Journal of Smart Education and Learning, 3(2), 2026, 67-78
Available at: https://journal.nurscienceinstitute.id/index.php/jsel
EISSN: 3063-6930

A needs analysis of academic supervision to enhance teaching competence in the society 5.0 era

Ghasa Faraasyatul 'Alam[1]*, Nurul Faizah[2], Winda Fashihah[3], Hanif Aulia Kusuma[4], Mutmainnah[5]

[1]Faculty of Computer Science, Brawijaya University, Indonesia
[2]Graduate School of Education, Ankara University, Turkey
[3]Faculty of Administrative Science, Brawijaya University, Indonesia
[4]Postgraduate, State University of Malang, Indonesia
[5]Al-Muntahny Islamic Religious High School, Indonesia

*) Corresponding Author (e-mail: ghasafa@lec.ub.ac.id)

Abstract
This study aims to identify the preliminary needs for implementing academic supervision to strengthen educators' teaching competencies in the Society 5.0 era. This study employed a quantitative descriptive research design to examine the preliminary needs for academic supervision. Data were analyzed descriptively to identify the priority needs for academic supervision, discussing research findings in depth, and drawing a conclusion from an analysis of the need for academic supervision in relation to improving the quality of education. The participants consisted of 60 lecturers from Brawijaya University. Findings indicate that the need for academic supervision related to the preparation of learning devices accounted for 28%, followed by the need for supervision of blended learning teaching modules at 34%, and LMS-based teaching modules at 38%, representing the highest priority area. Lecturers require greater support in designing and implementing technology-enhanced learning environments. The study contributes to literature by identifying priority dimensions of academic supervision in higher education and provides practical guidance for universities in developing supervision programs that support digital pedagogy and teaching quality improvement in the Society 5.0 era.

Keywords: Academic Supervision, Teaching Competence, Era Society 5.0

Abstrak
Penelitian ini bertujuan untuk mengidentifikasi kebutuhan awal dalam penerapan supervisi akademik untuk memperkuat kompetensi mengajar pendidik di era Masyarakat 5.0. Penelitian ini menggunakan desain penelitian deskriptif kuantitatif untuk menguji kebutuhan awal supervisi akademik. Data dianalisis secara deskriptif untuk mengidentifikasi kebutuhan prioritas supervisi akademik, membahas temuan penelitian secara mendalam, dan menarik kesimpulan dari analisis kebutuhan supervisi akademik dalam kaitannya dengan peningkatan kualitas pendidikan. Partisipan terdiri dari 60 dosen dari Universitas Brawijaya. Temuan menunjukkan bahwa kebutuhan supervisi akademik terkait dengan persiapan perangkat pembelajaran mencapai 28%, diikuti oleh kebutuhan supervisi modul pengajaran blended learning sebesar 34%, dan modul pengajaran berbasis LMS sebesar 38%, yang mewakili area prioritas tertinggi. Dosen membutuhkan dukungan yang lebih besar dalam merancang dan mengimplementasikan lingkungan pembelajaran yang ditingkatkan dengan teknologi. Studi ini berkontribusi pada literatur dengan mengidentifikasi dimensi prioritas supervisi akademik di pendidikan tinggi dan memberikan panduan praktis bagi universitas dalam mengembangkan program supervisi yang mendukung pedagogi digital dan peningkatan kualitas pengajaran di era Masyarakat 5.0.

Kata kunci: Supervisi Akademik, Kompetensi Mengajar, Era Masyarakat 5.0

How to cite: 'Alam, G. F., Faizah, N., Fashihah, W., Kusuma, H. A., & Mutmainnah. (2026). A needs analysis of academic supervision to enhance teaching competence in the society 5.0 era. *Journal of Smart Education and Learning*, *3*(2), 67–78. https://doi.org/10.53088/jsel.v3i2.3452

1. Introduction

Society 5.0 has emerged as a transformative paradigm that is reshaping education through the integration of advanced digital technologies, requiring educators to continuously develop their teaching competencies to meet evolving learning demands. The world of education has also welcomed the arrival of this era which can be seen from the development of infrastructure, synchronization of education and industry, the use of technology as an aid in the teaching and learning process, and the development of human resources in each educational unit (Nastiti & Abdu, 2020). Consequently, developing 21st-century competencies has become increasingly important for both students and educators (Sumarno, 2019). According to Carayannis & Morawska-Jancelewicz a bright future with good quality education cannot be separated from all levels of education, including in higher education today (Carayannis & Morawska-Jancelewicz, 2022). Educators play a central role in producing high-quality human resources by delivering professional instruction that aligns with technological and educational developments.

Castañeda et al. (2018) emphasized that digital teaching competence plays a significant role in improving educational practices in the digital era. Digital teaching competence enables educators to integrate digital technologies effectively into instructional practices, thereby enhancing teaching quality and student learning outcomes (Colás-Bravo et al., 2019). Sustainability and competence of digital teaching in higher education are also currently being developed and realized in stages through professionalism training for educators to prepare for national and international competitiveness in the world of education with the advantages possessed by each educational institution (Colás-Bravo et al., 2021).

These developments highlight the need to strengthen educators' professional competencies in the Society 5.0 era, particularly their ability to effectively integrate digital technologies and innovative teaching practices into the learning process. To deal with the problems that are often experienced by tertiary institutions, the initial solution that can be given is by conducting a needs analysis to be able to identify deeper and further about the needs of educators to improve the learning process in the classroom. Academic supervision is widely recognized as an effective approach to supporting educators' professional development (Elliana et al., 2021). In general, this supervision can be interpreted as observing, guiding, and supervising activities (Fitriyani et al., 2021). Therefore, analyzing the need for academic supervision is essential to designing professional development programs that address educators' instructional challenges effectively.

One of the main parts of educational supervision is supervising educators in carrying out learning activities known as academic supervision (Istiningsih et al., 2020). Academic supervision can be defined as professional assistance to educators with a sequence of systematic planning cycles, careful observation, and objective and accurate feedback (Rahabav, 2016). The essence of academic supervision itself is actually not to assess the work of educators in managing the learning process, but

academic supervision is carried out to assist educators in order to improve the quality of learning which can develop educator professionalism when carrying out teaching activities in certain educational units (Sunaryo, 2020).

While previous studies have demonstrated the role of academic supervision in enhancing teaching quality and professional competence, limited research has examined the specific supervision needs of university lecturers in the Society 5.0 era. In particular, the supervision requirements related to blended learning and LMS-based teaching remain underexplored. Therefore, this study seeks to fill this gap by identifying and prioritizing academic supervision needs that support lecturers' digital pedagogical competencies in higher education.

Increasing the teaching competence of educators is urgently needed especially with the challenges of the current era of society 5.0 which are increasingly widespread in various fields including education. Higher education institutions therefore continue to improve educators' competencies to ensure high-quality teaching and produce competent graduates. Further investigation regarding these academic needs needs to be carried out to create superior educational quality that is reflected in the academic community (Zen et al., 2022). Therefore, this study aims to analyze educators' needs for academic supervision and identify priority areas for strengthening teaching competence in the Society 5.0 era.

2. Research Method

The research method used in the analysis of academic supervision needs is a quantitative method with a descriptive approach so as to provide a clear picture of the analysis of the data obtained. Steps that can be taken to obtain research results include conducting research data analysis, discussing research findings, and providing conclusions. The research was conducted at Brawijaya University, involving 60 lecturers selected through purposive sampling. The inclusion criteria required participants to be actively engaged in teaching and involved in the implementation of technology-supported learning activities.

Quantitative research is carried out so that the needs analysis that you want to find can be found with accurate and informative information and data. According to Cresswell each procedure from the stages carried out in the research is used to collect and analyze important information in order to increase understanding of the issues or research topics raised (Cresswell, 2015). This needs analysis was carried out as an initial stage for further research using scientific methods to obtain data with specific purposes and uses (Sugiyono, 2018). Therefore, research that uses quantitative methods needs to look at the results of the analysis and initial definitions to be able to get the findings that the researcher wants (Riyanto & Hatmawan, 2020).

Data were collected using an online questionnaire consisting of 15 items distributed across three dimensions of academic supervision needs: (1) learning device preparation (5 items), (2) blended learning teaching modules (5 items), and (3) LMS-based teaching modules (5 items). Responses were measured using a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Prior to data

collection, the instrument was subjected to validity and reliability testing. Content validity was evaluated by three experts in educational supervision and educational technology. Construct validity was assessed using item-total correlation analysis, with all items meeting the minimum acceptable correlation coefficient ($r > 0.30$). Reliability was examined using Cronbach's Alpha, yielding a coefficient above 0.70, indicating satisfactory internal consistency.

The data analysis process consisted of three stages. First, questionnaire responses were tabulated and screened for completeness. Second, descriptive statistical analysis was conducted using frequency, mean, and percentage calculations to identify the relative priority of each academic supervision need category. The percentages were obtained by comparing the total score of each category with the overall accumulated score across all categories. Finally, the findings were interpreted and discussed to formulate conclusions and recommendations regarding the development of academic supervision programs aimed at enhancing lecturers' teaching competencies and supporting digital learning implementation in the Society 5.0 era.

3. Results and Discussion

The needs analysis identified three priority areas for academic supervision to enhance educators' teaching competence in the Society 5.0 era: instructional planning, LMS-based teaching modules, and blended learning teaching modules. From the three results of the analysis of the need to carry out academic supervision in the learning process in order to improve educator competence, it can be concluded that the need for teaching modules based on learning management systems gets more attention than the needs for preparation of learning devices and blended learning teaching modules which can be seen in Figure 1 and Figure 2.

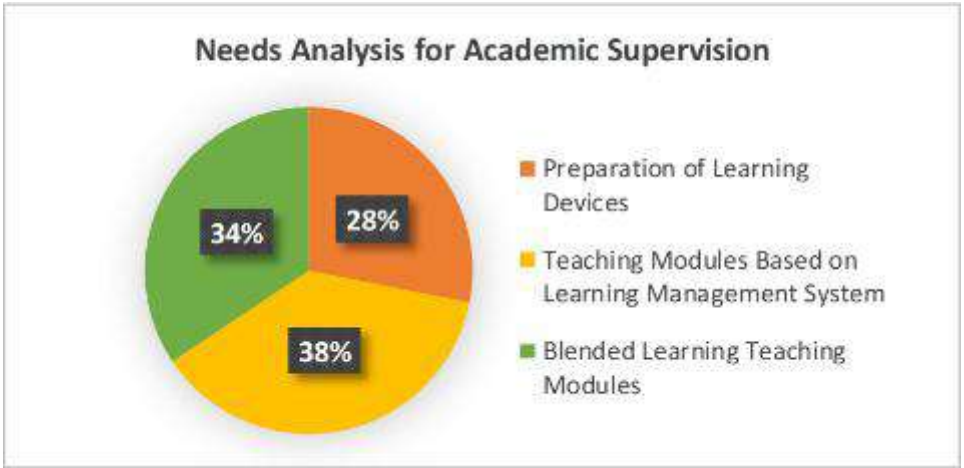


Figure 1. Needs Analysis of Academic Supervision

Figure 1 presents the results of the academic supervision needs analysis based on responses collected using a five-point Likert scale. The resulting category scores indicated that learning device preparation accounted for 28% of the total supervision needs score, blended learning teaching modules accounted for 34%, and LMS-based teaching modules accounted for 38%. These findings suggest that lecturers perceive

the greatest need for academic supervision in developing and implementing LMS-based teaching modules, followed by blended learning modules, while supervision related to learning device preparation received comparatively lower priority.

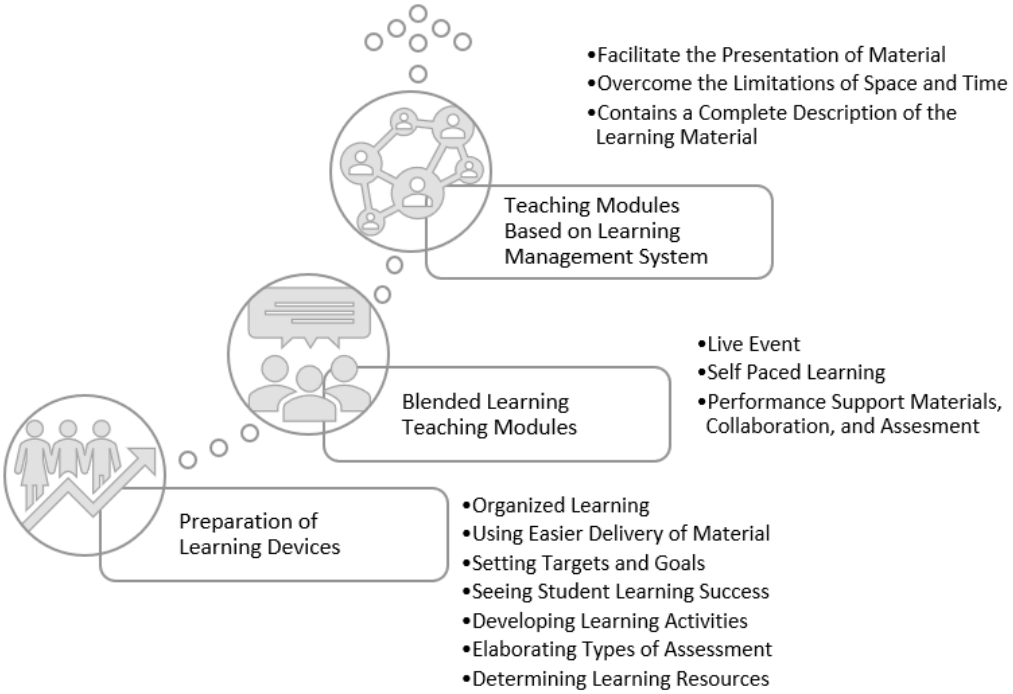


Figure 2. Academic Supervision to Improve Teaching Competence

Figure 2 illustrates the relationship between academic supervision and the improvement of educators' teaching competence. The findings suggest that systematic academic supervision can strengthen instructional practices and support continuous professional development. This result can be interpreted within the context of Brawijaya University, where the integration of digital learning technologies has become an essential component of teaching and learning activities. As a university that actively promotes technology-enhanced learning and supports hybrid and online instructional models, lecturers are increasingly expected to design, manage, and deliver learning content through LMS.

Consequently, many lecturers require additional guidance and academic supervision to develop high-quality LMS-based teaching modules that effectively organize learning materials, facilitate student engagement, support assessment activities, and ensure alignment with learning outcomes. Furthermore, the high demand for LMS-based supervision reflects the growing need to optimize digital pedagogical competencies, particularly in responding to the challenges of Society 5.0, where technology integration, flexible learning environments, and data-driven educational practices play a central role in higher education. Therefore, the prominence of LMS-based teaching modules in this study indicates not only a technological requirement but also a strategic need to strengthen lecturers' capacity to deliver effective and innovative digital learning experiences at Brawijaya University.

Academic Supervision for Preparation of Learning Devices

The needs analysis based on educators' perceptions revealed that 45% of respondents strongly agreed, 35% agreed, 15% were neutral, 5% disagreed, and none strongly disagreed with receiving training on the preparation of learning devices (Figure 3).

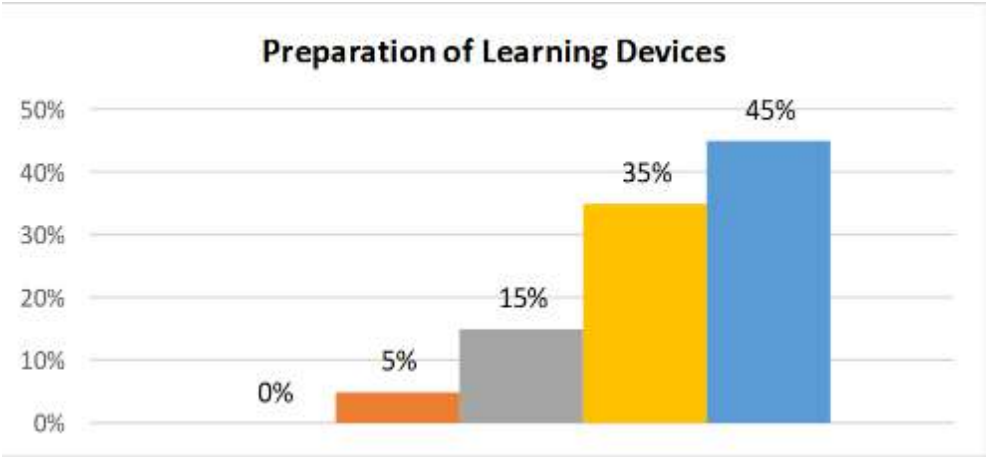


Figure 3. Preparation of Learning Devices

These findings are consistent with those reported by Jenab (2019), who found that academic supervision significantly improved teachers' competence in preparing lesson plans. The preparation of learning plans has increased in terms of determining the learning model there has been an increase, namely: from 25% it increased to 75% and the assessment aspect increased from 25% to 75%, indicators increased from 25% to 75%, learning objectives increased from 50% to 75 %, teaching materials from 25% to 75%.

Similar findings were reported by Safitri (2021), who found significant improvements in educators' ability to prepare lesson plans following academic supervision. Teaching competence involves not only mastery of knowledge and professional skills but also the ability to adapt to changing educational demands (Rustianto et al., 2018). Academic supervision plays an important role in supporting educators' professional growth through reflection and instructional (Wiyono et al., 2022).

The findings indicate that conventional supervision is insufficient to address the challenges of digital learning. The strong need for supervision related to blended learning and LMS-based teaching modules suggests that academic supervision should focus more on developing lecturers' digital pedagogical competencies to support effective teaching in the Society 5.0 era. Therefore, preparation of learning devices is needed by educators so that they can have more thorough preparation in terms of teaching and learning which is also integrated with the use of digital technology to be able to support various kinds of tasks.

Academic supervision has also been shown to improve educators' ability to prepare innovative lesson plans that comply with educational standards (Rohadi, 2021). Training is one of the supervision techniques that can be utilized by educational institutions to be able to develop their human resources in order to gain insight, knowledge, skills, and competencies so that they can realize the professionalism of

educators in more meaningful teaching (Wiyono et al., 2020). It has been proven from the results of previous findings that it is also consistent to say that academic supervision activities carried out in realizing an optimal learning process can influence the increase in educator competence for making lesson plans for each lesson.

Academic Supervision to Teaching Modules Based on Learning Management System

The results of the needs analysis of the teaching modules based on learning management system based on educator perceptions show that 0% strongly disagree, 5% disagree, 5% neither agree nor disagree, 30% agree, and 60% strongly agree if they receive training on teaching modules based on learning management system which can be noticed in Figure 4.

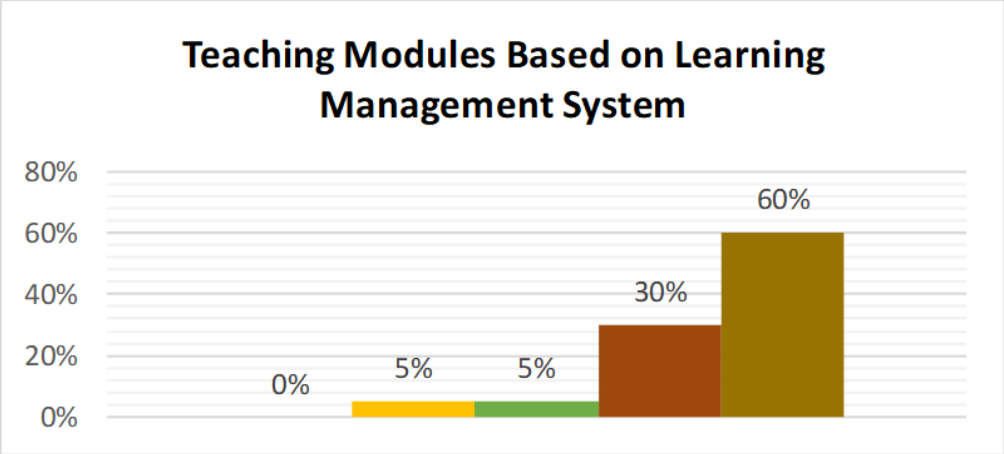


Figure 4. Teaching Modules Based on Learning Management System

The training process for educators regarding e-learning can be implemented with a learning management system where it can help improve specific teaching work so that it can have a positive impact on educators who participate in regular supervision activities (Strigas& Tsimiris, 2019). Improving teaching quality requires innovative instructional strategies supported by web-based learning management systems (Meléndez Peretó et al., 2018). Effectiveness of using an e-module based on a learning management system is considered quite high, because it is able to provide facilities in the form of open source material that can be accessed flexibly anywhere and at any time (‘Alam et al., 2023).

The present findings are consistent with Onan et al. (2014) who said that teaching through Moodle is considered sufficient to be able to meet the needs of the teaching process in relation to modules that can be used for audit purposes and evaluation management data related to monitoring, assessing, and managing the teaching process in project-based-learning activities using a learning management system according to function. These findings suggest that the needs of educators regarding module learning through a learning management system are needed to support teaching and learning activities so that they become more effective and efficient and facilitate all kinds of educational management processes, especially in learning. Other findings suggest that good university governance is able to provide a positive and

significant relationship to student trust through educational management information systems in higher education (Faraasyatul'Alam et al., 2021). This means that the better use of education management information system that is managed, the more optimal results it can produce for academic needs of lecturers and students (Faraasyatul Alam et al., 2023).

Developing academic supervision modules is increasingly important because they enhance educators' professional performance (Saleh & Mutiani, 2021). This academic supervision also plays an important role in improving the quality of teacher teaching in the classroom and can help educators to be able to improve the teaching profession so that student learning outcomes can continue to increase (Noor et al., 2020). The need for teaching modules based on learning management system can increase student learning outcomes, one of the factors is that the system has been integrated with the assessment of the learning evaluation results for each assignment given by educators automatically facilitating the process of processing the grades.

Academic Supervision to Blended Learning Teaching Modules

The results of the needs analysis of blended learning teaching modules based on educator perceptions show that 0% strongly disagree, 5% disagree, 5% neither agree nor disagree, 35% agree, and 55% strongly agree if they receive training on blended learning teaching modules which can be considered in Figure 5.

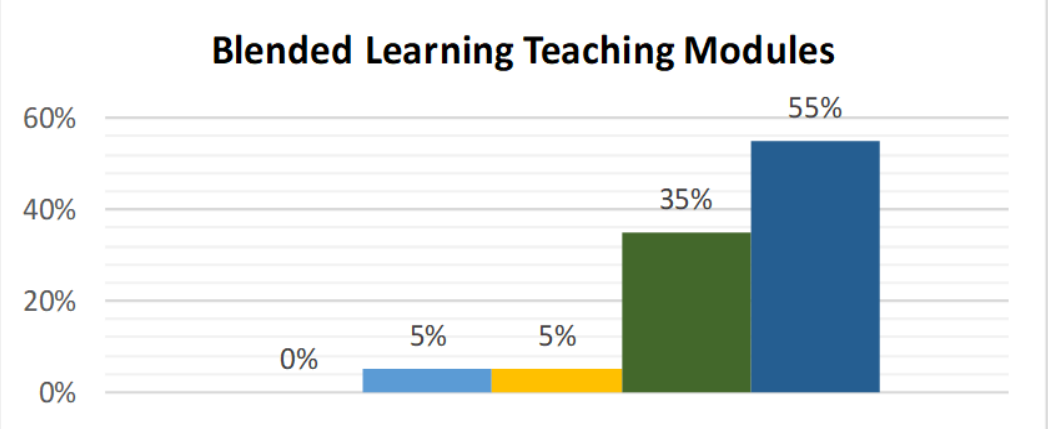


Figure 5. Blended Learning Teaching Modules

Academic supervision plays an important role in integrating technology into professional teaching practice (Donnelly, 2013). The need for blended learning teaching modules can be seen clearly in the era of society 5.0 which carries the concept of an intelligent society with guidance on the skills of 21st century educators. Innovation and the 21st century learning curriculum are certainly developing rapidly, especially the implementation of blended learning which continues to be strengthened to be able to obtain teaching and learning activities that are based on smart education (Fahmi et al., 2020). Educators require training to adapt blended learning strategies to current curricula and rapidly evolving digital technologies. Such training enables them to design interactive teaching materials that support effective learning. Today's innovative teaching modules also utilize interactive multimedia in learning performance

that is integrated with digital technology, so that teaching and learning activities can be more enjoyable and not boring (`Alam et al., 2019).

Electronic modules in blended learning positively affect learning implementation, student readiness, and instructional innovation (Sumarmi et al., 2021). Indeed, the impact given by the existence of blended learning teaching modules makes the quality of teaching more optimal, then training through academic supervision is needed by every educator. Development of blended learning-based modules is needed to be able to handle the learning process properly according to the material of each educational institution (Putri et al., 2021). The design of blended learning modules sometimes also must pay attention to the characteristics of the course material, the features contained in the learning management system, supporting facilities for teaching and learning activities, the role of the lecturer in preparing and facilitating learning, and alternative online modules for other existing blended learning in college (Cahyono et al., 2019).

If educators hope to be able to make such good blended learning modules, they must be prepared as well as possible by carrying out academic supervision activities in which there are special teachings or exercises related to making interactive teaching modules. Sugiani et al. (2019) also reported that electronic modules significantly improved students' learning outcomes and learning independence. Teaching modules in blended learning can reveal a conducive and directed learning environment, learner knowledge that can be obtained from a variety of quality sources, increased learning motivation due to interaction and feedback, and increased satisfying learning experiences when viewed from the learning process (Jais et al., 2021). Overall, the evidence indicates that academic supervision is essential for improving educators' instructional competence and supporting the effective implementation of blended learning in higher education.

4. Conclusion

Study indicates that the highest academic supervision need was related to LMS-based teaching modules (38%), followed by blended learning teaching modules (34%) and learning device preparation (28%). These results suggest that lecturers require greater support in developing digital pedagogical competencies to effectively implement technology-enhanced learning in the Society 5.0 era. Therefore, the identified supervision needs can serve as a reference for supervisors and university leaders in designing targeted professional development programs, particularly those focused on LMS utilization, blended learning implementation, and digital instructional design. However, this study is limited by its relatively small sample size and its focus on lecturers from a single institution, which may limit the generalizability of the findings. Future research should involve larger and more diverse samples across multiple universities and employ mixed-methods approaches to gain deeper insights into lecturers' academic supervision needs. In practice, higher education institutions should develop continuous and data-driven academic supervision programs to strengthen educators' professionalism, improve teaching quality, and support sustainable educational transformation in the Society 5.0 era.

Acknowledgements

The greatest gratitude is conveyed to Brawijaya University for their invaluable support and contribution to this research. The academic environment, resources, and encouragement provided greatly assisted in the completion of this scientific work.

References

‘Alam, G. F., Sobri, A. Y., & Sunandar, A. (2023). Higher Education Standard Policy with Effectiveness of Using E-Module Through Learning Management System. In *Proceedings of the International Conference on Educational Management and Technology (ICEMT 2022)*. https://doi.org/10.2991/978-2-494069-95-4_34

`Alam, G. F., Az-Zahra, H. M., & Rokhmawati, R. I. (2019). Pengembangan Media Pembelajaran Berbasis Multimedia Interaktif pada Mata Pelajaran Sains Materi Tata Surya Menggunakan Model APPED (Studi Kasus: SD Brawijaya Smart School). (2019). *Jurnal Pengembangan Teknologi Dan Ilmu Komputer*, *3*(4), 3832-3837

Cahyono, A. N., Zaenuri, & Subagja, M. (2019). The Design of Blended Learning Modules for Higher Education. *Journal of Physics: Conference Series*, *1387*(1). https://doi.org/10.1088/1742-6596/1387/1/012121

Carayannis, E. G., & Morawska-Jancelewicz, J. (2022). The Futures of Europe: Society 5.0 and Industry 5.0 as Driving Forces of Future Universities. *Journal of the Knowledge Economy*. https://doi.org/10.1007/s13132-021-00854-2

Castañeda, L., Esteve, F., & Adell, J. (2018). Why rethinking teaching competence for the digital world? In *Revista de Educación a Distancia* (Issue 56). https://doi.org/10.6018/red/56/6

Colás-Bravo, P., Conde-Jiménez, J., & Reyes-de-Cózar, S. (2019). The development of the digital teaching competence from a sociocultural approach. *Comunicar*, *27*(61). https://doi.org/10.3916/C61-2019-02

Colás-Bravo, P., Conde-Jiménez, J., & Reyes-de-Cózar, S. (2021). Sustainability and digital teaching competence in higher education. *Sustainability*, *13*(22), 12354. https://doi.org/10.3390/su132212354

Cresswell, J. W. (2015). Research Design Pendekatann Kualitatif, Kuantitatif, dan Mixed. Yogyakarta: Pustaka Pelajar.

Donnelly, R. (2013). Enabling connections in postgraduate supervision for an applied eLearning professional development programme. *International Journal for Academic Development*, *18*(4). https://doi.org/10.1080/1360144X.2013.784873

Elliana, E., Yusrizal, Y., & Usman, N. (2021). Academic Supervision in Improving Teacher Professionalism. *AL-ISHLAH: Jurnal Pendidikan*, *13*(1). https://doi.org/10.35445/alishlah.v13i1.527

Fahmi, A. K. R., Mustiningsih, Safitri, A. M. N., Ratri, D. K., Argadinata, H., & ‘Alam, G. F. (2020). *Curriculum and Learning Innovation COVID-19 Pandemic Situation at Surya Buana Modern Islamic Boarding School Malang, Indonesia*. https://doi.org/10.2991/assehr.k.201214.265

Faraasyatul’Alam, G., Burhanuddin, & Supriyanto, A. (2021). Relation of good university governance with education management information system, excellent

service, and student trust at the entrepreneur campus. *Proceedings - 2021 7th International Conference on Education and Technology, ICET 2021*. https://doi.org/10.1109/ICET53279.2021.9575063

Faraasyatul Alam, G., Imron, A., Timan, A., & . S. (2023). Productivity of Learning Management System in Organizational Development by Utilizing Smart Education. *KnE Social Sciences*. https://doi.org/10.18502/kss.v8i10.13445

Fitriyani, E. P., Supardi, K. I., & Amin, Y. (2021). Academic Supervision For Improving Pedagogical Competence of Classroom Teachers. *Educational Management*, *10*(1), 86-90.

Istiningsih, E., Suyatno, & Widodo. (2020). Academic supervision to improve teachers' readiness in utilizing information and communication technology in vocational high schools. *Universal Journal of Educational Research*, *8*(10). https://doi.org/10.13189/ujer.2020.081002

Jais, J., Abdul Rahim, R. E., Budit, B., Hussin, M., Kamaruzaman, S. F., Kamaruldin, & Mohd Dzaki, D. R. (2021). Exploring user analysis of blended learning module for Research Methodology course. *SHS Web of Conferences*, *124*. https://doi.org/10.1051/shsconf/202112401002

Jenab, I. (2019). Supervisi Akademik Berkelanjutan dalam Meningkatkan Kompetensi Guru pada Penyusunan Silabus dan RPP. *P2M STKIP Siliwangi*, *6*(1). https://doi.org/10.22460/p2m.v6i1p34-50.1250

Meléndez Peretó, A., Pedrosa Bou, A., & Fuentes Agustí, M. (2018). Supervisible Project. Teaching and Learning from and for the Community. *ICERI2018 Proceedings*, *1*. https://doi.org/10.21125/iceri.2018.1786

Zen, E. F., Hambali, I. M., Ashar, M., Saputra, N. M. A., & Kurniawan, N. A. (2022, January). Investigating Needs of Academic Support Using Personalized Learning System to Enhance Academic Success Among Fresh Year Student. In *2022 2nd International Conference on Information Technology and Education (ICIT&E)* (pp. 363-367). IEEE. https://doi.org/10.1109/ICITE54466.2022.9759842

Nastiti, F., & Abdu, A. (2020). Kajian: Kesiapan Pendidikan Indonesia Menghadapi Era Society 5.0. *Edcomtech Jurnal Kajian Teknologi Pendidikan*, *5*(1). https://doi.org/10.17977/um039v5i12020p061

Noor, I. H. M., Herlinawati, & Sofyaningrum, E. (2020). The academic supervision of the school principal: A case in Indonesia. *Journal of Educational and Social Research*, *10*(4). https://doi.org/10.36941/JESR-2020-0067

Onan, A., Gürlen, E., & Turan, S. (2014). Do moodle reports and logs meet the needs of educational supervision? *Iberian Conference on Information Systems and Technologies, CISTI*. https://doi.org/10.1109/CISTI.2014.6877087

Putri, R. W., Retnoningsih, A., & Widiatningrum, T. (2021). Development of Plant Tissue Module Based on Blended Learning as High School Teaching Material. *Journal of Innovative Science Education*, *10*(2), 168-176. https://doi.org/10.15294/jise.v9i3.42075

Rahabav, P. (2016). The Effectiveness of Academic Supervision for Teachers. *Journal of education and practice*, *7*(9), 47-55.

Riyanto, S., & Hatmawan, A. A. (2020). Metode Riset Penelitian Kuantitatif Penelitian Di Bidang Manajemen, Teknik, Pendidikan Dan Eksperimen. Deepublish.

Rohadi, R. (2021). Improving Teacher's Ability in Developing Innovative RPP During The Covid-19 Pandemic Through Academic Supervision Program in SMAN 1 Puloampel Academic Year 2020/2021. *Journal of English Education Studies*, *4*(1). https://doi.org/10.30653/005.202141.64

Rustianto, A., Rusdarti, R., & Prihatin, T. (2018). Academic Supervision Model Based On Video Conference For Teacher Of Smk Negeri In Wonosari Sub-District, Gunungkidul Regency. *Educational Management*, *7*(1).

Safitri, H. (2021). Peningkatan Kemampuan Guru dalam Menyusun RPP Kurikulum 2013 melalui Supervisi Akademik di SMP Negeri Tanjungpinang Tahun 2018. *TANJAK: Journal of Education and Teaching*, *2*(1). https://doi.org/10.35961/tanjak.v2i1.163

Saleh, M., & Mutiani, M. (2021). The Role of the Principal in Increasing Teacher Performance Through Periodic Academic Supervision. *AL-ISHLAH: Jurnal Pendidikan*, *13*(2). https://doi.org/10.35445/alishlah.v13i2.889

Sugiani, K. A., Degeng, I. N. S., Setyosari, P., & Sulton. (2019). The Effects of Electronic Modules in Constructivist Blended Learning Approaches to Improve Learning Independence. *International Journal of Innovation, Creativity and Change*, *9*(10), 82-93.

Sugiyono. (2018). Sugiyono Metode Penelitian Kuantitatif Kualitatif. *Metode Penelitian Kuantitatif Kualitatif*. Bandung: Alfabeta

Sumarmi, Bachri, S., Irawan, L. Y., & Aliman, M. (2021). E-module in blended learning: Its impact on students' disaster preparedness and innovation in developing learning media. *International Journal of Instruction*, *14*(4). https://doi.org/10.29333/iji.2021.14412a

Sumarno, S. (2019). Pembelajaran Kompetensi Abad 21 Menghadapi Era Society 5.0. In *Prosiding SEMDIKJAR (Seminar Nasional Pendidikan Dan Pembelajaran)* (Vol. 3, pp. 272-287).

Sunaryo, Y. (2020). Academic supervision of school principals and teacher performance: A literature review. *International Journal Pedagogy of Social Studies*, *5*(2), 17-34. https://doi.org/10.17509/ijposs.v5i2.29094

Strigas, K.P., & Tsimiris, A. (2019). Teacher Training with Distance e-Learning Application, Statistical Analysis and Valuation. (English). *Open Education: The Journal for Open & Distance Education & Educational Technology*, *15*(1). https://doi.org/10.12681/jode.19604

Wiyono, B. B., Burhanuddin, & Maisyaroh. (2020). Comparative effect of the supervision of the principal and quality of organizational management in school education. *Utopia y Praxis Latinoamericana*, *25*(Extra10). https://doi.org/10.5281/zenodo.4155681

Wiyono, B. B., Widayati, S. P., Imron, A., Bustami, A. L., & Dayati, U. (2022). Implementation of Group and Individual Supervision Techniques, and Its Effect on the Work Motivation and Performance of Teachers at School Organization. *Frontiers in Psychology*, *13*. https://doi.org/10.3389/fpsyg.2022.943838