
Blended Supervision System In Madrasah In Era 4.0

Achmad Nasihi¹, Basuki Wibawa², Popi Puadah³

Jakarta Islamic University, Matraman, East Jakarta, 13120, Indonesia

Email: achmadnasihimt@gmail.com, bwibawa@unj.ac.id, dr.popipuadah@gmail.com

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Abstract

This research is motivated by the contextual phenomenon that virtual learning is not only a way to ensure the continuity of learning during the Covid-19 pandemic but also accelerates the adaptation of Indonesian education to global demands in Era 4.0 where the Internet of Things is the main feature and key in the development of a multidimensional life, including in education. Online distance learning has become a new educational paradigm in Indonesia. However, new problems have also emerged, especially in terms of the supervision of Madrasah/schools. So far, the process of implementing madrasa supervision by supervisors is still mostly done conventionally with manual devices, while the learning process and madrasa activities take place digitally so that supervisory tasks such as monitoring, coaching, mentoring and training professional teachers and their assessment are less effective. Therefore, it is necessary to develop a digital-based madrasa supervision model to facilitate the process of monitoring the implementation of digital-based madrasa education. However, if the supervision is only carried out online, it will not be sufficient because specifically in the process of professional coaching and training, face-to-face meetings are needed between the supervisor and the teacher, and the head of the madrasah. Therefore, a mix of online and offline supervision is needed or a combination of both, is then called blended supervision. Because the scope of blended supervision is very broad and consists of various elements, it is called a supervision system. This refers to the opinion of Abdul Kadir (2014:61) that "The system is a set of interrelated or integrated elements intended to achieve a goal". The online supervision model will emphasize the use of the website as a media source of information, communication between stakeholders in madrasa supervision, and storage of digital supervision applications so that all users can access everything through the website. The offline supervision model will be designed in such a way as to make it easier for supervisors to motivate and transfer knowledge and values to principals and teachers in their fostered

madrasahs either through coaching, mentoring, and professional training. This study uses the Research and Development (R&D) method using the ADDIE model which consists of five research steps, namely analysis, design or model design, product development, implementation, and evaluation. From the results of this study, it is hoped that a new product of a blended supervision system will be born for Madrasahs in Era 4.0. Blended supervision allows the achievement of madrasah supervision from both academic and managerial aspects with online and offline access and a combination of both.

Keywords: Blended supervision system, madrasah, Era 4.0.

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1. Introduction

In the industrial revolution 4.0 which focuses on the use of digital technology, it has disrupted various processes in the education sector, including the madrasah supervision model. This is marked by the massive use of online-based Information and Communication Technology (ICT) by supervisors in carrying out their supervisory duties in madrasahs. This surveillance model became known as e-supervision and became increasingly popular during the COVID-19 pandemic. The implementation of social distancing which resulted in an online Distance Learning (PJJ) policy in all Indonesian schools/madrasahs became the basis for conducting online madrasah supervision with the assumption that supervision of the implementation of online PJJ would not be effective if carried out conventionally. Therefore, an online-based monitoring model is needed.

The web-based e-supervision model is the most widely used and has previously been developed to overcome several challenges in the implementation of academic supervision such as a large number of trained teachers and the remote geographical location. Web-based e-supervision offers several supervision implementations using the help of web-based internet technology and building communication and virtual communities between supervisors and fostered teachers (Leyva, 2012: 215–219).

The implementation of online-based supervision during the COVID-19 pandemic was quite effective, especially in terms of accessibility. The problem of the supervisor's difficulty in accessing all madrasahs because of the distance and the number of madrasahs that are too far and too many can be relatively resolved. By going online, supervisors can supervise learning in madrasahs from anywhere and anytime. However, to carry out professional coaching and training of teachers and school principals which requires the transfer of knowledge, values, and examples, it will not be effective without face-to-face. If the supervisor will supervise the condition of madrasah facilities and infrastructure, online supervision will not be adequate

because it requires concrete physical evidence. In this context, a combination of online supervision and offline supervision (face-to-face) is needed, which is called blended supervision.

2. Research Methods

This study aims to develop a mixed-based supervision model, the method used is research and development (R&D) using the ADDIE model, consisting of five stages, namely Analysis, Design, Development, and Implementation. Implementation) and Evaluation (Evaluation) because this research and development model is more rational and more complete than other models in product development steps. The data sources of this research were taken from all madrasa supervisors in the South Jakarta City Ministry of Religion Office.

The stages of the research developed by referring to research in the ADDIE model as described by Endang (2011: 179) in the following stages: 1) Analysis stage. At this stage, the purpose of developing a blended supervision model based on blended supervision is set for application users, both for the Head of Madrasah Education, Supervisors, Madrasah heads, teachers, and non-educational officers or people in need outside the Ministry of Religion. The analysis was carried out to identify and formulate the purpose of developing this blended supervision model application and for whom this application was used.

This analysis stage is also a process of defining the concept of blended learning which is a mixture of online and offline supervision models and how they are implemented by supervisors in carrying out the duties and functions of supervision to teachers, madrasa principals, and their fostered madrasas. In addition, several analyzes were also carried out, including; a) Job Position Analysis. This individual analysis is carried out to find out and clarify whether the problems encountered require solutions related to the implementation of the supervision program, for example, lack of interest, knowledge, and skills of teachers cause a low service index in the organization, this requires a solution in the form of implementing madrasah supervision programs that can be carried out by all positions related. b) Performance Analysis.

This analysis is carried out to find out and clarify whether this supervision model can be carried out by all supervisors and teachers with varying levels of performance and whether digital applications will increase or even decrease the performance of supervisors and/or teachers and madrasah principals. c) Needs Analysis. Needs analysis is a necessary step to determine whether this monitoring model can be applied online and offline or should be mixed. The developer also identifies the need for supervision and the required contents by referring to the main duties of the applicable supervisor. 2) Design Phase (Design / Design).

This stage is also known as making a blended-based supervision model design. With the following steps: a) Designing an online supervision program that contains all supervisory activities (in the form of text, video, web, google form, interactive applications, etc.), designing content that is by the design of the supervision program in both academic and managerial aspects. In this design stage, a rubric, instrument, or other digital-based supervision model is determined that needs to be included in the website to be developed, by the design of the supervision program, namely the content aspect and the supervision model that will be carried out.

In the development of digital-based applications, there are many choices of programming languages that can be applied, with the aim that the applications developed can

be accessed anytime and anywhere running on the Windows Server operating system, so in this study, the source code of the application will be written using the Programming Language. b) Designing mixed surveillance by combining digital-based supervision with conventional (offline) supervision, especially about which supervisory duties are suitable for online, offline, or both mixed models.

In addition, other supporting sources are also considered in the design, so that at this stage it can be determined whether the application can be developed by the objectives and results of the analysis. c) At this stage, it is necessary to conduct a product design feasibility test by experts and practitioners. If it is declared feasible both in the process of expert and practitioner testing, the next step is product development. 3) Development Phase (development). The development stage is a process to realize the design that has been prepared to become a reality. In the digital surveillance application design, the design is then processed to be developed into a website-based application by the objectives and results of the analysis. All system requirements are met and application coding begins with writing the script/source code. An important step in this development stage is testing the product prototype before it is implemented. Furthermore, this digital application is combined with the concept of conventional supervision so that a blended supervision product is born. This trial phase is indeed part of one of ADDIE's steps, namely evaluation. More precisely, formative evaluation, because the results are used to improve the monitoring system that is being developed. 4) Implementation stage. Implementation is a real step to implement an application that is being made which is then combined with an offline supervision model. The applications that have been developed are arranged in such a way that they can carry out their duties, functions, and roles so that they can be implemented. 5) Evaluation Stage (Evaluation). Evaluation is a process to see whether the monitoring system that is being built is successful, according to the initial design or not. The evaluation stage can occur at any of the four stages. Formative evaluation occurs in each of the four stages above because the purpose is to need revision. As, at the design stage, we may need a form of formative evaluation, such as an expert review to provide input on the design we are making. At the development stage, it is also necessary to test the products developed and small group evaluations are needed.

As for this article, the limited research method used is the "Systemic Literature Review" (SLR) by presenting the results of the literature review in chapters 1 and 2 which contain the research background and literature review which is then linked to several research results that have been carried out by experts so that this article can explain the conceptual model of blended supervision along with the results of the factual research.

3. Results And Discussion

The development of a blended supervision system is accentuated by efforts to maximize the implementation of supervisory duties. Based on the Regulation of the Minister for Empowerment of State Apparatus and Bureaucratic Reform Number 21 of 2010 concerning the Functional Positions of Madrasah Supervisors and their Credit Scores. It is stated that the main task of Madrasah Supervisors is to carry out academic and managerial supervisory duties in educational units which include 1) preparation of supervision programs, 2) implementation of guidance and monitoring of the implementation of 8 (eight) National Education Standards, 3) assessment, guidance and professional training of

teachers, 4) evaluation of the results of the implementation of the supervision program, and 5) the implementation of supervisory duties in special areas. The main tasks of Madrasah Supervisors must be managed properly so that they can be carried out effectively and efficiently.

Madrasah supervisory tasks are then grouped based on three models of supervision implementation either online, offline, and or mixed, and then equipped with a supervision approach and methodology that is tailored to the needs. Blended supervision in general can be carried out on every type of supervisory task, only in its implementation there will be variations in the level of dominance between the use of online and offline models according to the characteristics of the supervisory task. The offline model will be widely used in supervisory tasks that require a process of transferring knowledge and values from supervisors to teachers and principals of the target schools as well as the need for physical evidence. While the online model will be dominantly used in the type of supervisory task that can be done from anywhere and anytime, does not require physical evidence that can be directly seen and touched and there is no transfer of knowledge and value activities that require face-to-face.

Based on the supervision model, the supervisory duties can be grouped as follows:

No.	Job of Supervision	Supervision Model			Keterangan
		Offline	Online	Blended	
1.	Preparation of supervision plan	√		V	Dominant offline
2.	Monitoring 8 SNP		√	V	Dominant online
3.	Coaching of Teachers and Heads of Madrasah	√		V	Dominant offline
4.	Teacher professional guidance and training	√		V	Dominant offline
5.	Teacher assessment		√	V	Dominant online
6.	Evaluation of supervision program results		√	V	Dominant online
7.	Implementation of supervisory duties in special areas		√	V	Dominant online

The implementation of the Blended supervision system is not as simple as we imagine. Learning designs and blended patterns need to be carefully crafted by combining face-to-face and online interactions with the principles of flexibility, adaptability, and accommodative so that each applied model is always based on the needs of the fostered and continuous evaluation. This blended supervision system relies heavily on the supervision design designed by the supervisor, whether it be an online supervision design or an offline supervision design, and the right combination of the two.

Based on the results of the identification of supervisory needs in the 4.0 era, an online surveillance model is needed. According to Sally J. Zepeda (2003:2-3.), the challenge for supervisors is to expand opportunities for teachers by utilizing an integrated approach to improve the professional competence of teachers with wider accessibility through the help of electronic instruments. Dudding & Justice (2004:145-151) presented the necessary components and considerations for implementing a surveillance program using video conferencing technology; specifically for supervising graduate students. Furthermore, Rezk Mayer (2020:1-8) conducted a study that resulted in recommendations for an instructional leadership model

in which principals and supervisors shift from fault-finding to catalysts for professional growth, empowering teacher capacity, eliminating agitation performance measurement, and turning practice into a self-exploratory mission. with constructivist principles and using online supervision reports and interviews.

In a more practice-oriented study, Asep Awaludin (2017:1-8) examined the application of Internet-Based Online Academic Supervision and Supervisory Information Technology Mastery in the Context of Improving the Professional Competence of Islamic Education Teachers. The results of this study concluded that; First, the implementation of online-based academic supervision activities with digital applications by PAI supervisors can be carried out with satisfactory results. Second, the implementation of online-based academic supervision activities by PAI supervisors was successful with the achievement of a fairly high score, namely 70.67%, meaning that PAI supervisors were able to use online supervision program applications in academic supervision programs at schools. Third, this online-based academic supervision is successful and effective in improving the professional competence of PAI teachers by considering the level of implementation and mastery of online-based information technology, getting an average score of 70.43% which means that the success rate is high. Especially during the Covid-19 pandemic, Ratna Priliantini (2020: 1), conducted research on an electronic-assisted academic supervision model for Madrasah Supervisors in Central Java Province. The results of this study conclude that online-based supervision has become an effective way to solve the problem of an unbalanced comparison between too few supervisors and too many teachers and target schools and difficult access due to long distances because online-based supervision can be done at any time. and everywhere. This research also explains digital technology devices that can support e-supervision, such as LMS, zoom meetings, Google Classroom, and others. The results of this study are in line with Uno (2007:28) mentions internet technology that can always be accessed anytime, anywhere, by multi-user and offers all the conveniences that have made the internet an appropriate medium for the development of educational communication media.

The results of the research on online-based supervision above points to the importance of websites and digital applications in e-supervision which have the following functions: 1) Use of digital applications as a source of information. The application is designed digitally on a website page that serves as a source of information. In addition to printed sources of information, resource persons, and the environment, supervisors can use information sources in the form of digital data in the form of web and electronic data ranging from digital instrument applications, digital modules, videos, audio, digital books, articles, journals, and digital libraries. 2) Use of digital applications as tools and media for supervision. Digital-based surveillance tools and media are designed in the form of artificial intelligence so that users just need to operate them according to the instructions. 3). Use of digital applications to present monitoring results. The form of presenting the results of supervision such as products and reports on the results of supervision can be done using artificial intelligence in digital applications. Supervision products can be presented in the form of spreadsheets, videos, web, blogs, vlogs of the like with certain limitations to maintain the personality of teachers and principals as well as fostered madrasahs. 4). Use of digital applications for discussion and collaboration. An important component of open supervision is discussion and collaboration. Discussion activities serve to facilitate supervisors, teachers, and other elements in exploring

ideas and knowledge and sharing them with other supervisors and teachers. Collaboration or cooperation with fellow stakeholders in the form of making products or projects. Discussion and collaboration activities can use digital applications in the form of website-based social media linked to Facebook, Instagram, Twitter, and others. 5). The use of digital applications as a supervisory manager. Digital applications can be presented through a fully online approach or a mix of face-to-face with online called blended supervision.

When the Covid-19 pandemic peaked which led to the implementation of National Large-Scale Social Restrictions (PSSB), the implementation of online supervision was quite effective. Online distance learning (PJJ) can still be monitored in various ways. There are at least three effective ways for supervisors to supervise online learning. 1) Through the e-learning application or google classroom. The supervisor enters the Google Classroom with a certain class code and monitors the activities of teachers and students in the Google Classroom freely. 2) through the application zoom meeting, google meet, and the like. Supervisors can observe the entire learning process through the application directly starting from the opening, core activities, and closing of learning. However, it is undeniable that this online supervision has weaknesses caused by network disturbances, limited interaction between supervisors and their mentors, teacher limitations in the use of online media, and others that allow supervision loss to occur so that the results of supervision cannot be used as material for improvement. learning in madrasahs that are more creative and innovative.

The weaknesses of online supervision are then tried to be minimized face-to-face. With this face-to-face supervision model, supervisors can convey the results of supervision and provide direction and guidance for teachers in improving the quality of their learning through a directive and collaborative approach. This face-to-face supervision is very important because the transfer of knowledge, values, and role models from supervisors to teachers and school principals will be more effective. Thus under certain conditions, the selection of offline or offline supervision models in addition to having to meet the principle of flexibility in its application also needs to combine the two because it will be heavily influenced by other factors such as distance, supervisor abilities, tools and materials used, characteristics of teachers, principals and fostered madrasahs, facilities and infrastructure, costs and other conditions. In order not to create a gap between the online and offline models, a blended online supervision model is carried out so that the supervision system will be more flexible and effective.

Facts in madrasahs show that not all supervisory tasks can be accommodated with the e-supervision model (online) because aspects related to the transfer of knowledge and values as well as exemplary from supervisors to teachers and principals either through coaching, mentoring and training have not run optimally, including monitoring of physical things is difficult to do online because it requires concrete physical evidence that can not only be seen but can also be touched. This then gave birth to the idea that offline (face-to-face) supervision needs to be done so that weaknesses in e-supervision can be minimized with a face-to-face model which then gives birth to a new supervision system called blended supervision.

4. Conclusions

The Industrial Era 4.0 with the phenomenon of internet things and the covid-19 pandemic which led to the implementation of the PSSB (lockdown) policy naturally led the world of education to carry out online learning activities (e-learning). This then requires

adjustments in the implementation of supervision which must also be online-based or what is then called e-supervision.

E-supervision was then mostly carried out by supervisors personally and institutionally, including by supervisors within the Ministry of Religion of the City of South Jakarta. The implementation of e-supervision shows positive results, at least the supervision process for madrasahs, teachers, and principals is still running and quite effective.

Both the online supervision model and the offline supervision model are two models that support, complement, and enhance each other. Therefore, both models must be designed in such a way as to be applicable. The design of the online supervision model is accentuated by making website pages as a source of information and monitoring data storage, communication media, and stakeholder interactions in supervision and the manufacture of digital supervision application products that contain supervision instruments, teaching materials for coaching, mentoring and professional training of teachers and school principals, journals supervision and education and other content according to the needs of the times.

In the future, along with the relationships and interactions of supervisors, teachers, principals, and stakeholders in the world of education that can take place online and offline, blended supervision will become an alternative supervision system that is meaningful and can improve the quality of education in Indonesia.

REFERENCES

- Abdul Kadir. (2014). *Pengenalan Sistem Informasi Edisi Revisi*. Andi.Yogyakarta.
- Asep Awaluddin, (2015), *Supervisi Akademik Berbasis Internet Online Dan Penguasaan Teknologi Informasi Supervisor Dalam Rangka Peningkatan Kompetensi Profesional Guru PAI (Studi Kasus di SMP Negeri 1 dan SMP Negeri 8 Kota Salatiga)*, Tesis, IAIN Salatiga.
- Borg, W.R. & Gall, M.D. (1983). *Educational Research: an Introduction*, Fourth edition. New York: Longman.
- Dudding, C. C., & Justice, L. M. (2004). *An E-Supervision Model: Videoconferencing as a Clinical Training Tool Communication Disorders Quarterly*, 25(3), 145–151.
<https://doi.org/10.1177/15257401040250030501>. Access on Oktober, 27th, 2021
- Leyva, V. (2012). *Online Supervision of Field Education. Field Educator*, 2(1)
- Mulyatiningsih, E. (2011). *Metode Penelitian Terapan Bidang Pendidikan*. Alfabeta. Yogyakarta.
- Rezk Marey (2020). Gelan Hesham, Ashraf Magdd, Mustafa Toprak, Dr., Professor (2020), *Re-conceptualizing teacher evaluation and supervision in the light of educational reforms in Egypt*, Elsevier Journal, Egypt.
- Ratna Priliantini, (2020). *Model Supervisi Akademik Berbantuan Elektronik bagi Pengawas Madrasah di Provinsi Jawa Tengah*, Seminar Nasional Pascasarjana 2020: UNNES, Issn: 2686 6404
- Sally J. Zepeda (2003). *Instructional Supervision*, New York: Eye on Education, Library of congress cataloging in Publication data.
- Sugiono, (2009). *Metode Penelitian Kuantitatif Kualitatif dan R & D*, Cet.7, Alfabeta Bandung.
- Uno, H. H. B. (2007). *Model pembelajaran: menciptakan proses belajar mengajar yang kreatif dan efektif*. Bumi Aksara, Jakarta.