The Important Role of Principal in Academic Supervision to Improve Teacher Competency in Society 5.0 Era

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ARTICLE INFO	ABSTRACT
	This research analyzes theories and strategies for increasing teacher competency through academic supervision. This research used a qualitative literature review method. The collected articles were selected using purposive sampling, resulting in 120 relevant books and articles. The document findings were then analyzed and sorted into three main topics: educational supervision, teacher competency, and the era of society 5.0. After grouping the data based on the themes above, 10 articles and books were found on topics related to educational supervision, 10 articles and books on teacher competency, and 5 on the era of society 5.0. The research results show that school (madrasah) principals must have expertise and seriousness in supervising educational institutions, especially academic supervision, which aims to improve teacher competence. Academic supervision involves planning, implementation, and evaluation with the principles of objectivity and continuous improvement. With this research, it is hoped that it can be used as a model for effective academic supervision by school principals and teachers in the information technology era.

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INTRODUCTION

The low competence of teachers is an educational problem in Indonesia. The large number of teachers who are technology stutterers narrows students' opportunities to explore their curiosity. These teachers only rely on books as a source and conventional learning media. The use of varied and up-to-date media can make the teacher's role to be more innovative and productive in presenting material to students.[1] The teacher's expertise and ability to utilize technology dramatically influence the quality of learning. Improving the quality of education is necessary to increase human resources.[2] Not only improvements in teacher competence, but improvements to the quality of educators, curriculum, and infrastructure must always be done in tandem. It is done so that students can compete in the era of Society 5.0, an era of information and communication technology that is rapidly developing.[3]

The role of a teacher is to create an atmosphere that supports learning. Thus, students easily understand the material, have motivation and enthusiasm for learning, and possess a high level of learning persistence to improve student learning achievement.[4] Competent and professional educators are educators who can organize and plan learning activities, consisting of the primary material in the learning process, preparation of Learning Implementation Plans and Syllabus, selection of learning methods and techniques, use of multimedia, and information communication technology in the learning process.[5] Not only being able to plan and teach, competent and professional teachers can also focus on improving student achievement.

In line with the goals of education, namely providing quality and professional human resources,[6] the professionalism and competence of teachers as educators can be increased through supervision, coaching, and providing motivation carried out by supervisors both by school principals, senior teachers as well and related education offices through objective and sustainable educational supervision activities.[7]

Ozila said that the importance of the principal's supervision of teacher educators is an effort to control and guarantee the quality of learning in the classroom. This role must be carried out continuously and sustainably. Academic supervision is the basis of professional supervision activities to improve teacher competence. Unfortunately, supervision in the field only reaches the stage of examining lesson plans and observing the

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[1] M Ghofar Rohman and Purnomo Hadi Susilo, "Peran Guru dalam Penggunaan Media Pembelajaran Berbasis Teknologi Informasi dan Komunikasi (TIK) Studi Kasus di TK Muslimat NU Maslakul Huda," *Reforma: Jurnal Pendidikan dan Pembelajaran* 8, no. 1 (2019): 173–77.

[2] Regita Andriani, Ditha Aulia Andriany, and Sifa Kiamul Lailia, "Meningkatkan Kualitas Guru dalam Menguasai TIK Melalui Program Microsoft Partner in Learning (PiL) dan Aplikasi Moodle," *Current Research in Education: Conference Series Journal* 01, no. 01 (2021): 1–6.

[3] Ubabuddin, "Pelaksanaan Supervisi Pembelajaran sebagai Upaya Peningkatan Tugas dan Peran Guru Dalam Mengajar," *Nidhomul Haq* 5, no. 1 (2020): 102–18.

[4] Nurdyansyah and Eni Fariyatul Fahyuni, *Inovasi Model Pembelajaran*, *Nizmania Learning Center*, Edisi 1 (Sidoarjo: Nizamia Learning Center, 2016).

[5] Kemendikbud, *Supervisi Akademik* (Direktorat Jenderal Guru dan Tenaga Kependidikan, 2016), 14.

[6] Benjamin Bukit, Tasman Malusa, and Abdul Rahmat, *Pengembangan Sumber Daya Manusia. Teori, Dimensi Pengukuran, dan Implementasi dalam Organisasi*, 1st ed. (Yogyakarta: Zahir Publishing, 2017), 17.

[7] Munawar, "Supervisi Akademik: Mengurai Problematika Profesionalisme Guru di Sekolah," *Al-Tanzim : Jurnal Manajemen Pendidikan Islam* 03, no. 01 (2019): 135–55.

implementation of teacher learning in the classroom. It has not yet reached the realm of measuring student achievement.[8] Furthermore, Prasojo, L.D. stated that the supervision or supervision of school principals can be used as a standard guideline for education stakeholders to issue policies regarding the utilization and use of information technology such as social media in education. Likewise, as a supervisor, the principal is expected to be able to motivate teachers to explore the use of information technology or social media for the benefit of educational progress and academics in the future.[9]

The research findings above show that school principals are essential in providing motivation and solutions for increasing teacher competency. However, this research emphasizes the importance of school principals providing additional insight and knowledge through supervision activities to increase teacher competency, which is needed in the current era of digital technology.

Several reasons underlying the importance of this research are supervision able to improve the quality of learning and provide solutions to problems faced by teachers. However, the effectiveness of academic supervision in implementing learning in schools (madrasah) will have an impact on increasing the competence of teachers, which in turn can be used as a model for effective academic supervision by both school principals and teachers in the information technology era. This research can also be used as a standard guide for education stakeholders to issue policies regarding the utilization and use of information technology, such as social media, in education. Likewise, as a supervisor, the principal is expected to be able to motivate teachers and students to explore the use of information technology or social media in learning interactions for the benefit of educational progress and academics in the future.

RESEARCH METHOD

This study used a qualitative literature review method. The data used in this study were articles related to academic supervision, teacher competence, and the era of Society 5.0. The data collection technique was documentation by tracing written sources that contain information on the topics discussed. The data sources included research articles published on Science Direct, Google Scholar, Scopus, Mendeley Web, and Research Gate.

From the selection results using the purposive sampling method, it can be identified that 120 books and articles were relevant and published in the last 12 years. It can be found ten articles and books on topics related to educational supervision, ten articles and books on teacher competence, and five articles and books related to the era of Society 5.0. The data obtained were then analysed using Content Analysis. The data analysis technique used in this study was proposed by Miles & Huberman[10], which the stages were data reduction, data display (presentation of data), and conclusion. The results of the document findings were analyzed and reduced into three main topics: educational supervision, teacher

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[8] Amalini Lutfia Ozila, "Peranan Supervisi dalam Meningkatkan Pengembangan Profesionalisme dan Kinerja Guru" (Universitas Negeri Padang, 2017), 126.

[9] Lantip Diat Prasojo and Lia Yuliana, "How Is Social Media Used by Indonesian School Principals for Instructional Leadership?," *Cakrawala Pendidikan* 40, no. 1 (2021): 70–80.

[10] Matthew B. Miles and A. Michael Huberman, *Analisis Data Kualitatif: Buku Sumber Tentang Metode-Metode Baru,* Trans. Tjetjep Rohendi Rohidi (Jakarta: UI Press, 1992), 16-17.

competency, and the era of digital technology. From the reduction results, a table was created to display the data for analysis and understanding the data under the study criteria and themes.

RESULT AND DISCUSSION
Results Regarding Academic Supervision, Teacher Competency, and the Era of Digital Society

Based on the analysis results of books and articles, the following table is the theoretical review data from academic supervision as follows:

Table 1. Topics and Reviews of Books and Articles Related to Academic Supervision

No.	Title of the sources	Review
1	Actualization of artistic supervision in Islamic education management	Artistic supervision focuses on empathy and upholds the dignity of teachers. This kind of supervision can eliminate the stigma that supervision is a place to find teacher mistakes.
2	Supervision of Islamic education: Study of the model of supervising madrasah in Sorong	The role of the school principal as a hidden supervisor is to provide support and alternative learning solutions.[11]
3	Implementation of educational supervision to improve the quality of education in madrasahs	Supervisors (supervisors, school/madrasah principals) must have expertise and seriousness in supervising educational institutions to improve education quality.[12]
4	Educational supervision	Effective school principal leadership is the leadership that can provide inspiration and good examples for teachers, staff, and other employees according to conditions or needs and understands their roles and functions so that the implemented leadership system can achieve the goals set.[13]
5	Analysis of the Perception of Supervisors in Primary Education	Differences in perceptions related to supervision between school principals and teachers in the school environment result in supervision objectives needing to be achieved.[14]
6	Supervision and assessment of teacher performance.	The government is compiling modules and supervision guidelines by considering social inclusion as well as strengthening character

[11] Evy Ramadina, "Aktualisasi Supervisi Artistik dalam Manajemen Pendidikan Islam," *Attractive: Innovative Education Journal* 3, no. 1 (2021): 91.

[12] Imam Turmidzi, "Implementasi Supervisi Pendidikan untuk Meningkatkan Mutu Pendidikan di Madrasah," *Tarbawi* 4, no. 1 (2021): 33–49.

[13] Muhammad Kurniawan et al., *Supervisi Pendidikan* (Bandung: Alfabeta, 2019), 34-35.

[14] Ali Ünal, "Analysis of Perception on Supervisors in Primary Education," *Procedia - Social and Behavioral Sciences* 2, no. 2 (2010): 5028–5033.

		education with the main values of nationalism and independence as an effort to strengthen national character.[15]
7	Implementation of academic supervision to improve teacher quality	Based on research results, good cooperation between school principals and teachers can solve problems teachers face in planning and implementing learning.[16]
8	Academic supervision: Unraveling the problems of teacher professionalism in schools	Academic supervision activities carried out by the school principal must start from planning, implementation, and evaluation with the principles of objectivity and continuous improvement.[17]
9	Principal academic supervision, teacher professionalism, and education quality	There is a positive and significant influence between improving the quality of school principals' academic supervision and teacher professionalism in improving the quality of education.[18]
10	Head of the madrasah, academic supervision, and teacher performance	Supervision techniques consist of individual and group supervision. Individual supervision consists of orientation techniques for new teachers, classroom observation, and individual conferences. Group techniques include teacher council meetings, workshops, guided reading, bulletin boards, and field trips.

Table 2. Topics and Studies of Books and Articles Related to Teacher Competence

No.	Topic	Review
1.	Analysis of influence teaching and teacher certification against teacher competence in schools medium vocational training in the Parung Panjang area, Bogor Regency	Competence, teaching-based technology information, teacher certification, and teacher competency are influential and significant to teachers.[19]

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[15] Setyo Hartanto and Sodiq Purwanto, *Supervisi dan Penilaian Kinerja Guru (MPPKS - PKG)* (Jakarta: Direktur Jenderal Guru dan Tenaga Kependidikan Sekretaris Direktorat Jenderal Guru dan Tenaga Kependidikan Direktur Pembinaan Tenaga Kependidikan, 2019), 107.

[16] Erfy Melany Lalupanda, "Implementasi Supervisi Akademik untuk Meningkatkan Mutu Guru," *Jurnal Akuntabilitas Manajemen Pendidikan* 7, no. 1 (2019): 62–72.

[17] Munawar, "Supervisi Akademik: Mengurai Problematika Profesionalisme Guru di Sekolah."

[18] Erni Agustina Suwartini, "Supervisi Akademik Kepala Sekolah, Profesionalisme Guru dan Mutu Pendidikan," *Jurnal Administrasi Pendidikan* 24, no. 2 (2017): 62–70.

[19] Akhmar Barsah, Aden Prawiro Sudarso, and Denok Sunarsi, "Analisis Pengaruh Pengajaran dan Sertifikasi Guru terhadap Kompetensi Guru pada Sekolah Menengah Kejuruan di Wilayah Parung Panjang Kabupaten Bogor," *Journal of Education, Humaniora and Social Sciences (JEHSS)* 3, no. 2 (2020): 650–657.

2.	Become a professional teacher, dream student	The capable teacher controls participants; education can increase a supportive learning atmosphere so that learning becomes fun and impacts increasing teachers' and students' performance.[20]
3.	Reality post-teacher competency certification	It is the inequality between teachers' expectations and competence after obtaining a certification and reality on the ground.[21]
4.	Review teacher competence in the digital era in fulfilling the demands of education 21st century.	There is convenience in accessing learning sources that teachers use—the study of anti-plagiarism to improve competence. The opportunity is welcomed when the teacher can adapt themself to technology development.[22]
5.	The challenge of teachers and education teacher training in an era of change	In the era of technology, educators must adapt and take advantage of the situations to increase learning.[23]
6.	Learning strategy education based on the frontier in the digital age	Teacher competence is very influential in effective dynamic learning.[24]
7.	Contribution to professional and organization education in education in the 4.0 era	The contribution of professional organizations and education is expected to be more proactive in improving the well-being and teachers.[25]
8.	Coaching and development teaching profession: the guidelines implementation evaluation teacher performance	The policy setting of duties and responsibilities of the central level government regarding teacher performance evaluation.[26]

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[20] Mohammad Tohir, "Menjadi Guru Profesional Idaman Siswa" https://matematohir.wordpress.com, 2016, 1-5.

[21] Fitria Nur Anggranei, "Realitas Kompetensi Guru Pasca Sertifikasi," *Scientific Journal of Reflection: Economic, Accounting, Management and Business* 3, no. 4 (2020): 331–340.

[22] Siti Khodijah, "Telaah Kompetensi Guru di Era Digital dalam Memenuhi Tuntutan Pendidikan Abad Ke-21," *Journal of Islamic Education Policy* (tt, 2018): 67-78.

[23] Pipit Novita, "Tantangan Guru dan Pendidikan Keguruan di Era Perubahan," in *Dinamika Pembangunan Berkelanjutan: Bertahan di Tengah Pandemi Covid 19* (Yogyakarta: Beta Offset, 2020): 346.

[24] Pebria Dheni Purnasari and Yosua Damas Sadewo, "Strategi Pembelajaran Pendidikan Dasar di Perbatasan pada Era Digital," *Jurnal Basicedu* 5, no. 5 (2021): 3089–3100.

[25] Dias Nugroho, Sobirin, and Muchlis Lingga Dwi Saputro, "Kontribusi Profesi dan Organisasi Kependidikan pada Pendidikan di Era 4.0," 2021, 17.

[26] Kementerian Pendidikan Nasional, *Pembinaan dan Pengembangan Profesi Guru: Pedoman Pelaksanaan Penilaian Kinerja Guru*, 2nd ed. (Jakarta, 2011), 128.

9.	Development competence teacher professionalism in the digital era (21st century)	Teacher competence development programs can be held through training or non-training activities.[27]
10.	Enhancement of teacher competency rights and obligations	The identification of teacher's efforts to increase their competencies.[28]

Table 3. Topics and Reviews of Books and Articles Related to Era Society 5.0

No.	Topic	Review
1.	Heutagogy approach in learning in the era of Society 5.0	Heutagogy is an approach that focuses on the learner center, and the educators are facilitators and controllers in the learning atmosphere. There is double-loop learning in the method. This approach allows participants to enrich their knowledge and skills independently.[29]
2.	Workshop on e-learning in the era of Society 5.0	E-learning is commonly applied in the era of Society 5.0. It is urgently needed to increase understanding and knowledge about learning.[30]
3.	the learning model for the era of Society 5.0	In the era of Society 5.0, students are free to determine their style and time for independent learning.[31]
4.	Indonesian youth readiness in supporting unlimited education society 5.0	It takes the role of all parties (the students, parents, teachers, parties, school, and the environment around) to supervise learning through devices. It can increase the effectiveness of online learning in the era of Society 5.0.[32]

[27] Zainuddin Notanubun, "Pengembangan Kompetensi Profesionalisme Guru di Era Digital (Abad 21)," *Jurnal Bimbingan dan Konseling Terapan* 3, no. 2 (2019): 54.

[28] Iwan Wijaya, "Peningkatan Kompetensi Guru Hak dan Kewajiban," (National Proceeding, 2017), 91.

[29] Hotimah, Ulyawati, and Siti Raihan, "Pendekatan Heutagogi dalam Pembelajaran di Era Society 5.0," *Jurnal Ilmu Pendidikan* 1, no. 2 (2020): 152–159.

[30] Sayid Ma'rifatullah et al., "Sentiment Analysis di Era Society 5.0," *Jurnal Ilmiah Pengabdhi* 6, no. 2 (2021): 163–67.

[31] Eko Sudarmanto et al., *Model Pembelajaran Era Society 5.0*, ed. Adirasa Hadi Prasetyo, 1st ed. (Cirebon: Insania, 2021), 45.

[32] Runik Machfiroh, Sapriya, and Kokom Komalasari, "Indonesian Youth Readiness in Supporting Unlimited Education Society 5.0," in *2nd Annual Civic Education Conference (ACEC 2019)* (Atlantis Press, 2021), 528–533.

| 5. | Android application development of student learning skills in Era Society 5.0 | Students can master the technology and use them as learning media. This ability helps the students face the challenges in the era of Society 5.0. It is essential to develop learning media that are accessible and suitable to the student's needs in the era of society 5.0.[33] |

Discussion Regarding Academic Supervision, Teacher Competency, and the Era of Digital Society

Based on data from the United Nations Development Program (UNDP), it showed that in the 2020 Human Development Index (HDI), Indonesia is ranked 107 out of 189 countries. At this ranking, Indonesia's HDI score is 0.718, with a life expectancy rate of 71.7 years of education expected at 13.6, average years of education taken at 8.2, and per capita income of 11,459 (Human Development Report, 2020). Although at the end of this year, UNDP designated Indonesia as having a high HDI (in a fixed ranking), this ranking still needs to be added to neighboring countries.

There are several reasons behind this, one of which is the decline in the quality of educational institutions in Indonesia.[34] It was found that there needed to be a more excellent quality of educational institutions under the Education Office and the Ministry of Religion. In this study, 2 things related to this case being discussed. First, educational supervision needs to be carried out professionally, flexibly, and in a formal form. In contrast, the supervision which has been done was too rigid and informal. Second, learning activities are not quite optimal because they are constrained by limited facilities and infrastructure, especially in educational institutions located in remote areas.

To overcome the problem in the first point, several types of supervision have been tried to test the effectiveness in certain learning situations. One type of supervision researched by Ramadina[35] is artistic supervision. The supervisor in this model focuses on a sense of empathy in which good relations are developed between superiors and subordinates, regardless of position or status, as a form of implementing one's religious values. Supervision is carried out empathetically, upholding the dignity of the teacher. The teacher has full authority in managing his learning in class. The supervisor acts as someone who helps the teacher solve his problems as a learning leader, so the assumption that supervision is limited to finding teacher mistakes is wrong.[36] Supervision conducted by the principals, which should be problem-solving in teaching teaching-learning process, seems to be a controller and reporter rather than a guide. The existence of principles in the middle of the teaching and learning process burdens teachers. Teachers can be flexible and

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[33] Ariadi Nugraha and Fuad Aminur Rahman, "Android Application Development of Student Learning Skills in Era Society 5.0," *Journal of Physics: Conference Series* 1779, no. 1 (2021): 1–9.

[34] Imam Turmidzi, "Implementasi Supervisi Pendidikan untuk Meningkatkan Mutu Pendidikan di Madrasah."

[35] Ramadina, Evy. "Aktualisasi Supervisi Artistik dalam Manajemen Pendidikan Islam," *Attractive: Innovative Education Journal* 3, no. 1 (2021): 91.

[36] Ali Ünal, "Analysis of Perception on Supervisors in Primary Education," 5028–5033.

act naturally since they think they are being assessed and noticed by the leader. The teachers are afraid of being noticed that there are many mistakes in their teaching technique.

Additionally, the teacher assumes that supervision activities are fault-finding activities. It makes it difficult for cooperation between the two parties. It can be avoided with cooperative actions such as those on artistic supervision.

The guidelines for implementing teacher performance[37] describe the duties and responsibilities of the central government to schools regarding teacher performance evaluation and the concept of teacher performance evaluation. Evaluation of teacher performance or supervision is always carried out regularly with formative and summative assessments at the beginning and end of the year. This performance appraisal applies objective, fair, accountable, beneficial, transparent, practical, goal-oriented, process, sustainable, and confidential principles. The supervision objective can be achieved if all principles are appropriately implemented.

Artistic supervision is a model of supervision that positively influences teachers. The characteristic of artistic supervision is using a collaborative approach. This approach has been proven in research conducted by Lalupanda,[38] showing that good collaboration between supervisors and educators improves the quality of learning, educators, and student achievement. So that there is a demand for school principals who can hear more than speeches are needed.[39] Sensitivity and experience are the main instruments so that the understanding of supervision in a positive direction and the goals of supervision can be adequately achieved.

In line with the second point, the cause of the low quality of education providers is that only some types of high-quality supervision can be carried out in some units. Education in eastern Indonesia differs from the rapid progress of education in the western Indonesian region, especially in Java. The study held by Chudzaifah[40] concluded that school principals in eastern Indonesia were not quite optimal in managerial or supervisory tasks. It is because the principal is still focused as an educator.

To improve the managerial quality of school principals, the Directorate of Education Personnel Development, Ministry of Education and Culture[41] has published a guidebook for teacher supervision and performance evaluation entitled "*Supervisi dan Penilaian Kinerja Guru.*" This book aims to enable school principals to think visionary in leading and managing schools. This book is a guide and reference that can be used in the supervision process.

The critical role of the school principal in increasing the quality of education is proven in research conducted by Suwartini,[42] with a positive influence of 30.9%.

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[37] Kementerian Pendidikan Nasional, *Pembinaan dan Pengembangan Profesi Guru: Pedoman Pelaksanaan Penilaian Kinerja Guru* (Jakarta: 2021), 189-201.

[38] Lalupanda, "Implementasi Supervisi Akademik untuk Meningkatkan Mutu Guru," 62–72.

[39] Suhertian, *Supervisi Pendidikan* (Jakarta: Renika Cipta, 2000), 180.

[40] Ibnu Chudzaifah, "Supervisi Pendidikan Islam: Telaah Model Pengawasan Madrasah di Kota Sorong," *AL-FIKR: Jurnal Pendidikan Islam* 5, no. 2 (2020): 18–30.

[41] Setyo Hartanto and Sodiq Purwanto, *Supervisi dan Penilaian Kinerja Guru (MPPKS - PKG),* 107.

[42] Suwartini, "Supervisi Akademik Kepala Sekolah, Profesionalisme Guru dan Mutu Pendidikan," 62–70.

Meanwhile, the positive and significant influence of teacher professionalism on the quality of education is 20.2%. This study shows that improving the quality of education is not only the quality factor of the principal's supervision but also the teacher competency factor. The study of teacher competence and professionalism is presented in Table 2.

Competence means ability, expertise, authority, and power. Mulyasa[43] states that competence is a combination of knowledge, skills, and attitude values reflected in the habit of thinking and acting. Efforts to improve the quality of education are also pursued by increasing teacher competence and technology integration. The existence of a positive influence between information technology-based teaching abilities[44] proves that teacher competence is always required to go hand in hand with the rapid technological developments in this era of society 5.0. (Table 3).

One way in the world of education to improve the quality and competence of teachers is teacher certification. All teachers are expected to have a certificate as a teaching license or permit.[45] Unfortunately, several studies present findings that certified teachers cannot be considered competent and professional.[46]

Certification is a formality only, as a complete administration and educator status. This is evidenced by teachers still needing to improve learning innovation, literacy, linearity, contextuality, personality, and literacy. One of the studies conducted by Anggraeni[47] provides the solution to this problem by conducting supervision and evaluation, outreach and assistance, education and training, and reciprocity—the collaboration of the four actions is expected to overcome these problems optimally.

Teachers must fully understand the material and motivate the students to increase student achievement. Tohir[48] concludes several points and criteria for teachers that students desire are teachers who master the subject matter; use active, innovative, creative learning strategies; can motivate their students to learn; can create conducive teaching and learning conditions; are humorous; insert learning with games; provide the rights and needs of their students; maintain authority; can be examples or role models; understand child development psychology; understand children's learning styles; always look attractive and always smile and are patient; educate with heart and inspire; give awards to students; and are up to date and fun.

Teachers must always be ready to face the challenges of today's global world due to the development of advanced technology. One way to deal with it is to look inward, outward, and forward.[49] Looking inward means educators must constantly evaluate the

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[43] E Mulyasa, *Kurikulum Berbasis Kompetensi (Konsep, Karakteristik, dan Implementasi)* (Bandung: Remaja Rosdakarya, 2004), 142.

[44] Akhmar Barsah, Aden Prawiro Sudarso, and Denok Sunarsi, "Analisis Pengaruh Pengajaran dan Sertifikasi Guru terhadap Kompetensi Guru pada Sekolah Menengah Kejuruan di Wilayah Parung Panjang Kabupaten Bogor," *Journal of Education, Humaniora and Social Sciences (JEHSS)* 3, no. 2 (2020): 650–657.

[45] Hadion Wijoyo and Irjus Indrawan, "Model Pembelajaran Menyongsong New Normal Era pada Lembaga PAUD di Riau," *JS (Jurnal Sekolah) Universitas Negeri Medan* 4, no. 3 (2020): 205–212.

[46] Siti Khodijah, "Telaah Kompetensi Guru di Era Digital dalam Memenuhi Tuntutan Pendidikan Abad Ke-21," 67-78.

[47] Fitria Nur Anggranei, "Realitas Kompetensi Guru Pasca Sertifikasi," *Scientific Journal of Reflection: Economic, Accounting, Management and Business* 3, no. 4 (2020): 331–340

[48] Tohir, "Menjadi Guru Profesional Idaman Siswa", 1-5.

[49] Novita, "Tantangan Guru dan Pendidikan Keguruan di Era Perubahan," 346.

teaching and learning process, the effectiveness of the methods that have been carried out, the success of students in understanding the material, and the achievement of target outcomes. Looking outward means teachers must always be broad-minded, keep up with the times, and understand the latest trends and issues in local and global contexts by taking advantage of the current situation and implementing it as best practice. It is concluded that teachers must always have subject content knowledge, skills, creativity, values, and a growth mindset because the world of education is dynamic and flexible toward any changes.

In the era in which education can be carried out online, it provides a challenge for researchers to analyze what factors influence the effectiveness of online learning. The study's results found that what influences the effectiveness of online learning is not educators' understanding of learning methods and school accreditation but teacher competence.[50] Educators not only carry out improving teacher competence and professionalism but also require contributions from professional and educational organizations.[51] It is hoped that the strategy and activeness of stakeholders can improve the welfare image and increase teacher professionalism.[52]

The word professionalism comes from the English word profession, which means work. Put forward by Kunandar,[53] the teaching profession is unique expertise and authority in the fields of education, teaching, and training that are occupied to become a livelihood in meeting the needs of the life concerned. Teacher welfare must be given great attention to carry out their duties and functions correctly. Increasing the welfare of teachers also needs to be done so that they can live a decent, dignified life and improve their quality of life. It will be easier for teachers to obtain sources of information from books and continue their further studies through the welfare and support of professional organizations.

One of the government's contributions to increasing teacher competence is implementing education and training activities (training) and non-training.[54] Several training activities include In-house training (IHT). They are internship programs in relevant industries/institutions; school partnerships with government and private institutions; distance learning in the form of seminars or training; tiered and special training carried out by P4TK and LPMP as agencies in charge of implementing teacher training programs; short courses at LPTK; internal coaching by the school principal; and further education.

Meanwhile, the teacher's efforts can be carried out through activities other than training conducted by the teacher, namely periodic discussions by teachers in solving problems in teaching and learning activities; seminars; workshops; research; writing books and teaching materials; making learning media and making technological and artistic works. Some activities that are followed independently require quite a lot of money. This is also

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[50] Pebria Dheni Purnasari and Yosua Damas Sadewo, "Strategi Pembelajaran Pendidikan Dasar di Perbatasan pada Era Digital," *Jurnal Basicedu* 5, no. 5 (2021): 3089–3100.

[51] Kementerian Pendidikan Nasional, *Pembinaan dan Pengembangan Profesi Guru: Pedoman Pelaksanaan Penilaian Kinerja Guru* (Jakarta: 2019), 193.

[52] Nugroho, Sobirin, and Saputro, "Kontribusi Profesi dan Organisasi Kependidikan pada Pendidikan di Era 4.0," 291.

[53] Kunandar, *Guru Profesional: Implementasi Kurikulum Tingkat Satuan Pendidikan (KTSP) dan Sukses dalam Sertifikasi Guru* (Jakarta: Rajagrafindo Persada, 2007), 101.

[54] Zainuddin Notanubun, "Pengembangan Kompetensi Profesionalisme Guru di Era Digital (Abad 21)," *Jurnal Bimbingan dan Konseling Terapan* 3, no. 2 (2019): 54.

the basis for the teacher's expectations of well-established welfare.

The many learning resources and facilities provided by technology in the era of Society 5.0 for educators who can master devices present an unlimited variety of learning materials. Era society 5.0 is a concept initiated by the State of Japan and inaugurated on January 21, 2019. This concept is where humans innovate not only for manufacturing factors but also to solve social problems with the help of the integration of virtual and physical space.[55] It can increase student interest in learning interests and knowledge that is much broader. There are many digital devices, such as the internet (web-based courses, web-centric courses, and web-enhanced courses), intranets, smartphones, digital storage, cloud, etc.[56] These tools can be used as online and offline learning tools and resources and are easy to apply anywhere and anytime.

To keep up with the times that are all sophisticated technology, school conditions must constantly adapt. Qualified supporting facilities must be available.[57] Schools with minimal facilities will hinder the effectiveness of online learning. Socio-economic abilities of students also contributed to this success factor. Because online learning is carried out in schools and at home, students must have devices and data packet fees that meet the criteria to access online learning resources.

In the era of society 5.0, learning is directed at student independence in acquiring knowledge and skills. One learning method is heutagogy, an advanced pedagogical and pedagogical teaching level.[58] In conventional educational learning, learning is teacher-centered. As for the pedagogical approach, participants are given the flexibility to process and find solutions to problems to gain new knowledge and skills. In this method, educators determine their learning so that the purpose of this learning is long-term. Students are problem and challenge-seekers. In the process, students must test hypotheses from their initial understanding and the freedom to seek answers to all the questions they ask.

With the development of technology and the variety of information scattered in cyberspace, it is unsurprising that students who spend more time with their devices find more new knowledge, which will become their hopes and testaments that they must test for the truth. E-learning learning with the pedagogy method is very suitable to be applied in the era of Society 5.0.

Sudarmanto et al.[59] suggest several learning methods that are suitable for use in the era of Society 5.0, including seamless learning, experiential learning, flipped classroom, web-based learning, problem-based learning, inquiry learning, project-based learning, blended learning, cooperative learning, contextual teaching and learning, quantum learning, discovery learning, direct instruction, and mastery learning. First is seamless learning; in this learning, students are required to interact with other students both in the physical and

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[55] Faulinda Ely Nastiti and Aghni Rizqi Nimal Abdu, "Kajian: Kesiapan Pendidikan Indonesia Menghadapi Era Society 5.0," *Edcomtech Jurnal Kajian Teknologi Pendidikan* 5, no. 1 (2020): 61–66.

[56] Siti Khodijah, "Telaah Kompetensi Guru di Era Digital dalam Memenuhi Tuntutan Pendidikan Abad Ke-21," 67-78.

[57] Pebria Dheni Purnasari and Yosua Damas Sadewo, "Strategi Pembelajaran Pendidikan Dasar di Perbatasan pada Era Digital," *Jurnal Basicedu* 5, no. 5 (2021): 3089–3100.

[58] Hotimah, Ulyawati, and Siti Raihan, "Pendekatan Heutagogi dalam Pembelajaran di Era Society 5.0," 152–159.

[59] Eko Sudarmanto et al., *Model Pembelajaran Era Society 5.0*, 45.

virtual world supported by mobile devices, making it easier for students to learn anywhere, anytime, and anywhere. The role of gadgets is increasingly complex, not only as a communication tool but also as a learning tool.

The second method, experiential learning, optimizes students' exploring abilities so that students can understand knowledge and skills through direct learning experiences. Third, flipped classroom learning is learning where students study learning material at home before discussing it again in class regarding less understandable points and working on comprehension assignments from the material. Fourth, web-based learning empowers resources from internet sites as learning resources and tools. Fifth, problem-based learning is problem-based learning, where the material will be associated with problems in life. Sixth, inquiry learning is a learning model that frees students to find answers and solve problems. This method focuses on the process of critical and analytical thinking.

The following method is the seventh method. Project-based learning can be solved in groups with long working hours. Eighth, blended learning combines online and offline learning in class. Ninth, the cooperative learning method uses both small and large study groups where students learn to work together to achieve learning goals. Tenth is contextual teaching and learning, where learning relates the material being taught to real-world situations of students and encourages students to make connections between the knowledge they have and its application in their lives.

The eleventh method, quantum learning, combines various interactions in and around the learning environment by providing a different atmosphere from the classroom. The twelfth, the discovery method, is a method that aims to provide long and not easily forgotten memories of learning material by letting students be active in discovering, investigating, and analyzing a problem themselves. The thirteenth method is direct instruction, where the teacher gives the order and steps sequentially. This approach is specifically designed for material that requires a coherent and well-structured procedural understanding. The last method described is the fourteenth mastery learning method. This method aims to enable students to master the learning material thoroughly.

Teacher competence in using technology plays an essential role in the learning effectiveness of all the methods. Participation and support are also needed by students from parents, teachers, and the surrounding environment are needed for the success of this online learning (e-learning). In the era of society 5.0, the teacher is a guide who can direct students to understand their learning more usefully. Based on research internet users have increased by 99% over the last 2-3 years.[60]

Teachers and students expect the complexity of learning in the era of Society 5.0 to be much different compared to conventional face-to-face learning. Various problems come from the teacher's obligation to master technology, for example. Not all teachers can master technology and use it as a learning tool and media.[61] Teachers with low welfare, areas not covered by strong internet areas, and many students from lower middle-class

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[60] Runik Machfiroh, Sapriya, and Kokom Komalasari, "Indonesian Youth Readiness in Supporting Unlimited Education Society 5.0," 528–533.

[61] Elif Iliman Puskulluoglu, Burcu Turkkas Anasiz, and Aycan Cicek Saglam, "Supervisor Selection , Assignment and Training Processes in the Turkish Education System Supervisor Selection , Assignment and Training Processes in the Turkish" 8, no. 1 (2019): 44–58.

families have become a polemic in facing the education system in society 5.0.

Supervision is expected not only as a means of assessing and disclosing deficiencies in the learning process but also as a means of motivation and education for educators to increase the effectiveness of their learning. A good supervision, positive support from the school principal, and the environment are expected to solve the problems in learning. A good school principal is a school principal who is sensitive to problems in the school environment; discussions regarding class problems are expected to be facilitated in a forum and resolved by discussion and deliberation.[62] It is hoped that deficiencies related to supporting facilities and infrastructure can also be accommodated by schools or submitted to the relevant offices for further follow-up.

Theoretically, this research provides a comprehensive reference guide to support the performance of school principals in supervision activities, which is necessary to improve the competence of teachers who are required to be more responsive to developments in science and technology. Meanwhile, practically the benefits and benefits can be taken from the empirical research exposure carried out by researchers in implementing effective implementation of academic supervision in learning in schools (madrasas). This research can also be used as a standard guide for education stakeholders to issue policies regarding the utilization and use of information technology, such as social media, in education. Likewise, as a supervisor, the principal is expected to be able to motivate teachers to explore the use of information technology or social media for the benefit of educational progress and academics in the future.

CONCLUSION

The results show that the effectiveness of academic supervision in increasing teacher competence in the era of Society 5.0 depends on the ability of school principals in terms of organizational management and the positive support of school principals to always guide and support teachers in improving their competence and professionalism. Several essential things related to school principals' role in encouraging teachers to improve teacher competence include providing training, technical guidance, seminars, or workshops on e-learning. It is a common need for implementation in the era of digital society. It is needed to increase understanding, knowledge, and practice regarding current learning and future teachers' challenges.

It is hoped that there will be good support from school principals and related stakeholders in facilitating training programs, technical guidance, and offers of further studies domestically and abroad. It is done to support improving school quality to prepare teachers to face and adapt to the era of society 5.0.

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[62] Marika Matengu, Outi Ylitapio-Mäntylä, and Anna-Maija Puroila, "Early Childhood Teacher Education Practicums : A Literature Review," *Scandinavian Journal of Education Research* 65, no. 6 (2021): 1156–70.

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