
The Effect of Using Learning Management Systems and On-the-Job Training on Improving Teachers' Professional Competence in In-Depth Learning in Bulukumba Regency

Rahmaniar¹, Hartini², Muhammad Fahreza W³

¹ Universitas Patompo, Indonesia; fps@unpatompo.ac.id

² Universitas Patompo, Indonesia; antyhartini@gmail.com

³ Universitas Patompo, Indonesia; mfahreza@unpatompo.ac.id

Article history

Submitted: 2026/02/01; Revised: 2026/03/11; Accepted: 2026/05/04

Abstract

This study aims to determine the effect of the use of Learning Management System (LMS) and On The Job Training (OJT) on the professional competence of teachers in Bulukumba Regency, both partially and simultaneously. This study uses a quantitative approach with a survey method. Research data were obtained through distributing questionnaires to 18 respondents who are teachers in Bulukumba Regency. The data analysis technique used is multiple linear regression analysis which includes partial tests (t-test), simultaneous tests (F-test), and coefficient of determination with the help of a statistical data processing program. The results of the study indicate that partially the use of LMS has a significant effect on the professional competence of teachers, while the On The Job Training (OJT) variable also has a significant effect on the professional competence of teachers. Simultaneously, the use of LMS and the implementation of OJT have a significant effect on the professional competence of teachers. The Adjusted R Square value of 0.365 indicates that 36.5% of the variation in the professional competence of teachers can be explained by these two variables, while the rest is influenced by other factors outside the research model. Thus, the use of Learning Management System (LMS) and the implementation of On The Job Training (OJT) have a positive and significant effect on improving the professional competence of teachers in Bulukumba Regency.

Keywords

Learning Management System (LMS), On The Job Training (OJT), Teacher Professional Competence, In-depth Learning



© 2026 by the authors. This is an open-access publication under the terms and conditions of the Creative Commons Attribution 4.0 International (CC BY SA) license, <https://creativecommons.org/licenses/by-sa/4.0/>.

INTRODUCTION

Learning approaches in education play a crucial role in developing students with skills that can meet the challenges of 21st-century education. These efforts are now being designed through an in-depth learning approach based on the principles of mindful, meaningful, and

joyful learning, providing students with opportunities to understand, apply, and reflect on what they learn across contexts (Suyanto et al., 2025). This principle has become a prominent topic in Indonesian education following a statement by the Minister of Basic Education of the Republic of Indonesia (Suyanto et al., 2025). Deep learning initiates learning principles that foster student awareness, foster meaningfulness in educators, and foster an ideal learning environment that can provide positive motivation and encouragement for students (Suyanto et al., 2025). Quoting from the Norwegian Directorate for Education and Training, deep learning, within the overall educational structure, is a strategy for acquiring information on how to respond to global changes, how to process data, how to use new technologies, and how to interpret this information in a complex world (Suyanto et al., 2025).

Deep learning emphasizes six global competencies: character, citizenship, collaboration, communication, creativity, and critical thinking. These competencies encompass empathy, social-emotional learning, compassion, entrepreneurship, and related skills necessary to function well in a complex world (Fullan et al., 2018). Developing the six competencies emphasized in deep learning not only fosters individuals who are academically intelligent, socially aware, emotionally sensitive, and adaptable to global needs (Maulana, 2025). Based on interviews with teachers in Bulukumba Regency regarding immersive learning, approximately 90% of them believed that immersive learning was a new curriculum that would be implemented in 2025. However, immersive learning is actually an approach aimed at providing more meaningful learning experiences for students. The results of these interviews were then combined with data from a pre-test administered to 18 elementary and special needs teachers, who were the subjects of this study. The pre-test, conducted in October 2025, found that the teachers' understanding of immersive learning was still limited. Eight teachers scored below 70, eight scored below 80, and two scored below 90.

One approach that can be used to improve teachers' professional competence in understanding immersive learning is the use of a Learning Management System (LMS). LMSs offer a variety of tools that can expand learning access, allowing teachers to access training materials flexibly. Iriani et al. (2025) showed that the use of an LMS can improve teachers' pedagogical competence, although the biggest challenge is teachers' lack of skills in managing and optimizing these platforms for teaching purposes. On the other hand, On-the-Job Training (OJT), which is based on direct experience in the field, has also proven effective in improving teachers' practical skills (Yulaekah, 2025). However, OJT is often limited to theoretical aspects applied directly in the classroom and lacks integration of technology-based learning (Yulaekah, 2025).

Many teachers face obstacles in accessing quality training, especially in remote areas. An LMS can bridge this gap by providing a platform that allows them to access training materials online (Syihabuddin, 2017). With an LMS, teachers can utilize various learning resources, including videos, e-books, and discussion forums, without having to physically attend training. This makes the professional development process more accessible and

affordable for all teachers. Furthermore, an LMS also helps with the management of educational resources. Through this platform, teachers can access relevant training materials and share experiences with their colleagues (Chew et al., 2020).

METHODS

This study employed a quantitative approach with a survey method. Data were obtained by distributing questionnaires to 18 respondents, who were teachers in Bulukumba Regency. The data analysis technique used was multiple linear regression analysis, which included partial tests (t-tests), simultaneous tests (F-tests), and coefficients of determination using a statistical data processing program..

FINDINGS AND DISCUSSION

The Effect of Learning Management System (LMS) Use on Improving Teacher Professional Competence in Deep Learning

Based on the results of the partial test (t-test), the variable Learning Management System (LMS) Use has a t-value of 9.888 with a significance value of 0.000, which is less than the 0.05 level of significance. This indicates that Learning Management System use has a significant effect on teacher professional competence in implementing deep learning in Bulukumba Regency. These results align with research conducted by Iriani et al. (2025), which found that utilizing a Learning Management System in the learning process can improve teacher competence, particularly in managing digital materials and evaluating technology-based learning. Furthermore, research by Hayati et al. (2025) also showed that optimal use of an LMS can improve the quality of teacher learning by designing more innovative and interactive learning.

Learning Management Systems make it easier for teachers to manage learning materials, assign assignments, conduct evaluations, and access various digital learning resources. Thus, utilizing an LMS can be a crucial strategy for improving teachers' professional competence in the face of technological developments in education. Furthermore, the use of a Learning Management System (LMS) also encourages teachers to be more adaptive to developments in educational technology and the digital transformation of the learning process. Through an LMS, teachers act not only as presenters of material but also as facilitators, capable of designing more structured, collaborative, and learner-centered learning experiences. The integration of various features such as discussion forums, online quizzes, digital assignment submission, and learning outcome analysis allows teachers to monitor student progress more systematically and efficiently. Therefore, the more optimal teachers'

use of an LMS, the greater the opportunity to improve their professional competence, particularly in designing, implementing, and evaluating technology-based learning that aligns with the demands of 21st-century education.

The Effect of On-the-Job Training (OJT) on Improving Teacher Professional Competence in In-Depth Learning

Based on the results of the partial t-test, the On-the-Job Training (OJT) variable has a calculated t-value of 6.869 with a significance value of 0.000, which is less than the 0.05 level of significance. Therefore, it can be concluded that On-the-Job Training (OJT) has a significant effect on teacher professional competence in Bulukumba Regency. These results align with research conducted by Yulaekah (2023), which states that On-the-Job and Off-the-Job Training improve teachers' professional and pedagogical competence because the training process is conducted directly in the workplace. Another study by Siti Raudoh and Fitri Anisa Kusumastuti (2025) also shows that internship-based training can improve teachers' professional abilities in managing learning and enhance teaching skills.

OJT training provides teachers with the opportunity to gain direct learning experience through internships and guidance from more experienced individuals. Thus, this training activity can help teachers improve their teaching skills and professional competence on an ongoing basis. Furthermore, the implementation of On The Job Training (OJT) also provides teachers with the opportunity to develop professional abilities through a practical and contextual learning process. Through OJT activities, teachers can directly observe, practice, and evaluate effective learning strategies in a real work environment. Interaction with colleagues and mentors during the training process also allows for the exchange of knowledge and experience that can enrich teachers' professional insights. Therefore, the more frequently teachers participate in structured and ongoing OJT activities, the greater their contribution to improving teachers' professional competence, particularly in developing more effective, innovative, and student-centered learning methods.

The Effect of a Combination of LMS and On-the-Job Training on Teacher Professional Competence in Deep Learning

Based on the results of the simultaneous test (F-test), the calculated F-value was 154.698 with a significance value of 0.000, which is less than the 0.05 level of significance. This indicates that the use of a Learning Management System (LMS) and On-the-Job Training (OJT) together significantly influences teacher professional competence in deep learning in Bulukumba Regency. These results align with research conducted by Zona Tanjung et al. (2025), which found that the combination

of digital learning technology and practice-based training can significantly improve teacher competence.

The coefficient of determination showed an Adjusted R-square of 0.365, indicating that 36.5% of the variation in teacher professional competence can be explained by LMS use and OJT implementation, while 63.5% is influenced by factors outside the research model. This indicates that improving teachers' professional competence is not only influenced by learning technology and on-the-job training, but also by other factors such as teaching experience, work motivation, and support from educational institutions. Furthermore, the results of this study indicate that the use of a Learning Management System (LMS) combined with On-The-Job Training (OJT) can be an effective strategy in comprehensively improving teachers' professional competence. The LMS plays a role in supporting technology-based learning processes and digital material management, while OJT provides direct practical experience that helps teachers develop teaching skills in a real-world work environment. The combination of learning technology and practice-based training can strengthen teachers' abilities to design, implement, and evaluate learning processes more innovatively and effectively. Therefore, the synergy between LMS utilization and OJT implementation needs to be continuously improved as an effort to support the improvement of teachers' professional competence in the digital era.

CONCLUSION

The use of a Learning Management System (LMS) has a significant impact on improving teacher professional competence in Bulukumba Regency. This is evidenced by the results of a partial t-test, which showed a calculated t-value of 9.888 with a significance value of 0.000, which is less than the 0.05 level. These results indicate that the more optimal the use of an LMS in the learning process, the greater the improvement in teachers' professional competence in managing technology-based learning. On-the-Job Training (OJT) significantly impacted teacher professional competence in Bulukumba Regency. This is demonstrated by the calculated t-value of 6.869 with a significance value of 0.000, which is less than 0.05. Thus, the implementation of hands-on, on-the-job training can improve teachers' teaching skills and professional abilities in carrying out the learning process. The simultaneous use of a Learning Management System (LMS) and On-the-Job Training (OJT) significantly impacted teacher professional competence in Bulukumba Regency. This is proven by the results of the simultaneous test (F test) which shows the value of F_{hitung} of 154.698 with a significance value of 0.000 which is smaller than 0.05. In addition, the Adjusted R Square value of 0.365 shows that 36.5% of the variation in teacher professional competence can be explained by the use of LMS and the implementation of OJT, while the rest is influenced by other factors outside the research model..

REFERENCES

- Ahmad Fauzi. 2021. *Pengaruh On The Job Training terhadap Peningkatan Kompetensi Kerja Guru*. Jurnal Pendidikan dan Pengembangan SDM.
- Anggriawan, Fandy Septia. 2020. *Pengembangan Learning Management System sebagai Media Pembelajaran untuk Sekolah Menengah Sederajat*. Jurnal Tata Rias, Vol. 9 No. 2.
- Aisyah, Nur dan Muhammad Iqbal. 2023. *Pengaruh Pelatihan Berbasis Praktik Kerja terhadap Kompetensi Profesional Guru*. Jurnal Pendidikan dan Pengajaran.
- Biggs, J. 2003. *Teaching for Quality Learning at University*. Society for Research into Higher Education & Open University Press.
- Boone Jr, Harry N, and Deborah A.Boone. 2012. *Analyzing Likert Data*. Journal of Extension 50
- Creswell, J. W. 2015. *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. Sage Publications.
- Departemen Pendidikan dan Kebudayaan. 1990. *Kamus Besar Bahasa Indonesia*. Jakarta: Balai Pustaka.
- Fullan, Michael, Joanne Quinn, dan Joanne McEachen. 2018. *Deep Learning: Engage the World Change the World*. United Kingdom: SAGE Publication Asia-Pacific Pte. Ltd.
- Hartono. 2019. *Metodologi Penelitian*. Pekanbaru: Zavana Publishing.
- Hayati, dkk. 2025. *Integrasi Platform E-Learning dan Coaching untuk Guru Sekolah Dasar di Kabupaten Malang: Evaluasi Efektivitas dan Pengaruhnya terhadap Kualitas Pembelajaran*. JEPENDIMAS, Vol. 2 No. 4.
- Iriani, U., Hestivik, C., Fadila, Y., & Sindo, P. 2025. *Efektivitas Penggunaan LMS dalam Diklat Daring untuk Meningkatkan Pedagogik Guru*. Jurnal Pendidikan dan Teknologi.
- Kementerian Pendidikan dan Kebudayaan Republik Indonesia. 2023. *Laporan Tahunan Kualitas Pendidikan di Indonesia*.
- Kemenpanrb. 2023. *Mendikdasmen Paparkan Penerapan Deep Learning untuk Tingkatkan Mutu Pendidikan*.
- Kunandar. 2011. *Guru Profesional: Implementasi Kurikulum Tingkat Satuan Pendidikan dan Sukses dalam Sertifikasi Guru*. Jakarta: Raja Grafindo Persada.
- Maszeri, Mokhlis, Shohibuddin, dkk. 2025. *Deep Learning dalam Pendidikan dan Artificial Intelligence*. Yogyakarta: Putra Adi Dharma.
- Maulana, Farhan. 2025. *Konsep Pendekatan Deep Learning Melalui Prinsip Mindful, Meaningful,*

- dan Joyful Learning pada Mata Pelajaran Pendidikan Agama Islam dan Budi Pekerti. UIN Syarif Hidayatullah Jakarta.
- Mulyasa, E. 2007. *Standar Kompetensi Sertifikasi Guru*. Bandung: Remaja Rosdakarya.
- Mulyasa, E. 2009. *Menjadi Guru Profesional Menciptakan Pembelajaran Kreatif dan Menyenangkan*. Bandung: Remaja Rosdakarya.
- Musfah, Jejen. 2011. *Peningkatan Kompetensi Guru melalui Pelatihan dan Sumber Belajar Teori dan Praktik*. Jakarta: Kencana Prenada Media Group.
- Nasution, S. 2004. *Didaktik Asas-asas Mengajar*. Jakarta: Bumi Aksara.
- Nurhayati, Siti. 2023. *Optimalisasi Learning Management System dalam Meningkatkan Inovasi Pembelajaran Guru*. Jurnal Pendidikan dan Teknologi.
- Nurmaini, siti. 2021. *Pengenalan Deep Learning dan Implementasinya*. Palembang: Unsri Press.
- Pratama, Rizky dan Dewi Lestari. 2022. *Kombinasi Teknologi Pembelajaran Digital dan Pelatihan Praktik dalam Peningkatan Kompetensi Guru*. Jurnal Inovasi Pendidikan.
- Pied A. Sahartian dan Ida Aleida. 1990. *Superfisi Pendidikan dalam Rangka Program Inservice Education*. Surabaya : Usaha Nasional.
- Pupuh Fathurrahman dan AA Suryan. 2012. *Guru Profesional*. Bandung : PT Radika Aditama
- Purwanto, Ngalim. 2004. *Ilmu Pendidikan Teoritis dan Praktis*. Bandung: Remaja Rosdakarya.
- Riadi, Muchlisin. 2003. *Learning Management System*. <https://www.kajianpustaka.com>
- Rahman, Andi. 2024. *Integrasi Pembelajaran Berbasis Teknologi dan Program Pelatihan Kerja dalam Peningkatan Kompetensi Guru*. Jurnal Pendidikan Digital.
- Raudoh,Siti dan Fitri Anisa Kusumastut. 2025. *Pengaruh Pelatihan Guru terhadap Profesionalisme Guru Sekolah Dasar*.
<https://jurnal.uns.ac.id/SHES/article/view/107449/51178>
- Santoso, Budi dan Rina Kartika. 2022. *Pemanfaatan Learning Management System dalam Meningkatkan Kompetensi Profesional Guru*. Jurnal Teknologi Pendidikan.
- Sudarmanto. 2009. *Kinerja dan Pengembangan Kompetensi SDM: Teori, Dimensi Pengukuran dan Implementasi dalam Organisasi*. Yogyakarta: Pustaka Pelajar.
- Sudjana, nana. 1991. *Dasar-dasar Proses Belajar Mengajar*. Bandung : Sinar Baru.
- Sugiyono. 2015. *Metode Penelitian Pendidikan*. Bandung: Alfabeta.
- Surya, Muhammad. 2003. *Percikan Perjuangan Guru*. Semarang: Aneka Ilmu.
- Suyanto, dkk. 2025. *Naskah Akademik Pembelajaran Mendalam Menuju Pendidikan Bermutu*. Jakarta: Pusat Kurikulum dan Pembelajaran Kemendikbud.
- Syah, Muhibbin. 2004. *Psikologi Pendidikan dengan Pendekatan Baru*. Bandung: Remaja

Rosdakarya.

Tim Peneliti Pendidikan Balai Litbang. 2011. *Pemetaan Mutu Madrasah Aliyah dalam Rangka Mencapai Standar Nasional Pendidikan di Provinsi Riau*. Jakarta: Balai Litbang Agama.

Uno, Hamzah B. 2008. *Profesi Kependidikan*. Jakarta: Bumi Aksara.

Undang-Undang Republik Indonesia Nomor 20 Tahun 2003 tentang Sistem Pendidikan Nasional.

Usman, Moh. Uzer. 2000. *Menjadi Guru Profesional*. Bandung: Remaja Rosdakarya.

Wirawan, D. 2022. *Learning Management System (LMS) dalam Pendidikan: Pengelolaan Pembelajaran Terstruktur dan Terintegrasi*. Yogyakarta: Penerbit Edukasi.

Yulaekah. 2023. *Pengaruh On the Job Training dan Off the Job Training terhadap Kompetensi Profesional dan Pedagogik Guru*. Tesis.

Yusuf, A. Muri. 1982. *Pengantar Ilmu Pendidikan*. Jakarta: Ghalia Indonesia.

Zona Tanjung, dkk. 2025. *Pelatihan Integrasi Teknologi dalam Pembelajaran bagi Guru-Guru*.
Jurnal