation.

Furthermore, Robert Gagne, in his Information Processing Theory, argues that learning is crucial to individual student development. The learning process contributes to student development. Learning is a series of processes involving information acquisition, which are then processed and transformed into learning outcomes. During learning, data processing and interactions occur between the individual's internal and external conditions. These two conditions are interrelated where internal conditions are conditions within the individual that are needed to grow learning outcomes while external conditions are external influences in the form of the environment that affect learning outcomes. According to Gagne there are eight phases of the learning process, the first phase is motivation that exists within the individual, the second is the individual's understanding phase, the third is the acquisition phase from the previous phase, the fourth is the information storage phase in memory, the fifth is the recall phase when needed, the sixth is the generalization phase, the seventh is the treatment phase and the last is the feedback phase.

In learning, learning outcomes are often used as a measure of a person's mastery of a subject. Learning outcomes, when viewed from the meaning of the word, consist of "results" and "learning." The outcome (product) is the benefit obtained through activities or processes that produce functional changes in the input.

Learning is the stage of changing all individual behaviors that are compatible with each other, encompassing cognitive processes that are the result of a series of experiences occurring in the environment. Learning outcomes according to experts are as follows: according to Gagne and Briggs, learning outcomes are the results after participating in the learning process in the form of a set of abilities; Sudjana (2010) argues that learning outcomes are essentially changes in behavior, encompassing cognitive, affective, and psychomotor aspects, resulting from the learning process; and according to Hristov et al. (2023), learning outcomes are those that occur after learning that aligns with learning objectives.

Referring to the above definition, learning outcomes can be concluded as the result of a series of learning activities that have been carried out in accordance with objectives, including changes in cognitive knowledge, attitudes, behavior, and psychomotor skills.

According to Slameto (2015), several factors, both internal and external, influence student learning outcomes. Internal factors include students' physical and psychological aspects. Physical factors relate to students' health and five senses, which can influence the learning process and achieve optimal learning outcomes. Psychological factors include students' intelligence, attitudes, skills, and motivation.

On the other hand, external factors consist of the social and non-social environment. The social environment encompasses the school environment, including teachers, staff, and classmates, as well as the community environment, which can influence student learning outcomes. Meanwhile, the non-social environment encompasses factors such as school buildings, distance between home and school, weather conditions, and learning equipment. Overall, these internal and external factors play a significant role in influencing student learning outcomes.

Teachers are a crucial component in the educational process. Their role is central to efforts to change education and improve schooling. It is widely accepted that teachers are a crucial component of education. Without competent teachers, any efforts to improve education will likely fail. Furthermore, according to Fathurrohman & Sutikno (2007), teacher competence is a teacher's ability to carry out their duties and obligations with a full sense of responsibility.

According to Muhibin Syah (2004), a number of basic skills a teacher must possess to improve the success of the teaching and learning process. Several aspects need to be considered, such as mastery of the material, which includes managing learning materials according to the curriculum and using learning applications. Furthermore, teachers must be able to plan teaching objectives, apply appropriate teaching methods, and implement teaching and learning programs effectively. Classroom management is also crucial, including reorganizing and creating a harmonious learning environment. The use of learning media also requires attention, including selecting, using, managing, and developing simple learning media. Furthermore, teachers need to have a basic understanding of education, be able to manage teaching and learning relationships, and conduct student educational assessments and evaluate teaching performance. Teachers must also be familiar with and utilize consultation and counseling services, and have an

understanding of school administration. Furthermore, teachers need to understand and apply principles and interpret training outcomes for educational purposes. By mastering these skills, teachers are expected to improve the effectiveness of the teaching and learning process.

Indicators based on the Teacher Competency Model of PERDIKJEN GTK No. 6565/B/GT/2020 represent teacher competency and educator leadership, forming a fully integrated competency. Teacher professional development is carried out in stages and continuously according to needs. Essentially, teachers, as educators, are tasked with educating, teaching, guiding, directing, and training students.

Furthermore, this regulation also stipulates that teachers should develop their profession through education, training, and training. Education, in this case, refers to professional teacher education conducted professionally by universities. Education and training are activities aimed at improving competency in carrying out their duties effectively.

These teacher competencies are structured based on a model structure, from developing teacher competency levels to the most advanced category. This tiered model allows each teacher to independently reflect on their own categorization, and the competency levels serve as an effort to assist teachers in their development.

One of the negative cultural traits inherent in Indonesian society is "rubber time." This term is often used during events or appointments. Time delays always accompany every activity and event. Discipline is merely a beautiful phrase that can be difficult to implement.

The word "discipline" is often interpreted as obedience or compliance with rules. Discipline is an individual's attitude toward following the rules that apply within a social or organizational setting. Discipline can also be defined as training to develop self-discipline and behave in an orderly manner.

Discipline is the way a person obeys the rules without expecting any reward. Discipline also has several meanings, including obedience and compliance with the orders of a leader (Marcela & Hidayat, 2023). Discipline aims to develop attitudes that foster self-control and orderly behavior (Adika & Dafit, 2023). Discipline is crucial in achieving educational goals, where discipline is a fundamental factor in determining the quality of student learning.

Arikunto (2018) explains the discipline he studies by dividing discipline into several indicators: first, disciplined behavior in the classroom as a learning environment; second, discipline outside the classroom and in the school environment; and third, disciplined behavior in the community, especially the home environment. Furthermore, Tu'u (2004) argues that

indicators of student learning discipline include a shift in behavior or a change in students' learning patterns in following and adhering to school regulations. These indicators include the ability to manage study time, diligently studying regularly, paying close attention during class, and being orderly in class. Meanwhile, according to Ayatullah (2020), indicators of learning discipline are divided into three types: first, adherence to study time, second, obedience and compliance with school assignments, and third, obedience and compliance with school arrival and departure times. Based on these indicators, teachers are expected to be the driving force in guiding students to be disciplined so that the desired learning outcomes can be achieved optimally and maximally.

Etymologically, entrepreneurship comes from the words *wira* and *privat*. *Wira* means brave, main, or strong. *Pribadi* is a combination of two words: *swa*, meaning "self," and *sta*, meaning "private," which can be interpreted as maintaining one's own strength. According to Herdiana (2013), considering this etymological meaning, it is clear that entrepreneurship does not mean, as some have suggested, a private company, side business, entrepreneur, or similar.

According to Okpara (2007), entrepreneurship is a creative and innovative resource in seeking success. Essentially, entrepreneurship is the ability to think creatively and creatively, creating opportunities through innovative thinking and a creative spirit, thus creating new opportunities for life's challenges. Mulyani (2018) states that entrepreneurship education aims to develop students' emotional, social, creative, and intellectual aspects holistically and optimally. Furthermore, according to Suherman (2010), the goal of entrepreneurship education is to equip students with managerial skills, product processing techniques, and self-development. These three main elements emphasize collaboration skills.

Entrepreneurship education, which is included in the 2013 curriculum in schools, includes the subject "Products, Creativity, and Entrepreneurship." In accordance with Indonesian Minister of Education and Culture Regulation No. 07/D.D5/KK/2018, this subject is mandatory because it is expected to enable students to develop their skills and develop an entrepreneurial spirit after graduation. This is the government's hope to alleviate high unemployment through the development of entrepreneurial skills and abilities after graduation.

Based on data analysis of 191 students, several statistically significant results were found: Direct Effect of Teacher Competence on Learning Outcomes: There is a positive and significant effect of teacher competence on student learning outcomes, with a regression coefficient (c) of 0.185 and a significance value of 0.010 (less than

0.05). This proves that the higher the teacher's competence, the better the learning outcomes achieved by students. Effect of Teacher Competence on Learning Discipline: Teacher competence was also shown to have a positive and significant effect on student learning discipline, with a regression coefficient ( $a$ ) of 0.157 and a significance value of 0.030. This means that competent teachers are able to create a learning environment and process that encourages students to be more disciplined. Mediating Role of Learning Discipline: Learning discipline was shown to partially mediate the effect of teacher competence on learning outcomes. This is demonstrated by several findings: after learning discipline was included as a mediating variable, the direct effect of teacher competence on learning outcomes decreased from 0.185 to 0.155 ( $c' < c$ ); the indirect effect (through learning discipline) remained significant. This model explains that teacher competence not only has a direct impact but also indirectly improves learning outcomes by first shaping students' learning discipline; and contribution of Influence (Coefficient of Determination  $R^2$ ): Teacher competence and learning discipline together only explain 7% of the variation in student learning outcomes. The remaining 93% is influenced by other factors not examined in this study.

## Conclusion

Based on the results of the analysis and discussion that have been presented previously, the following conclusions can be drawn: Teacher Competence is included in the moderate or sufficient criteria; Learning Discipline is included in the moderate criteria; and Learning Outcomes are included in the moderate criteria; Teacher Competence has a positive effect on Learning Outcomes. This means that the higher Teacher Competence, the higher Learning Outcomes will be; and Learning Discipline mediates Teacher Competence on student Learning Outcomes. Teacher competence influences learning outcomes, which can also be through learning discipline which has a partial effect on learning outcomes.

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## Conflicts of Interest

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