



# The Influence of Power Point Learning Media on Chassis Technology Subjects at SMKN 5 Surabaya

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## ABSTRACT

SMK Negeri 5 Surabaya is one the partners of the State University of Surabaya as one of the places for the implementation of the Introduction to Learning Environment (PLP) program, especially in the Department of Automotive Engineering, Management and Maintenance (TMPO). In vocational schools, especially in SMK Negeri 5 Surabaya, is very important to have a good teaching process so that the material can be delivered by teacher well received by students. The results of the observations of researchers in Class XI TMPO SMKN 5 Surabaya show that students are less interested in attending Chassis Technology education without teaching methods or not using teaching media, making students bored and tend not to pay attention to material expenditure. material taught by the teacher. From the research that has been done, it is expected that power point media can affect the learning interest of class XI TMPO SMKN 5 Surabaya students so that their learning outcomes increase. This research was conducted at SMKN 5 Surabaya, Surabaya City on 19 September 2022/2023. The population in this study were 28 students of class XI TMPO SMKN 5 Surabaya. This research is experimental research using a pre-experimental design with pre-test and post-test of one group. From the results of the pre-experimental research conducted, it can be concluded that the use of power point teaching media in class XI TMPO SMKN 5 Surabaya changes in results between before and after using power point media as seen from the average pre-test results. value 42.46 and post-test 76.89.

**Keywords:** *Media, Experiment, Powerpoint.*

## 1. INTRODUCTION

SMK Negeri 5 Surabaya is one of the partners of Surabaya State University as one of the places where the Introduction to Learning Environment (PLP) program is implemented, especially in the Automotive Management and Maintenance Engineering (TMPO) department. The PLP program is expected to be able to prepare students for the means to create educators who have pedagogic, personal, social and professional competence, are ready to take up education, and plan and produce educators and prospective teachers who have the attitudes, values, knowledge and skills of educators. professional one. In vocational education, especially at SMK Negeri 5 Surabaya, there needs to be a good learning process, so that the material presented by educators can be well received by students, because education is one of the most influential factors for the progress of a country, and includes efforts to realize learning process that is active

learning, so that it can grow self-ability.[1] and build and develop capabilities [2].

Good learning is a teaching and learning process that makes students and learning effective by delivering material using a syllabus or curriculum so that students understand what is being taught [3]. Rusman mentions "learning is a communication interaction between learning resources, and teachers as presenters, as well as students as students[4]. In improving the quality of teaching and learning, educational institutions (schools) are an important means of achieving this. Including the Vocational High School (SMK) is an educational institution that has the goal of producing competent, high-quality skills at a level acceptable to the world of work/industry. As stated in the Law of the Republic of Indonesia Number 20 of 2003 which contains the National Education System in article 15 that vocational education is an educational institution that produces students who are prioritized especially to work in a

particular field. Vocational education is education that prepares the realization of skills, behavior, attitudes, work culture and appreciation of the fields needed by the industrial world [5].

Vocational education is very important to have a good learning process so that the material delivered by the teacher can be understood by students [6][7]. In accordance with Permendikbud Number 22 of 2016, student learning outcomes are divided into three types including cognitive, affective, and psychomotor. So that the learning process is able to realize quality personal qualities that have attitudes, knowledge, and skills according to learning outcomes[8]. Sadiman [9] revealed that each method of conveying concepts can determine student understanding. The way the teacher delivers the material can also affect how the material is delivered to students. Teachers are expected to become competent educators. Including teacher competencies including pedagogic competence, namely teachers are required to practice various models, methods, approaches, strategies, and techniques in teaching [10]. Therefore, learning model innovation is urgently needed to create new learning models that provide better learning outcomes and improve time efficiency and learning effectiveness towards change. With this incident students must focus on the topic presented by the teacher.

Innovation is one thing that needs to be applied to create attractive media. One of the most relevant innovations in learning today is virtual media that can be accessed from anywhere [11].Miarso in [12] learning media, namely everything that is used to convey advice that stimulates the views, intuition, concern, and interest of students so that it can motivate the learning process.

Learning media is a consistent presentation of information and can provide relaxed and fun learning conditions [13][14], so that you can achieve the desired learning goals. has the ability to stimulate a student's interest in learning, presenting objects directly, making abstract things concrete, providing common perceptions, overcoming time barriers [15]. Learning media is part of the shared learning component (educational process, method, means, time) [16]. Which is used for learning efficiency. This research is a PowerPoint format learning media. PowerPoint media This is an educational tool Used to bring science stuff to students from experimental groups. power point has many advantages to use as learning media [17] such as can be used for all class sizes, can be use either online or offline class. Provides the possibility of face-to-face and observing student responses, can present various combinations of clipart, picture, colour, animation and sound so as to make students more interested, can be used repeatedly. As a learning media, power point has many positive impacts to increase learning outcomes, motivation, and the effectiveness a class to reach the goal of learning [18][19].

PowerPoint media is an interesting medium and has always been a mainstay of learning media used by vocational school educators [20]. The influence of the use of PowerPoint media on learning outcomes variables at SMK Negeri 3 Malang on 2019 produces a positive influence. Evidenced by the results of the calculation of the correlation test which states that there is 81.18% influence [21]. In 2020 PowerPoint media increased the average score of student learning outcomes at SMK Negeri 3 Surabaya seen from cycle I, namely 72 with a class achievement percentage of 64% to 85 with a class achievement percentage of 75% in cycle II [22]. Power point media influences learning outcomes by looking at the percentage of classical absorption and mastery of classical learning which has increased in the basic subjects of mechanical engineering design in Class X TMI 2 at SMKN 1 Tunjung Teja, Serang Regency [23]. The implementation of the Problem Based Learning model with PPT media can increase student activity and learning outcomes in class XI linear program material at SMK Muhammadiyah 2 North Klaten [24]. There is a significant influence on student learning outcomes of XI OTKP SMK NEGERI 1 PATUMBAK with interactive hyperlink power point media and role-playing learning models that have increased from an average value of 65.166 to 83.200 [25].

The results of the observations of researchers in class XI TMPO SMKN 5 Surabaya show that students are less interested in participating in Chasis Technology learning without using learning media which results in students being bored and tend not to pay attention to the material conveyed by the teacher. Sudjana [26] says that "learning outcomes are skills that a person has after having experience during the learning process". Jihad and Haris [27] stated "learning outcomes are the transitions in student behavior manifested after carrying out learning activities that are synchronous with learning objectives".

The purpose of this study was to determine the effect of the use of Powerpoint media on the learning interest of class XI TMPO students at SMKN 5 Surabaya resulting in an increase in learning outcomes in Chasis material.

## 2. METHOD

This research was conducted at SMKN 5 Surabaya, Surabaya City on September 19 for the 2022/2023 school year. The population in this study were 28 students of XI TMPO SMKN 5 Surabaya for the academic year 2022/2023. This study belongs to the pre-experimental type using a pre-experimental design with one group pre-test and post-test. Sugiyono [28] argues that "experiments are a method of research that aims to determine the effect of certain treatments on others in controlled circumstances". Wiersma [29] said that the basic concept of an experiment is something that is tested, that is, one or more independent variables are set

and controlled to find out the difference. The independent variable is called the experimental variable.

The purpose of this research was to understand the effect of using PowerPoint media on student interest and learning outcomes between before learning (pre-test) and after learning (post-test) [30]. The pre-test and post-test are research designs by comparing the test results after and after learning in an experimental test group which is then concluded through a description of the data on student interest in the material for class XI TMPO chassis.

The research was carried out on the grounds that the school had the facilities and infrastructure to use PowerPoint media, but due to the lack of knowledge of some teachers who were influenced by several factors, the facilities and infrastructure for using PowerPoint media were not used.

The analysis carried out included the type of qualitative descriptive analysis of the acquisition of pre-test and post-test scores that had been carried out with the following description.

### 3. RESULTS AND DISCUSSION

#### 3.1. Prepare power point media with axle system material

Preparation of a powerpoint with axle material referring to several books explaining about maintaining an axle system for class XI TMPO.

1. Arrange Pre-Test and Post-Test instruments, Preparation of Pre-Test and Post-Test instruments with several questions that utilize Google Forms as a platform for providing testing to students.
2. Retrieval of Pre-Test data, Pre-Test data was taken with instruments from Google Form before learning the axle system using PowerPoint media.
3. Delivery of axle system material, Submission of axle system material is carried out in class XI TMPO using powerpoint.
4. Retrieval of Post-Test data, Post-Test data was taken using instruments from Google Form after learning the axle system using PowerPoint media.
5. Perform data processing, Data processing is done by giving the results of the pre-test and post-test by entering the value data into Microsoft Excel for data analysis using SPSS.
6. Perform data analysis, perform data analysis using SPSS statistics version 25.

**Table 1.** Descriptive Analysis.

		Statistic	
		PRE-TEST	POST TEST
N	Valid	28	28
	Missing	0	0
Mean		42.46	76.89
Std. Error of Mean		2.161	1.245
Median		42.00	75.00
Mode		54	72
Std. Deviation		11.433	6.590
Variance		130.702	43.433
Range		50	27
Minimum		10	66
Maximum		60	93
Sum		1189	2153

The results showed that of the 28 test subjects/students the minimum score obtained during the pre-test was 10, the maximum score in the post-test was 60. The minimum score during the pre-test was 66, the maximum value was 93. And the average result was the pre-test mean was 42.46 and the post-test was 76.89. As well as the medium value obtained during the pre-test was 42.46 while the post-test was 76.89.

**Table 2.** Normality Test.

Normality Test				
Class		Kolmogorov-Smirnov <sup>a</sup>		
		Statistic	df	Sig.
Result	PRE-TEST	.129	28	.200*
	POST-TEST	.149	28	.115
*. This is a lower bound of the true significance.				
a. Lilliefors Significance Correction				

The normality test data shows a number (sig.) of 0.185 which is greater than 0.05, so that the research data is normally distributed.

**Table 3.** Paired Sample T Test.

T Test		
		Sig. (2-tailed)
Pair 1	PRE-TEST - POST TEST	.000

### 4. CONCLUSION

Based on the pre-experimental research that has been carried out, it can be concluded that the use of PowerPoint learning media in class XI TMPO SMKN 5 Surabaya has a change in results between before and after testing using PowerPoint media is observed from the acquisition of the pre-test average score of 42 .46 and post-test 76.89.

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