



The Influence of Participative Leadership and Digitalization of Learning on the Professional Competence

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Abstract

Professional competence means that teachers must be able to master teaching materials and scientific structures, compile learning tools, implement learning according to plans, carry out evaluations according to standards and carry out continuous self-development. The objectives of this study were to determine the extent of the influence of participative leadership and the digitalization of learning collectively on teachers' professional competence. The research approach used was quantitative, and this study employed a correlational design. The study population consisted of 382 teachers, while the sample included 195 teachers. Data were collected using a questionnaire. The data analysis techniques used in this study included descriptive analysis and prerequisite tests, which consisted of normality, multicollinearity, heteroscedasticity, and linearity tests, as well as hypothesis testing through simple and multiple linear regressions. The results of the study indicated that (1) the correlation between participative leadership and teachers' professional competence was 0.862. The influence of participative leadership had a significant effect on the variable of teachers' professional competence by 74.3%. (2) The correlation between the digitalization of learning and teachers' professional competence was 0.827. The influence of the digitalization of learning had a significant effect on the variable of teachers' professional competence by 68.5%. (3) The combined influence of participative leadership and the digitalization of learning on teachers' professional competence was expressed in the equation $\hat{Y} = 8.916 + 0.862 X_1 + 0.539 X_2$. The value of the correlation coefficient (r) was 0.891. The coefficient of determination for the influence of variables X_1 and X_2 on Y was 79.4%. The conclusion of this study was that there was a significant influence of participative leadership and the digitalization of learning on teachers' professional competence by 79.4%.

Keywords:

Participative Leadership, Digitalization of Learning, Teacher Professional Competence

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INTRODUCTION

Education has a very crucial role in improving the quality of human resources, which is the key to facing current global challenges. In this context, education not only functions as a process of transferring knowledge but also as a means of forming the character and values needed by students (Sutarman, 2019). According to Government Regulation of the Republic of Indonesia Number 57, 2023, concerning National Education Standards (SNP) Article 1, education is a conscious and planned effort to create a learning atmosphere that allows students to actively develop their potential. Quality education is the main foundation in building a



society that is knowledgeable, has character, and is able to compete at the global level.

Teachers as educators have a strategic role in the learning process, which has an influence on the achievement of student learning outcomes. The teacher's task is to provide services in order to meet the needs required by students (Kusnandar, 2020). Teachers should understand, master, and be able to carry out activities related to their main task, namely teaching. As explained in Permendikbudristek Number 56, 2022, concerning Teacher Education Standards, it is stated that teachers are professional educators with the main task of educating, teaching, guiding, directing, training, and evaluating students in early childhood education through formal education, basic education, and secondary education.

As a professional teacher, teachers must be able to master learning planning, learning implementation, and evaluating the learning process. Because of these three components, teacher competency can be measured and known. According to PANRB Regulation Number 21, 2024, the teacher's workload includes the main activities, namely planning learning, implementing learning, assessing learning outcomes, guiding and training students, and carrying out additional tasks. Teachers must have competence in their field of work, namely teaching. According to Uno (2019), competence is one of the factors that influences the achievement of learning and education goals in schools. Professional competency means that teachers must be able to master teaching materials and scientific structures, prepare learning tools (syllabus, learning objective flow, teaching modules), carry out learning according to design, carry out evaluations according to standards, and carry out continuous self-development (Madyawati, 2019).

Based on the results of the school supervisor's evaluation, it shows that in the planning process, state elementary school teachers in Pedurungan District, Semarang City, do not yet have complete learning administration. The data indicate that the completeness of learning tools in each school is still lacking. It can be seen from the flow of learning objectives, which have been collected from 25 schools, or 78%, and then from the preparation of teaching modules, there are 27 schools, or 84%, that have made them, and the remaining 16% of schools have not made teaching modules. This happens because teachers do not understand how to prepare the latest learning tools. Then the teaching modules created by teachers have never been developed, and there are very few activities combining teacher learning, training, and guidance for teachers in preparing learning tools so that there are still few teachers who collect syllabi, flows of learning objectives, and teaching modules. This shows the low level of professional competence in State Elementary Schools in Pedurungan District, Semarang City (Data source: Korsatpen, Pedurungan District, Semarang City, 2025).

Looking at the problems above, there are gaps in planning, implementation, and evaluation; namely, teachers do not fully understand the preparation of learning tools according to the latest curriculum, learning in class has not adapted to existing learning tools, teachers only give assignments without analyzing the level of competency achievement, this does not match the learning design and real practice, and in professional development there is still a lack of training and self-development, which does not match the demands of teacher professionalism and the opportunities provided by schools/agencies. This shows the low professional

competence of teachers. This problem is not in line with the results of research conducted by Kemal (2023), which shows that professional competence means teachers can understand their main tasks and functions. Teachers can apply various strategies, manage the class, and plan and utilize various learning resources.

One effort to increase teacher professional competence in implementing learning is through participative leadership. Participative leadership is an important factor that can increase teacher competence in learning (Diks, 2020). Participative leadership, according to Angrayana (2022), is a way for leaders to influence groups to be able to participate in decision-making; superiors not only provide opportunities for those who take the initiative but also help them adjust their tasks. The participative leadership style is in accordance with Permendikbudristek Number 40, 2021, which mandates school principals to be able to develop leadership that is collaborative and participatory and empowers teachers.

Participative leadership encourages teachers to involve colleagues in formulating the school's vision, mission, and goals. By involving other teachers, each member feels they have a role and responsibility for the progress of the school, which then increases their awareness and commitment to the educational programs launched (Wijaya, 2023). This participative leadership is in line with the goals of the teacher program, which seeks to shape and help teachers to become professional teachers and influence the school environment positively (Isthofa, 2023). Based on research conducted by Kemal (2023), it shows that participative leadership by school principals can increase teacher competence. Through this participative leadership, the principal encourages teachers to carry out their duties by giving teachers the opportunity to participate in decision-making, creating an atmosphere of friendship and relationships of mutual trust and respect (Kogoya, 2023).

Based on the evaluation results, the school supervisor stated that there were still school principals who did not involve teachers in solving problems. Then almost all school principals make their own decisions and do not jointly determine school program decisions. School principals have not delegated their duties to teachers because they do not believe in their competence (Data source: Pedurungan District School Supervisor, Semarang City, 2025). Participative leadership is ideally able to increase teacher professionalism in planning, implementing, and evaluating learning. However, the facts in Pedurungan District show that there are still gaps because some school principals have not fully involved teachers, have not delegated tasks, and have not built trust in teacher competence. These results are inversely proportional to the results of research conducted by Anwar (2022), which states that school principals plan activities and make decisions together, school principals build good relationships with teachers and staff, provide support to teachers and staff, and are friendly with subordinates.

After teachers participate in school activities, it is hoped that teachers can implement more innovative and creative learning, one of which is by implementing digitalization of learning. According to Fitriyani (2019), digitalization of learning is the use of information and communication technology in the learning process to increase interaction, accessibility, and effectiveness of learning. Based on Permendikbudristek Number 40 of 2021 concerning the assignment of teachers to utilize digitalization of learning. Professional teachers are expected to be able to integrate technology in learning, such as mastering digital devices and applications,

planning to develop teaching modules using digital media according to student needs, being able to apply innovative digital-based learning methods, and evaluating learning using digital platforms for assessment, both formative and summative (Novita and Radiana, 2024).

It is hoped that the digitalization of learning can help teachers with learning activities so that it can help improve teachers' professional competence in the digital-based learning process (Nugraha, 2022). Through digitalization, learning can be done more flexibly, not limited by space and time; learning resources become more varied and interactive (Jannah, 2021). This is supported by the results of research conducted (Yani, 2021), which shows that there has been an increase in teacher personality competence and an increase in teacher professionalism through the use of digitalization of learning, which shows teacher satisfaction in implementing learning.

Based on the evaluation results, the Head of Korsatpen, Pedurungan District, Semarang City, stated that there are still schools that do not have adequate technological facilities to support digital learning optimally. Then the readiness and competence of teachers is still lacking, who still need to receive adequate training to integrate technology in learning and manage digital platforms effectively. Not optimal in adapting the curriculum to utilize digital technology (Data source: Korsatpen, Pedurungan District, Semarang City, 2025).

Overall, the digitalization of learning at SDN Pedurungan District ideally requires teachers to master digital literacy and be able to integrate digitalization in the planning, implementation, and evaluation of learning, as well as the school's operational curriculum being prepared based on the use of digital technology. However, the facts in the field are that teachers still lack skills in managing digital platforms, and learning tends to return to conventional methods. Then the integration of the curriculum with digital technology has not been carried out optimally so that digital learning tools have not been developed. Teacher professionalism is very influential in the success of digitalization, because teachers are the main actors who integrate digitalization of learning in planning, implementing, evaluating, and developing learning.

Based on this description, it is important to conduct research on the influence of participatory leadership and digitalization of learning on the professional competence of teachers at Public Elementary Schools in Pedurungan District, Semarang City. Previous studies have largely examined leadership or digitalization separately. Furthermore, few have examined the combined effects of participatory leadership and digitalization on professional competence in elementary schools. Furthermore, teachers, as the spearhead of education, are expected to possess strong professional competence, both in pedagogical aspects, mastery of material, and the ability to utilize technology in learning. However, facts on the ground show that many teachers still do not fully understand the development of learning tools according to the latest curriculum, are not optimal in implementing digital learning, and have not received participatory leadership support from the principal. This condition indicates a gap between the demands of teacher professionalism and actual practice in the field.

The participative leadership of the school principal is an important factor because through a collaborative and open leadership style, teachers will be more

motivated, feel appreciated, and be encouraged to develop themselves professionally. Meanwhile, digitalization of learning can be applied in planning, implementing, and evaluating learning. Therefore, it is important to carry out this research to determine the extent to which participative leadership and digitalization of learning influence the improvement of teachers' professional competence. It is hoped that this research can make a real contribution to the development of education policy, especially in strengthening the role of school principals as participative leaders and encouraging increased digital literacy of teachers. Apart from that, this research is also important as evaluation material for schools and education agencies in designing sustainable training and mentoring programs so that teachers' professional competence increases.

The purpose of this research is to find out the influence of participative leadership on teacher professional competence. to determine the effect of digitalization of learning on teachers' professional competence and to determine the effect of participative leadership and digitalization of learning on teachers' professional competence in SD Negeri Pedurungan District, Semarang City.

METHODS

The type of research used is quantitative. The research design is described in the following scheme:

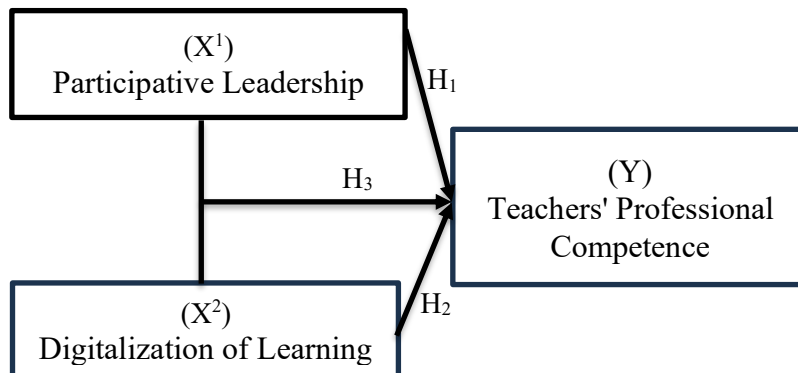


Figure 1. Research Design

The research design used is correlational research. This research took place at the State Elementary School, Pedurungan District, Semarang City. The population used in this research was 382 teachers, and the sample determination in this research used the Slovin formula with the proportional random sampling technique, totaling 195 teachers. Data collection was carried out using a questionnaire. This research has three questionnaire instruments, which were created based on the dimensions and indicators of each variable. The principal's participative leadership variable consists of 27 statements, the digitalization of learning variable consists of 36 statements, and the teacher's professional competence variable contains 45 statements. The instrument that was created was then tested for validity

and reliability, which showed that the results of the principal's participative leadership variable consisted of 25 statements, the digitalization of learning variable consisted of 30 statements, and the teacher's professional competency variable contained 41 statements. After it is valid and reliable, the research is carried out. The data from the research results were subjected to prerequisite tests, including normality, multicollinearity, linearity, and heteroscedasticity tests. Hypothesis tests in this research included the t-test, the F-test, and structural tests. Researchers used SPSS 25 software to process research data.

RESULTS & DISCUSSION

Result

1. The Influence of Participative Leadership on Teachers' Professional Competence in Public Elementary Schools, Pedurungan District, Semarang City.

Based on the results of research on the participative leadership variable on teachers' professional competence, it can be described as follows:

Table 1. Correlation of Participative Leadership on Teachers' Professional Competencies

		Participative Leadership	Teachers' Professional Competence
Participative Leadership	Pearson Correlation	1	.862**
	Sig. (2-tailed)		.000
	N	195	195
Teacher Professional Competency	Pearson Correlation	.862**	
	Sig. (2-tailed)	.000	
	N	195	195

The results of the correlation analysis between participative leadership variables and teacher professional competence show a positive value with a calculated r value of 0.862. Meanwhile, a Sig (1-tailed) of 0.000 indicates a unidirectional relationship between X1 and Y with a significant relationship because the value is less than 5% or $0.000 < 0.05$. Then the results of simple regression analysis show that the model of the relationship between participative leadership and teacher professional competence is expressed by the equation $\hat{Y} = 20.585 + 1.335 X1$. The results of the partial t-test show that the significance probability value is $0.000 < 0.10$, so that the independent variable is a significant explanation of the dependent variable, and the value of $t_{count} > t_{table}$ ($23.621 > 1.652787$) means that the participative leadership variable partially has a significant effect on the teacher professional competency variable.

Table 2. Summary Test of Participative Leadership Variables on Teacher Professional Competence

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.862 ^a	.743	.742	6.482

The R-squared value is 0.743. This value means that there is a strong influence between participative leadership (X1) on teacher professional competence (Y), which is 74.3%, while 25.7% of teacher professional competence (Y) is influenced by other variables not studied. Then the calculated r value is 0.862, which shows that there is a very strong influence of participative leadership (X1) on teacher professional competence (Y). The Effect of Digitalization of Learning on Teacher Professional Competence in Public Elementary Schools, Pedurungan District, Semarang City.

2. The Influence of Digitalization of Learning on the Professional Competence of Teachers in Public Elementary Schools, Pedurungan District, Semarang City.

Based on the results of research on the variable digitalization of learning on teacher professional competency, it can be described as follows:

Table 3. Correlation of Learning Digitization on Teacher Professional Competence

		Learning Digitization	Teacher Professional Competency
Learning Digitization	Pearson Correlation	1	.827**
	Sig. (2-tailed)		.000
	N	195	195
Teacher Professional Competency	Pearson Correlation	.827**	
	Sig. (2-tailed)	.000	
	N	195	195

The results of the correlation analysis between the digitalization of learning variables and teacher professional competence show a positive value with a calculated r value of 0.827. The results of simple regression analysis show that the digitalization model of learning on teacher professional competence is expressed by the equation $\hat{Y} = 15.262 + 1.175 X_2$. The results of the partial t-test show that the significance probability value is $0.000 < 0.10$, so that the independent variable is a significant explanation of the dependent variable, and the t-count $>$ t-table ($20.472 > 1.652787$) means that the digitalization of the learning variable partially has a significant effect on the teacher professional competency variable.

Table 4. Summary Test of Digitalization of Learning on Teacher Professional Competence

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.827 ^a	.685	.683	7.180

The R-square value of 0.685 means that there is a strong influence of digitalization of learning (X2) on teacher professional competence (Y), which is 68.5%, while 31.5% of teacher professional competence (Y) is influenced by other variables that were not studied. Then the correlation coefficient r value is 0.827, which shows that there is a very strong influence of the digitalization of learning on teacher professional competence.

3. The Influence of Participative Leadership and Digitalization of Learning on the Professional Competence of Teachers in Public Elementary Schools, Pedurungan District, Semarang City.

Based on the results of research on the variable influence of participative leadership and digitalization of learning on teachers' professional competency, it can be described as follows:

Table 5. Correlation Coefficient of the Effect of Participative Leadership and Digitalization of Learning on Teacher Professional Competence

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
Constant)	8.916	3.807		2.342	.020
Participative Leadership	.862	.086	.557	10.059	.000
Learning Digitization	.539	.079	.379	6.852	.000

The results of multiple regression analysis show that the relationship model of participative leadership and digitalization of learning on teacher professional competence is expressed by the equation $\hat{Y} = 8.916 + 0.862 X_1 + 0.539 X_2$. The results of the partial t-test show that the t-count value of X_1 against Y is 10.059, while the t-table value is 1.652787. This means $t_{count} > t_{table}$ ($10.059 > 1.652787$), so the participative leadership variable partially has a significant effect on the teacher professional competency variable. The t-count value of X_2 against Y is 6.852, while the t-table value is 1.652787. This means $t_{count} > t_{table}$ ($6.852 > 1.652787$), so the digitalization of the learning variable partially has a significant effect on the teacher professional competency variable.

Table 6. Summary Test of Participative Leadership and Digitalization of Learning on Teacher Professional Competence

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.891 ^a	.794	.791	5.825

The R-squared value is 0.794. This value shows that the variation in teacher professional competence (Y) can be explained by the variables participative leadership (X_1) and digitalization of learning (X_2) together at 79.4%, which means the coefficient of determination of the variable is in the strong category. This is in accordance with Sugiyono (2020), who states that a coefficient of determination in the range of 0.600-0.799 is said to be strong. So it can be concluded that there is a strong influence between participative leadership (X_1) and digitalization of learning (X_2) on teacher professional competence (Y). Then the correlation coefficient value r is 0.891, which means the variable correlation coefficient is in the very strong category. This is in accordance with Sugiyono (2020), who states that a correlation coefficient in the range of 0.80-1,000 is said to be very strong. So it can be concluded that there is a very strong influence between participative leadership (X_1) and digitalization of learning (X_2) on teacher professional competence (Y).

Discussion

1. The Influence of Participative Leadership on the Professional Competence of Teachers in Public Elementary Schools, Pedurungan District, Semarang City.

The results of the correlation analysis indicate that the relationship between participatory leadership and teacher professional competence is in the very strong

category, as reflected by the r value of 0.862. This figure not only indicates a statistically strong relationship but also has substantive meaning that an increase in participatory leadership is closely related to an increase in teacher professional competence. If the correlation value is squared, the coefficient of determination is obtained at 74.3%, which means that approximately 74.3% of the variation in teacher professional competence can be explained by the level of participatory leadership implemented by the principal. In other words, the more frequently and intensely teachers are involved in decision-making, school program planning, and two-way communication, the higher their motivation, professional responsibility, and performance in carrying out learning tasks.

This is in line with the theory that participatory leadership encourages teachers to be more creative, committed, and actively develop themselves, thus contributing directly to the improvement of professional competence. The results of this research strengthen the results of research conducted by Astutik (2021), which shows that there is a significant influence of participative leadership on teacher pedagogical competence. Looking at these results shows that school principals can carry out managerial supervision over the performance and learning processes carried out by teachers in order to improve teachers' professional competence. Teachers must be able to plan and implement learning well in order to achieve learning objectives.

There is a significant influence of participative leadership on the professional competence of teachers in public elementary schools in Pedurungan District, Semarang City, amounting to 74.3%. This also means an increase in teacher professional competence by 74.3% due to participative leadership, which is used as guidance and motivation in improving teacher professional competence and education service policies. The results of this research strengthen the results of research conducted by Astutik (2021), which shows that there is a significant influence of participative leadership on teacher pedagogical competence. Looking at these results shows that school principals can carry out managerial supervision over the performance and learning processes carried out by teachers in order to improve teachers' professional competence. Teachers must be able to plan and implement learning well in order to achieve learning objectives.

Learning is influenced by participative leadership carried out by the school principal. Basri (2021) states that participative leadership allows subordinates to participate in the decision-making process. This opinion emphasizes the dimension of "involvement" as the core of a participative leadership style, where organizational decisions are not the result of a single authority but rather the result of deliberation and collaboration (Purwoko, 2020). Opinion (Yukl, 2020) expands this view by emphasizing that participative leadership includes various aspects such as consultation, joint decision-making, empowerment, and democratic management. According to Kompri (2019), this leadership style arises from the belief that the active participation of subordinates is an effective means of motivating them to achieve common goals. This is done with the aim of increasing teacher professional competence.

The professional competence of teachers in Pedurungan District Public Elementary Schools, Semarang City, can continue to increase if the principal can manage the school by maximizing the implementation of leadership and school

management, which will in turn increase the professional competence of teachers. School principals must be able to synergize their potential by utilizing existing resources and learning resources so that they can produce good teacher professional performance and competence, especially in the field of education administration and learning processes (Hidayat, 2022).

With the strong influence of the principal's participative leadership on the professional competence of teachers in Public Elementary Schools, Pedurungan District, Semarang City, participative leadership needs to be carried out by the principal so that teachers' professional competence can increase (Wahjosumidjo, 2020). The form of participative leadership development of school principals can use more interesting methods or methods and instruct teachers to participate more in all school activities by developing learning tools and conducting more innovative learning (Pradana, 2020). Therefore, it is hoped that there will be a policy from the education office, especially for school principals, by facilitating principals' self-development activities, especially in the participative leadership of school principals, in order to increase teachers' professional competence.

2. The Effect of Digitalization of Learning on the Professional Competence of Teachers in Public Elementary Schools, Pedurungan District, Semarang City.

The results of the correlation analysis indicate a very strong and positive relationship between digitalization of learning and teacher professional competence, as indicated by an r value of 0.827. This high correlation indicates that the increased use of digital technology in the learning process is consistently accompanied by an increase in teacher professional competence. Substantively, this figure means that teachers who are increasingly accustomed to using digital devices, learning applications, interactive media, and online platforms for planning, implementing, and evaluating learning tend to have better professional competence. When the r value is squared, the coefficient of determination is 68.5%, indicating that approximately 68.5% of the variation in teacher professional competence can be explained by the level of digitalization of learning implemented.

This percentage is quite large in the context of educational research, confirming that digitalization of learning plays a significant role in improving material mastery, teaching creativity, the ability to design digital lesson plans, and technology-based evaluation. Therefore, this strong relationship is not only statistically significant but also has practical significance, indicating that the digital era has made a significant contribution to improving teacher professionalism in schools. The results of this research strengthen the results of research conducted by Sulastris (2024), which shows that the correlation between the principal's leadership style and the digitalization of learning in schools is 0.974 in the strong category with an R -squared value of 94.8% with the regression equation $Y = -2.506 + 1.269X_1$. These results emphasize that digitalization of learning needs to be developed by teachers. The digitalization of learning is an important phenomenon in educational transformation, which emphasizes the use of technology to expand access, increase effectiveness, and create a more interactive learning experience. According to Irhandayaningsih (2020), digitalization of learning is realized in various forms of learning activities, such as the use of email, learning management

systems (LMS), online quizzes, discussion forums, and digital learning resources such as e-journals or e-books. This means that digitalization is not just an abstract concept but has actually been implemented in modern learning practices. Meanwhile, Bella (2020) highlights the psychological and motivational dimensions of digitalization, saying that digital media can be a fun learning tool because it contains elements of play (gamification), which suit the characteristics and needs of school-age students.

Therefore, to realize good digitalization of learning, school principals and teachers at Public Elementary Schools, Pedurungan District, Semarang City, must continue to cultivate digital-based learning to improve the quality of learning (Karomani, 2021). Apart from that, the role of the school principal is needed to be able to improve and develop the digitalization of learning so that teachers are encouraged to work well so that teacher achievement and professional competence will be better (Nafilatur, 2019). This is proven by the results of the regression analysis that the coefficient of digitalization of learning on teacher professional competence in public elementary schools, Pedurungan District, Semarang City, is positive and significant.

The results of all analyses and tests related to calculating the regression of digitalization of learning on teacher professional competence above obtained good results; there were some data that deviated from the sample studied. In theory, when digitalization of learning is good, teachers' professional competence will also be good, but it was found that several samples studied deviated from theory. This shows that teacher professional competence is not only influenced by the digitalization of learning but is also influenced by several other factors, meaning that digitalization of learning is not the only factor that influences the level of teacher professional competence (Lestyningrum, 2022).

Positive digitalization of learning is one of the main foundations in supporting the improvement of teachers' professional competence. With strong and supportive digitalization of learning, teachers are more motivated to improve teachers' professional competence and competencies (Fajri, 2024). Therefore, educational institutions need to create and maintain digital learning that supports increasing teacher professional competence.

3. The Influence of Participative Leadership and Digitalization of Learning on Teacher Professional Competence in Public Elementary Schools in Pedurungan District, Semarang City.

The analysis results show that the correlation between participatory leadership (X1) and digitalization of learning (X2) simultaneously on teacher professional competence (Y) has a correlation coefficient of $r = 0.891$, which is categorized as very strong. This figure indicates that when both participatory leadership and digitalization of learning variables are improved simultaneously, teacher professional competence will increase significantly. An r value approaching 1 indicates that the relationship between the three variables is nearly linear, meaning that changes in X1 and X2 are followed by relatively consistent changes in Y. When the r value is squared, the coefficient of determination is obtained as $r^2 = 0.794$, meaning that approximately 79.4% of the variation in teacher professional

competence can be explained by the combination of participatory leadership and digitalization of learning.

This percentage is very large in the context of educational research, indicating that both variables have a strong and significant contribution to improving teacher competence. Substantively, this illustrates that when teachers are given the space to participate in decision-making, while also being facilitated with adequate learning technology, their professional abilities in planning, implementing, and evaluating learning will develop optimally. Thus, the r value of 0.891 not only indicates a very strong statistical relationship but also reflects the strategic role of these two variables in improving the quality of teacher professionalism in schools. The results of this research strengthen the results of research conducted by Astutik (2021), which shows that there is a significant influence between participative leadership and school culture on teacher pedagogical competence. The results of multiple regression tests show that participative leadership and school culture both influence pedagogical competence. There are many variables that can be explored in order to obtain a policy framework model and theoretical framework in an effort to improve teacher pedagogical competence.

Seeing the results above, participative leadership and good digitalization of learning are needed in order to improve teachers' professional competence. School principals and teachers are one of the determining factors for high and low educational outcomes. The success of the implementation of education is largely determined by the extent to which school principals and teachers are prepared to prepare themselves by having good performance in order to create outstanding students (Harlita, 2024). It requires seriousness from every school principal and teacher to improve teacher professional competence in order to achieve maximum achievement. By having good competence, performance, and digitalization of learning supported by participative leadership, it is hoped that it can improve teachers' professional competence (Lestari, 2022).

The participative leadership of the school principal and the digitalization of learning have a significant and complementary influence on improving teachers' professional competence (Siagian, 2021). Therefore, education managers need to ensure that these two factors work in harmony. According to Susanto (2019), participative leadership of school principals must be carried out periodically, digitalization of learning needs to be built with supporting values, and teacher motivation must continue to be maintained through various incentives and rewards.

In the process of conducting this research, there are limitations that can affect the results of the research, namely: (1) There are limitations in research time, energy, and the ability of the researcher. (2) There is a lack of ability of respondents in understanding the statements in the questionnaire filling activity and also honesty in providing answers so that there is a possibility that the results are less accurate. (3) This research only conducts an assessment of improving school quality so that further research needs to be developed for research. (4) The conclusions drawn are only based on the results of the questionnaire, so it is hoped that there will be further research on the influence of participatory leadership and digitalization of learning on teacher professional competence with different research methods, more samples, and the use of different and complete research instruments.

CONCLUSION

There is a positive and significant influence of participative leadership on teacher professional competence with a medium category of 74.3%; then, based on the r-calculated value of the variable participative leadership (X1) and teacher professional competence (Y), they have a strong relationship. There is a positive and significant influence of digitalization of learning on teacher professional competence with a medium category of 68.5%; then, based on the r calculated value of the digitalization of learning variable (X2) and teacher professional competence (Y), there is a strong relationship. There is a significant influence of participative leadership and digitalization of learning on the professional competence of teachers in the Pedurungan District Public Elementary School, Semarang City, with a medium category on teacher professional competence of 79.4%. The author suggests that school principals can reflect and evaluate by increasing managerial intensity and providing coaching in order to increase teacher professional competence.

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