

## Time Management and Knowledge Management through Professional Competence in Teacher Performance

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### Abstract

This study aims to determine and elaborate on the effect of time management and knowledge management through professional competence on teacher performance in Mamuju. This study uses a causality design with a quantitative approach. The population in this study were all teachers in Mamuju. The sampling technique uses random sampling; the final sample is 100 teachers. Data collection techniques through questionnaires and documentation, during data analysis with path analysis. The study results show that with a direct effect, teacher performance can be improved by time management, where the teacher can manage the role of time management by setting clear goals, prioritizing, assertiveness, avoiding delays, and minimizing time. In addition, knowledge management also affects teacher performance; knowledge management is demonstrated by the ability of school organizations to identify, reflect, share, and use knowledge evenly. Professional competence is an intervening variable that has a significant role in improving teacher performance. In an indirect effect, professional competence acts as a moderating variable, where time management and knowledge management can encourage professional competence and impact teacher performance.

**Keywords:** management, competency, performance, teachers, Indonesia

### 1. Introduction

Education is one of the essential factors in advancing a nation. Through good education, something new will be obtained so that it can be used in creating quality human resources. If it has quality human resources, a country can build its government to be more advanced. Therefore, every nation must have a good and quality education.

National education functions to develop capabilities and character as well as a national civilization whose goal is to create the potential of students so that they become quality human beings with characteristics of faith and piety to God Almighty, have a noble character, are healthy, have faith, are capable, are creative, independent and become a democratic and responsible citizen. Achieving educational goals is difficult; the education system must face many obstacles. One of the obstacles is the low quality of education in Indonesia, which makes educational purposes not optimally achieved.

Teacher performance is an essential factor that determines the direction and goals of quality education; performance itself is the result of work that someone has achieved following the duties and responsibilities in achieving educational goals. A teacher's success must meet predetermined criteria; if the teacher meets these criteria, a teacher can be said to be successful and have good qualities (Masrullah et al., 2021; Mislia et al., 2021). Conversely, if a teacher fails to meet reasonable standards, the teacher is said to have failed. Teachers must create a conducive learning climate as the primary resource in teaching and learning activities. However, there are many facts in our world of education where many teachers still need help creating conducive learning conditions as expected. The fact that cause of this lack of success is the inadequate performance of teachers.

Time management is one of the factors that can affect teacher performance; a teacher with good time management will know what to prioritize to achieve learning outcomes effectively and efficiently. Everyone has a different understanding and concept of time. The importance of time management for a teacher in his daily work life will help him focus on essential tasks. With this time management, you will not lose your time on useless activities, but you will run your time in an orderly and productive manner.

In addition, another factor that plays an essential role in improving teacher performance is knowledge management; knowledge management, commonly referred to as knowledge management, is a way of developing the potential of human resources in an organization. As a systematic approach, knowledge management helps distribute information and knowledge to the right people at the right time to create value (Kusiani et al., 2021). This time management is considered a potential organization's capacity to increase capabilities or competitiveness by utilizing various organizational/school resources.

The importance of knowledge management in schools facilitates making more informed decisions, where every decision will be born with very mature thinking (Tamsah et al., 2021). It was decided based on various essential considerations based on experience and information reviewed from many vital aspects. For example, teachers study the dynamics or changes in the way of learning and, simultaneously, the demands students need. Thus, the school always focuses only on the most exciting students and what requires something.

Good time management and knowledge management support will encourage competency improvement. The level of teacher competence can be demonstrated by the teacher's ability to integrate the concepts of personal, scientific, technological, and social abilities that form their standard competencies, which also include mastery of the material, understanding the desires and tendencies of the participants themselves, personal development and personal development.

## 2. Method

This research approach uses a quantitative approach to test specific theories by examining the relationship between variables. These variables are measured using research instruments, so data from numbers can be analyzed according to statistical procedures.

In this study, the sampling technique was carried out using a random sampling technique; namely, sampling was carried out with specific considerations, including a) all teachers who teach the subject; b) those willing to participate until the completion of the research; c) fill out the questionnaire promptly as determined by the researcher. The final sample obtained based on the sampling criteria was 100 people.

The questionnaire data collection method to be used in this study is to use a personal questionnaire. Data was collected using a structured questionnaire using a scale of 1-5. The questionnaire used in this study is direct and structured, meaning that the questionnaire is directly given to the respondent and provides a checklist of the available rating scales. Questions in the questionnaire are made using a Likert scale using five choices; each level is given a score starting from the lowest level with a score of 1 to the highest level with a score of 5.

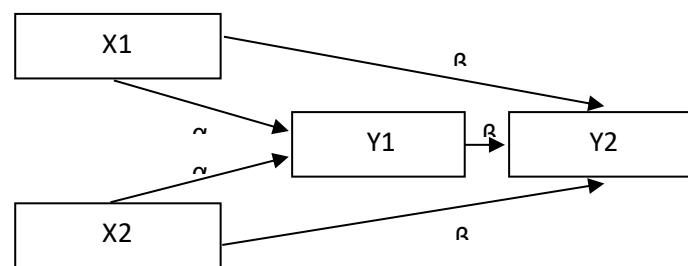
Hypothesis testing can be done with a procedure developed by Sobel (Sobel Test). The Sobel test tests the strength of the independent variable's indirect influence on the dependent variable through the intervening variable by multiplying the indirect effect of X to Y2 through Y1 by multiplying the path X - Y1 (a) by the path Y1 - Y2 (b) or ab. So the coefficient ab = (c-c') where c is the effect of X on Y2 without connecting Y1, while c' is the coefficient of influence of X on Y2 after connecting Y1. The Sobel test formula is as follows:

$$Sab = \sqrt{b^2Sa^2 + a^2Sb^2 + Sa^2Sb^2}$$

To test the significance of the indirect effect, we need to calculate the t-value of the coefficient with the following formula:

$$t \text{ value} = \frac{a \times b}{sab}$$

The calculated t value is compared with the t table value; if the t calculated value is greater than the t table value, it can be concluded that there is a mediating effect. The assumption is that the Sobel test requires a large number of samples; if the number of samples is small, the Sobel test is less conservative. Path analysis is a technique for analyzing causal relationships that occur when the independent variable affects the dependent variable directly and indirectly. The path analysis model can be described as follows:



**Figure 2.** Path Analysis Model

Mathematically, the model can be written as follows:

$$Y_1 = f(X_1, X_2)$$

$$Y_1 = \alpha_1 X_1 + \alpha_2 X_2 + e_1$$

$$Y_2 = f(X_1, X_2, Y_1)$$

$$Y_2 = \beta_1 X_1 + \beta_2 X_2 + \beta_3 Y_1 + e_2$$

$$\alpha_1 \alpha_2 \beta_1 \beta_2 \beta_3 = \text{Path coefficient}$$

$$e = \text{Standard error}$$

### 3. Result

#### Direct Effect

The direct effect can be seen from the beta value on the standardized coefficient in the coefficient table, the immediate effect between the variables (X1, X2) with the intervening variable (Y1) and the dependent variable (Y2). Recapitulation of direct influence, as shown in the following table:

**Table 1.** Recapitulation of direct effect

Variabel Independen	Variabel Dependen	Simbol	Beta Coe.	Sig.	S.E
Manajemen Waktu (X1)	<b>Kompetensi Profesional (Y1)</b>	X1 → Y1	0.399	0.000	0.095
Manajemen Pengetahuan (X2)		X2 → Y1	0.381	0.000	0.111
Manajemen Waktu (X1)	<b>Kinerja Guru (Y2)</b>	X1 → Y2	0.253	0.012	0.095
Manajemen Pengetahuan (X2)		X2 → Y2	0.221	0.026	0.110

Kompetensi Profesional (Y1)	Y1 → Y2	0.363	0.000	0.093
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### Indirect Effect

The mediating effect of Time Management (X1) on Teacher Performance (Y2) through Professional Competence (Y1), with the Sobel test formula as follows:

The interface shows a path diagram with an independent variable, a mediator variable, and a dependent variable. The path from independent to mediator is labeled A (SE<sub>A</sub>) and the path from mediator to dependent is labeled B (SE<sub>B</sub>). Below the diagram, the following values are entered:

- A: 0.399
- B: 0.363
- SE<sub>A</sub>: 0.095
- SE<sub>B</sub>: 0.093

A "Calculate!" button is present. Below it, the results are displayed:

- Sobel test statistic: 2.85916324
- One-tailed probability: 0.00212380
- Two-tailed probability: 0.00424760

If the  $t_{\text{count}}$  value  $>$   $t_{\text{table}}$  value, it can be concluded that there is a mediating effect. Based on the Sobel test, the  $t_{\text{count}}$  value was 2,859, and the  $t_{\text{table}}$  value was 1,984. Thus, it can be concluded that there is a mediating influence of variables  $X1 > Y2$  through  $Y1$ , meaning that Time Management (X1) affects Teacher Performance (Y2) through Professional Competence (Y1).

The indirect effect of Knowledge Management (X2) on Teacher Performance (Y2) through Professional Competence (Y1), the Sobel test formula is used as follows:

The interface shows a path diagram with an independent variable, a mediator variable, and a dependent variable. The path from independent to mediator is labeled A (SE<sub>A</sub>) and the path from mediator to dependent is labeled B (SE<sub>B</sub>). Below the diagram, the following values are entered:

- A: 0.381
- B: 0.363
- SE<sub>A</sub>: 0.111
- SE<sub>B</sub>: 0.093

A "Calculate!" button is present. Below it, the results are displayed:

- Sobel test statistic: 2.57756133
- One-tailed probability: 0.00497501
- Two-tailed probability: 0.00995002

If the  $t_{\text{count}}$  value  $>$   $t_{\text{table}}$  value, it can be concluded that there is a mediating effect. Based on the Sobel test, the  $t_{\text{count}}$  value was 2,577, and the  $t_{\text{table}}$  value was 1,984. Thus, it can be concluded that there is a mediating effect of variable  $X_2 > Y_2$  through  $Y_1$ , meaning that Knowledge Management ( $X_1$ ) affects Teacher Performance ( $Y_2$ ) through Professional Competence ( $Y_1$ ).

#### Total Effect

Table 2. Summary of the results of hypothesis testing

No	Hypothesis	Value	Sig	Conclusion
1	Time management has a positive and significant effect on the professional competence of teachers in Mamuju.	0.399	0.000	Positive and Significant
2	Knowledge management has a positive and significant effect on the professional competence of teachers in Mamuju.	0.381	0.000	Positive and Significant
3	Time management has a positive and significant effect on teacher performance in Mamuju	0.253	0.012	Positive and Significant
4	Knowledge management has a positive and significant effect on teacher performance in Mamuju.	0.221	0.026	Positive and Significant
5	Professional competence has a positive and significant effect on teacher performance in Mamuju.	0.363	0.000	Positive and Significant
6	Time management has a positive and significant effect on teacher performance through the professional competence of teachers in Mamuju.	0.144	0.035	Positive and Significant
7	Knowledge management has a positive and significant effect on teacher performance through the professional competence of teachers in Mamuju.	0.138	0.031	Positive and Significant

## 4. Discussion

### The Effect of Time Management on Teacher Performance

The study shows that time management has a positive and significant effect on teacher performance, meaning that improvements in time management will be followed by improvements in teacher performance, assuming that other factors that affect the size of time management are considered constant. Time management's positive and significant influence on teacher performance in Mamuju can be seen from the direct influence path analysis results, which show a positive and significant effect of time management on teacher performance.

A teacher will achieve all the plans prepared through good time management, and the tasks carried out will be optimal. Good use of time through time management will increase one's achievement of results for one's ability to manage time, and of course, this leads to the achievement of organizational goals. Good time management will improve performance. Performance is the level of task implementation achieved by a person using his abilities and the limits set to achieve organizational goals (Suryanti et al., 2021; Yusriadi et al., 2022).

Time management is an essential component of leadership. The teacher has a leadership function in his work assignments. Teachers must develop strategies to maximize time in achieving their and the school's goals (Nurman et al., 2022). When there are several time-efficient methods, the teacher must test and determine which pattern is most effective for him. Several organizational strategies are beneficial, such as planning, setting goals, delegating, making decisions, and balancing the work of all organizational components (Cahaya et al., 2022; Idris et al., 2022). By the managing time, teachers can consider essential matters from work time availability to work in achieving school goals.

The managerial implications of the effect of time management on teacher performance show that time management plays an essential role in supporting teacher activities to encourage their performance; the more teachers pay attention to their time, the more productive they will be in carrying out their duties and responsibilities, and vice versa, teacher performance will also be seen by the effective use of time.

### **The Effect of Knowledge Management on Teacher Performance**

Teachers are educators with the main task of educating, teaching, guiding, directing, training, assessing, and evaluating student learning. The teacher has a huge role in a school organization because the teacher will distribute knowledge to students. It is hoped that the best results or achievements will be obtained through the teacher's distribution of expertise or knowledge to their students. As educators whose job is to educate, direct and evaluate learning, it is essential for them to have a level of qualification appropriate to the teaching field that will be implemented in schools.

Training programs and mentoring in the work environment can encourage various forms of knowledge. It is also essential to choose the channel of knowledge distribution because multiple channels, both direct and indirect, have strengths and weaknesses. The more mature the organization, the more efficient the media communication channels and the faster the time for sharing knowledge (Achmat et al., 2021; Fitria et al., 2021; Wahyuni et al., 2021). This phase can also be seen as a connecting bridge and upstream to downstream flow in practicing knowledge (Aci et al., 2021; Ahral et al., 2021; Fatmawati, Tamsah, Romadhoni, et al., 2021; Kasim et al., 2022). The better distribution of this knowledge in the school environment has encouraged good teacher performance in providing learning, effective communication, initiative, and skills in schools.

The managerial implications of the influence of knowledge management on teacher performance show that teachers are the main actors in the teaching and learning process, and their role is significant in supporting the success of education. Knowledge management as a concept of developing teacher human resources through increasing knowledge in its role has been able to maximize the optimal function of teacher performance. Knowledge management allows one to distribute knowledge evenly within the organization's scope.

### **The Effect of Professional Competence on Teacher Performance**

The study shows that professional competence has a positive and significant effect on teacher performance, meaning that an increase in professional competence will be followed by an increase in teacher performance, assuming that other factors that affect the size of professional competence are considered constant. The positive and significant influence of professional competence on teacher performance in Mamuju can be seen from the direct influence path analysis results, which show a positive and significant effect of professional competence on teacher performance. The results of this study suggest the influence of competence on performance. The positive and significant influence of professional competence on teacher performance indicates that the better the professional competence, the better the teacher's performance will be. In the education system, the role of the teacher is very large, so they are required to have competence in the teaching and learning process (Fatmawati, Tamsah, Utina, et al., 2021; Setiawan et al., 2021). The competencies possessed are, of course, different from the competencies of other fields where the teacher will have many approaches to the target group, in this case, the students. Teachers must understand the conditions for their students or fellow teachers and the school environment.

Teachers will show results with better student achievement levels, innovative abilities, and better student learning styles as teachers can provide an approach directed at increasing student capacity in learning. With good competence possessed by the teacher, it will certainly show the best performance, which is measurable through the results, the level of efficiency, and the organization's satisfaction with its achievements. Thus, teachers who are getting better in their competence will encourage increased performance. The research findings state that the better the teacher's competence, the better his



performance will be. It also states that teachers, as skilled workers, must show a professional attitude in teaching, and mastering teaching materials is one of the characteristics of a professional teacher.

#### 4. Conclusion

Based on the results and discussion, it can be concluded that with a direct effect, the performance of teachers in Mamuju can be improved by time management, where the role of time management can be managed well by the teacher through setting clear goals, prioritizing, assertiveness, avoiding delays and minimizing wasted time. In addition, knowledge management also affects teacher performance; knowledge management is demonstrated by the ability of school organizations to identify, reflect, share, and use knowledge evenly. Professional competence, as an intervening variable that significantly improves teacher performance in Mamuju, can be seen in the better mastery of teaching materials, managing learning programs, implementing of teaching programs, assessing learning outcomes, and ability of educational foundations. On the indirect effect, professional competence as a moderating variable is good in this study, where time management and knowledge management can encourage professional competence and impact teacher performance.

#### References

- Achmat, B., Baharuddin, Misbahuddin, Anjanarko, T. S., Yusriadi, Y., Awi, A., Muchtar, F. Y., & Lionardo, A. (2021). Analysis of service quality improvement with education and training and professionalism and teamwork as mediation variables. *Proceedings of the International Conference on Industrial Engineering and Operations Management*, 7165–7175. <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85114247776&partnerID=40&md5=b25650b9d43d7d350ba16047a67e4a1c>
- Aci, Tamsah, H., Farida, U., Oyiho, A. T., Yusriadi, Y., Octamaya Tenri Awar, A., & Lionardo, A. (2021). Implementation of soft competency through education and training as well as work experience on the quality of financial reports in the government of mamuju regency. *Proceedings of the International Conference on Industrial Engineering and Operations Management*, 7132–7140. <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85114224773&partnerID=40&md5=03e8f00c4c02ee917d7f12cb28452256>
- Ahral, Ilyas, G. B., Mulat, T. C., Zacharias, T., Yusriadi, Y., Djunaidi, F. G., & Achmad, N. (2021). The effect of quality extension and education on clean and healthy behavior (PHBS) through community understanding in the work area of public health centre. *Proceedings of the International Conference on Industrial Engineering and Operations Management*, 3263–3264. <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85121100276&partnerID=40&md5=b02ab8d7415fd4c87e6ec89bf9654ee7>
- Cahaya, A., Yusriadi, Y., & Gheisari, A. (2022). Transformation of the Education Sector during the COVID-19 Pandemic in Indonesia. *Education Research International*, 2022. <https://doi.org/10.1155/2022/8561759>
- Fatmawati, Tamsah, H., Romadhoni, B., Lisanty, N., Ponijan, Syafruddin, & Yusriadi, Y. (2021). The influence of organizational culture, locus of control and self efficacy on the performance of civil servants of education personnel. *Proceedings of the International Conference on Industrial Engineering and Operations Management*, 3166–3168. <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85121155550&partnerID=40&md5=25f2b3fdf792efdcf24b3af09db94348>

- Fatmawati, Tamsah, H., Utina, D. A., Romadhoni, B., Yusriadi, Y., Chairul Basrun Umanailo, M., & Fais Assagaf, S. S. (2021). The effect of organizational tradition, control, and self-efficacy on the success of civil servants of education staff at the ujung pandang state polytechnic office. *Proceedings of the International Conference on Industrial Engineering and Operations Management*, 7386–7395. <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85114235739&partnerID=40&md5=707605bbd043cfd08f2a961e4509269b>
- Fitria, Tamsah, H., Yahya, M., Tumanggor, A. H., Yusriadi, Y., Umanailo, M. C. B., & Bahang, M. D. (2021). the effect of education and community income on clean and healthy behavior through motivation in Tandukalua district, Mamasa regency. *Proceedings of the International Conference on Industrial Engineering and Operations Management*, 3141–3147. <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85121100205&partnerID=40&md5=9d7928084c7b165ea060c960ed4b06c1>
- Idris, M., Bin Tahir, S. Z., Wilya, E., Yusriadi, Y., & Sarabani, L. (2022). Availability and Accessibility of Islamic Religious Education Elementary School Students in Non-Muslim Base Areas, North Minahasa, Indonesia. *Education Research International*, 2022. <https://doi.org/10.1155/2022/6014952>
- Kasim, A., Nawas, K. A., Tahir, S. Z. B., Yusriadi, Y., & Gheisari, A. (2022). Bugis and Arabic Morphology: A Contrastive Analysis. *Education Research International*, 2022. <https://doi.org/10.1155/2022/9031458>
- Kusiani, E., Ansar, Syahrudin, Bakri, M., Syukrano, M., Yusriadi, Y., & Manoktong, S. N. (2021). Increasing the professionalism of military teachers with training and experience through competence. *Proceedings of the International Conference on Industrial Engineering and Operations Management*, 3298–3304. <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85121101806&partnerID=40&md5=c27acba4881105026d37b70f6b828eec>
- Masrullah, Romadhoni, B., Hasbi, Yusriadi, Y., Misnawati, Febryani, A., & Jabbar, A. (2021). The influences of teacher professional competencies and infrastructure on teacher performance through teaching devices of technical implementation. *Proceedings of the International Conference on Industrial Engineering and Operations Management*, 3035–3042. <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85121114172&partnerID=40&md5=cf9d2956f2dc3d5abca9418e45aad5bd>
- Mislia, M., Alim, A., Usuf, E., Tamsah, H., & Yusriadi, Y. (2021). The effect of training and education and teacher certification allowances on teachers. *Cypriot Journal of Educational Sciences*, 16(4), 1368–1383. <https://doi.org/10.18844/cjes.v16i4.5986>
- Nurman, Yusriadi, Y., & Hamim, S. (2022). Development of Pluralism Education in Indonesia: A Qualitative Study. *Journal of Ethnic and Cultural Studies*, 9(3), 106–120. <https://doi.org/10.29333/ejecs/1207>
- Setiawan, I. P., Fachmi, M., Fattah, M. N., Rasyid, I., & Yusriadi, Y. (2021). Teamwork is an Intervening Variable, The Quality of Agricultural Extension Agents on Farmer Productivity, from A Human Capital Perspective. *Review of International Geographical Education Online*, 11(4), 1389–1397. <https://doi.org/10.33403/rigeo.8006853>
- Suryanti, Mattalatta, Syahrudin, Nugraha, S., Kurnia, H., Yusriadi, Y., & Umanailo, M. C. B. (2021). Increasing work motivation with state defense education and compensation through



employee discipline at the xi/hasanuddin military regional parent regiment educational institution. *Proceedings of the International Conference on Industrial Engineering and Operations Management*, 3284–3293. <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85121122200&partnerID=40&md5=56f2ad70817245d666ba9cac9336ab02>

Tamsah, H., Ilyas, J. B., & Yusriadi, Y. (2021). Create teaching creativity through training management, effectiveness training, and teacher quality in the covid-19 pandemic. *Journal of Ethnic and Cultural Studies*, 8(4), 18–35. <https://doi.org/10.29333/ejecs/800>

Wahyuni, Yahya, M., Mulat, T. C., Kessi, A. M. P., Yusriadi, Y., Rumaolat, W., & Syamsul, M. (2021). The effect of education level and health service management on stunting risk through nutritional status. *Proceedings of the International Conference on Industrial Engineering and Operations Management*, 3248–3254. <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85121098286&partnerID=40&md5=dedf0fd1c623962cb0efbda27a759914>

Yusriadi, Y., Makkulawu Panyiw Kessi, A., Awaluddin, M., & Sarabani, L. (2022). E-Learning-Based Education Resilience in Indonesia. *Education Research International*, 2022. <https://doi.org/10.1155/2022/7774702>