

The Effect of Google *Classroom* Use on Learning Media Design Ability and Teacher Professionalism at SMPN 3 Mandau

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A B S T R A C T

This study aims to determine the effect of using Google Classroom on the ability to design learning media and teacher professionalism at SMPN 3 Mandau. The method used is a quantitative approach with a quasi-experimental research design. The population in this study were 20 teachers at SMPN 3 Mandau, sampling was carried out using the total sampling technique. Data were collected through observation sheets distributed to 20 teachers, consisting of 10 observation aspects for the variable of the ability to design learning media, and 15 observation aspects for the variable of teacher professionalism. The results showed that the use of Google Classroom had a significant positive effect on the ability to design learning media with a coefficient value of $0.000 < 0.05$. In addition, the use of Google Classroom has also been shown to increase teacher professionalism with a coefficient value of 0.301 and a significance of $0.002 < 0.05$. Based on these findings, it can be concluded that the use of Google Classroom can improve the ability to design learning media and teacher professionalism, so it is expected to be a reference in the development of technology-based learning in schools. This research contributes to the development of teacher competencies in the digital era and encourages policies that support the use of technology in learning.

Keywords: *Influence, Google Classroom, Design, Learning Media, Educational Technology, Teacher Professionalism*

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INTRODUCTION

The development of information and communication technology in the 21st century has brought major changes to the education system, especially in terms of the learning process that requires teachers to be able to adapt to digital advancements. Professional teachers in the digital era must be able to utilize new technology in teaching and learning activities (KBM) and integrate it into the learning process effectively and

innovatively. Teacher professionalism in the context of modern education is not only measured by pedagogical ability, but also by the extent to which teachers are able to use digital technology as a learning tool. Wardoyo et al. (2017) states that the professionalism of teachers includes mastery of the subject matter, understanding of scientific concepts and mindsets that support the subject, the ability to develop subjects creatively, and the use of information and communication technology for self-development.

Teachers' skills in utilizing digital-based learning media are one of the important indicators of professionalism. According to Yurna (2023), improving teacher competence accompanied by the use of digital technology can produce good learning quality and help achieve the expected graduate competency standards. In line with this opinion, Solekhat (2023) emphasized that in carrying out information technology-based learning, teachers are required not only to be able to use, but also to design interactive learning media according to the characteristics and level of development of students. The ability to design digital media is a concrete form of teachers' professionalism in implementing creative and student-centered 21st century learning.

Learning media plays an important role as a means of communication in teaching and learning activities. Nofriyandi et al. (2021) Explains that learning media is a tool, material, or condition used to effectively distribute learning messages. Suryani & Oktaviana (2018) added that in the development of learning media, a systematic design is needed in order to achieve optimal learning quality. However, the reality on the ground shows that learning media is still often ignored by some teachers. Rahma et al. (2024) mentioning various reasons that cause this, such as limited time to make teaching preparations, difficulty finding the right media, limited costs, and lack of skills in using technological devices. In fact, if teachers have adequate competence, these obstacles can be overcome through creativity and innovation in designing simple learning media that are interesting and contextual.

Although the modern era of education demands the use of technology in learning, there are still many teachers who have not been able to optimize its use. Lutfi et al. (2023) found that many teachers have not made the most of digital learning platforms, such as *Google Classroom*, due to the lack of knowledge and skills in operating the available ICT devices.

Based on the results of observations at SMPN 3 Mandau, some teachers have used *Google Classroom* in the teaching and learning process, but its implementation has not been maximized. Some teachers still use conventional methods and have not been able to utilize digital features optimally. This shows that teachers' ability to design digital learning media and professionalism in the use of technology still needs to be improved. The main obstacles found at SMPN 3 Mandau include the lack of collaboration between teachers in sharing good practices in the use of technology, lack of motivation to learn new innovations, and limited experience in designing digital learning media. In addition, some teachers do not have awareness of the importance of improving

professional competence based on digital technology. This condition has an impact on the low quality of learning media innovation and a less interactive learning process.

One of the learning platforms that is widely used to support digital learning is *Google Classroom*. Ahmad et al. (2020) explains that *Google Classroom* is an application developed by Google to create virtual classrooms that allow learning interactions without space and time limits. According to Ruswan (2024), this platform provides convenience for teachers to compile materials, share assignments, and monitor student learning outcomes without having to meet face-to-face. Sadikin et al. (2020) adding that the main objective *Google Classroom* is to streamline the process of sharing files between teachers and students by integrating Google Drive, Docs, and various other features, so that the efficiency of the learning process increases.

Further, Rahma et al. (2024) emphasized that the use of good and effective digital technology can facilitate information search, improve teachers' life skills, and help in the preparation of quality learning plans. Research results Halifah & Sukmawati (2021) It shows that the use of digital media helps teachers in providing learning content that is in accordance with students' level of understanding while improving teacher-student interaction in the classroom. Usage *Google Classroom* It will consistently improve teachers' ability to design digital learning media that is in accordance with the characteristics of the material and the needs of students. Ridoh et al. (2024) also confirms that the use of *Google Classroom* can be a means to improve teachers' professionalism through online training and professional collaboration, so that teachers can continue to develop pedagogic and technological skills.

Based on this exposure, it can be concluded that the use of *Google Classroom* has great potential to improve teachers' ability to design learning media and strengthen professionalism in the context of digital learning. However, at SMPN 3 Mandau, the implementation is still not optimal. This is the basis for further research on the extent of the influence of *Google Classroom* use on learning media design skills and teacher professionalism. Therefore, this study was conducted with the aim of analyzing the relationship and influence of the use of *Google Classroom* on the ability to design learning media and improve the professionalism of teachers at SMPN 3 Mandau.

METHODS

This study uses a quantitative method with a pseudo-experiment method (*quasi experiment*) with design *One Group Pretest-Posttest Design*. According to Sugiyono (2019), experimental research methods are research methods used to find the effects of certain other treatments under controlled conditions. The research population is all teachers of SMPN 3 Mandau which totals 20 people, with saturated sampling techniques so that the entire population is used as a sample. The research instrument is in the form of a Likert scale questionnaire that has been declared valid and reliable through a validity test *Pearson Product Moment* and reliability test *Cronbach Alpha* and observation sheets. The



data analysis technique included a prerequisite test (normality and homogeneity test), followed by a hypothesis test using a t-test at a significance level of 0.05 to determine the partial and simultaneous influence between variables, with data processing assisted using the SPSS program.

FINDINGS AND DISCUSSION

Findings

The results of the study on the influence of the principal's example on the discipline and work motivation of teachers at SMPN 5 Mandau were carried out with a prerequisite test in the form of normality and homogeneity. Normality testing was performed with the help of IBM SPSS Statistic 25 using *the Shapiro wilk method*. The results of the normality test tested from the data on the ability to design learning media, and the professionalism of teachers at SMPN 3 Mandau are as follows:

Table 1. Normality Test of Media Design Ability

		Tests of Normality					
		Kolmogorov-Smirnova			Shapiro-Wilk		
GRADES	DATA	Statistic	df	Say.	Statistic	df	Say.
	PRETEST DESIGN ABILITY	.264	20	.071	.865	20	.060
	POSTTEST DESIGN ABILITY	.200	20	.034	.929	20	.147

a. Lilliefors Significance Correction

Based on the table above, it is explained that the results of the calculation of *the test of normality* on the research variable of media design ability show the *value of Asymp. Sig. (2-tailed)* the significance of *the pretest* is 0.060 and *the posttest* is 0.147 where the value is > 0.05 . So it can be concluded that the data is normally distributed. The test of teacher professionalism can be seen in the following table:

Table 2. A Teacher's Professionalism Test

		Tests of Normality					
		Kolmogorov-Smirnova			Shapiro-Wilk		
GRADES	DATA	Statistic	df	Say.	Statistic	df	Say.
	TEACHER PROFESSIONALISM PRETEST	.181	20	.084	.884	20	.081
	POSTTEST TEACHER PROFESSIONALISM	.236	20	.075	.901	20	.093

a. Lilliefors Significance Correction

Based on the table above, it is explained that the results of the calculation of *the test of normality* on the teacher's professional research variables show that *the value of Asymp. Sig. (2-tailed)* has a significance of *the pretest* of 0.081 and *the posttest* of 0.093 where the value is > 0.05 . So it can be concluded that the data is normally distributed.

The Homogeneity Test is a test to see whether the data is distributed homogeneously or not. The homogeneity test in this study can be seen in the following table:

Table 3. Homogeneity Test of Variables X, Y1 and Y2

		Test of Homogeneity of Variances			
		Levene Statistic	df1	df2	Sig.
LEARNING MEDIA	Based on Mean	2.275	5	13	.108
DESIGN ABILITY	Based on Median	1.616	5	13	.224
	Based on Median and with adjusted df	1.616	5	7.923	.261
	Based on trimmed mean	2.253	5	13	.111
TEACHER PROFESSIONALISM	Based on Mean	4.245	5	13	.250
	Based on Median	1.512	5	13	.253
	Based on Median and with adjusted df	1.512	5	4.870	.333
	Based on trimmed mean	4.018	5	13	.250

Source: Processed data of researchers, 2025

From the table above, it can be seen that the *value of the Based of Mean* ability to design learning media is 0.108 which means it is greater than 0.05. The teacher's professionalism has a sig value of 0.250. This value is greater than the sig value of 0.05 that has been set. So it can be stated that the data is distributed homogeneously.

After going through the prerequisite test with the normality and homogeneity test, the hypothesis test can be used. The hypothesis test used in this study is a parametric statistical test, namely *the Paired Sample T-test* because it comes from two interrelated variables. This test is used to find out whether or not there is an average difference between paired (related) samples. The data used is usually on an interval or ratio scale. The following are the results obtained from the *Paired Sample T-test* as shown in the following table 4:

Table 4. Paired Samples Test Media Design Ability

		Paired Samples Test					t	df	Sig. (2-tailed)
		Paired Differences			95% Confidence Interval of the Difference				
		Mean	Hours of deviation	Std. Error Mean	Lower	Upper			
Pair 1	PRETEST - POSTTEST MEDIA DESIGN ABILITY	-7.000	15.252	3.411	-14.138	.138	3.052	19	.000

In the table above, the result is a significance value of 0.000. Because the value of sig. $0.000 < 0.05$, there is a significant influence between the use of *Google Classroom* on the ability to design learning media. It can be seen that the value of sig. $(0.000 < \alpha (0.05))$, then H_0 is rejected and H_1 is accepted Based on the table, it can be seen that the value of T_{cal} is 4.085, this value is greater than T_{table} of 3.052. $T_{calculated} > T_{table}$ ($3,052 > 2,093$) so

that the alternative hypothesis (H_a) is accepted, and the null hypothesis (H_0) is rejected. This means that there is a significant influence between the use of *google classroom* on the ability to design learning media. The hypothesis test of teacher professionalism can be seen in the following table:

Table 5. Paired Samples Teacher Professionalism Test

		Paired Differences					t	df	Sig. (2-tailed)
		95% Confidence Interval of the Difference							
		Mean	Hours of deviation	Std. Error Mean	Lower	Upper			
Pair 1	TEACHER PROFESSIONALISM PRETEST - TEACHER PROFESSIONALISM POSTTEST	-10.050	12.555	2.807	-15.926	-4.174	3.580	19	.002

In the table above, the result is a significance value of 0.000. Because the value of sig. $0.002 < 0.05$, there is a significant influence between the use of *Google Classroom* on teacher professionalism. It can be seen that the value of sig ($0.002 < \alpha (0.05)$), then H_0 is rejected and H_1 is accepted Based on the table, it can be seen that the value of T_{cal} is 3.580, this value is greater than T_{table} of 3.580. $T_{\text{calculate}} > T_{\text{table}}$ ($3.580 > 2.093$) so that the alternative hypothesis (H_a) is accepted, and the null hypothesis (H_0) is rejected. This means that there is a significant influence between the use of *google classroom* on teacher professionalism.

Discussion

This research basically determines the influence of the use of *google classroom* on the ability to design learning media and teacher professionalism. Data collection was carried out using validated questionnaire sheets and conservation sheets. The variable of the ability to design learning media uses 10 observed statements. The variables of teacher professionalism at SMPN 3 Mandau used 15 items of internal statements that were observed.

Based on the results of the hypothesis test, the results obtained a significance value of 0.000. Because the value of sig. $0.000 < 0.05$, there is a significant influence between the use of *Google Classroom* on the ability to design learning media. It can be seen that the value of sig ($0.000 < \alpha (0.05)$), then H_0 is rejected and H_1 is accepted Based on the table, it can be seen that the value of T_{cal} is 4.085, this value is greater than T_{table} of 3.052. $T_{\text{computes}} > T_{\text{table}}$ ($3.052 > 2.093$) so that the alternative hypothesis (H_a) is accepted, and the null hypothesis (H_0) is rejected. This means that there is a significant influence between the use of *google classroom* on the ability to design learning media

Based on these results, it can be concluded that the majority of teachers at SMPN 3 Mandau have the ability to design learning media in the Good category. This shows that most of the teachers of SMPN 3 Mandau are skilled enough in designing learning media to support the teaching and learning process. These results are in line with the opinion of several previous researchers. According to Alim et al. (2020) *Google Classroom* provide space for teachers to be more creative in designing digital learning materials, because *platform* It supports various forms of media such as videos, images, and interactive documents. With these facilities, teachers are encouraged to develop more innovative learning media. In addition, research by Fauzi & Khusuma (2020) also indicates that the use of *Google Classroom* Improving teachers' skills in designing digital learning content, because teachers are required to adapt learning materials into an online format that is more attractive and easily accessible to students. Although the regression coefficient value shows a positive relationship, the magnitude of the influence given is 0.035 indicating that the effect is relatively low. That is, despite the use of *Google Classroom* Contributing to the improvement of learning media design skills, there are other factors that may also play a role, such as media design training, teaching experience, and teachers' intrinsic motivation. In line with opinion Revelation (2022) emphasizing the need for other support such as more intensive training in digital media creation.

These findings reinforce the concept that the use of technology-based learning platforms such as *Google Classroom* can improve teachers' skills in designing learning media. As stated by Noble (2022), teachers' competence in designing digital-based learning will further develop if supported by the use of platforms that facilitate communication, collaboration, and effective management of learning resources. Research conducted by Zainuddin & Attaran (2022) also found that the use of *Google Classroom* Contribute positively to teachers' skills in developing interactive and technology-based teaching materials. This is because *Google Classroom* Provides flexibility in managing various learning media formats such as videos, interactive quizzes, and multimedia presentations. Thus, the results of this study support the importance of the use of *Google Classroom* in strengthening learning media design skills, as well as emphasizing the need for continuous training and coaching for teachers so that they are more proficient in the use of educational technology.

The hypothesis test showed a significance value of 0.000. Because the value of sig. $0.002 < 0.05$, there is a significant influence between the use of *Google Classroom* on teacher professionalism. It can be seen that the value of sig ($0.002 < \alpha (0.05)$), then H_0 is rejected and H_1 is accepted Based on the table, it can be seen that the value of T_{cal} is 3.580, this value is greater than T_{table} of 3.580. $T_{calculated} > T_{table}$ ($3,580 > 2,093$) so that the alternative hypothesis (H_a) is accepted, and the null hypothesis (H_0) is rejected. This means that there is a significant influence between the use of *google classroom* on teacher professionalism.

This indicates that there is a positive influence between the use of *Google Classroom* and the professionalism of teachers. This means that the higher the usage *Google Classroom*, then the level of professionalism of teachers will also increase. These results are supported by previous research. According to Nugroho & Cahyo (2021) Integration *platform* in the learning process, such as *Google Classroom*, able to encourage teachers to develop their professional skills, including in lesson planning, classroom management, and learning evaluation. This is because the use of technology requires teachers to be more adaptive, creative, and skilled in implementing learning strategies that are in accordance with the times.

According to Supriadi & Wahyuni (2023) use of digital media such as *Google Classroom* Contribute to improving teachers' professional competence, especially in the aspect of mastery of teaching materials and the use of information technology to enrich the learning process. From the point of view of teacher professionalism theory, as stated by Hammond (2020) Teacher professionalism is not only characterized by mastery of materials and methods, but also the ability to adapt to changes, including the use of new technologies in learning. In this context, the use of *Google Classroom* It is one of the important indicators in strengthening the professionalism of teachers in the digital era. Although the regression coefficient shows a positive relationship, a value of 0.301 indicates that the effect is moderate. Thus, in addition to the use of *Google Classroom*, there are other factors that also contribute to teacher professionalism, such as teaching experience, teacher professional education and training, and intrinsic motivation.

These results reinforce the view that the use of technology in the learning process not only increases learning effectiveness, but also encourages teacher professionalism. According to Saputra & Pratiwi (2023) use of digital learning platforms such as *Google Classroom* forcing teachers to continuously develop their pedagogical, professional, social, and personality competencies to fit the needs of the 21st century. Research by Kurniawan & Dewi (2022) It also emphasized that teachers' involvement in the use of learning technology directly improves their professionalism, especially in mastery of materials, innovative teaching methods, and the ability to utilize digital resources to support learning. From the perspective of teacher competency theory, teacher professionalism is demonstrated by the ability to use a variety of learning approaches, including technology, to create an effective learning environment. *Google Classroom* It provides various features such as assignment collection, online quizzes, and class discussions that indirectly require teachers to be more skilled and professional in carrying out these tasks. Thus, the results of this study show that the use of *Google Classroom* has a significant positive contribution to improving teacher professionalism, especially in the aspects of mastery of learning technology, adaptation to educational innovation, and sustainable self-development.

CONCLUSION

Based on the results of the study, it can be concluded that the use of *Google Classroom* has a positive influence on the ability to design learning media and the professionalism of teachers at SMPN 3 Mandau. The t-test proved that the influence was significant with significance values ($0.000 < 0.05$) and ($0.002 < 0.05$). The more often and effectively teachers use *Google Classroom*, the higher their creativity and ability to design learning media that is engaging, interactive, and relevant to students' needs. The use of this digital platform also increases the professionalism of teachers, both in terms of responsibility, discipline, and pedagogic innovation. Therefore, continuous training on the use of digital technology needs to be carried out so that teachers are better prepared to face the challenges of 21st century learning.

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