Suite-based Monitoring Model to Control the Distance Learning Quality During the Covid-19 Pandemic

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ABSTRACT

The monitoring of the education quality standards on the implementation of the distance learning during the Covid-19 pandemic had proven to be difficult. This study aims to develop a monitoring model by utilizing the Gsuite facility to assist principals in supervising learning activities carried out by teachers. This development research used the Borg and Gall model which had been adapted by Lawrence Cunningham. FGD (Focus Group Discussion) and analysis SWOT analysis were used during the research, starting from collecting information, setting goals, making initial models, testing, and evaluating until the final model was produced. The trial was carried out by involving 20 respondents consisting of principals and teachers. The results of the trial and application of the model showed significant results. MMBGSuite's product have met the standard eligibility criteria by showing results of 82.9% for media validation and 76.2% for content or material validation so that it declare to get the “feasible” predicate. Likewise for practicality standards, MMBGSuite also received a percentage score of 80.6% from teachers and 85.4% from school principals indicating that this model is easy to use and practical. The results of this study indicate that the Gsuite-based monitoring model (MMBGSuite) can provide solutions to facilitate school principals in carrying out supervision and controlling the quality of the academic activities when distance learning was implemented during the Covid-19 pandemic.

1. INTRODUCTION

Education is a priority in the national development. By the developing education, it is hoped that the progress in various fields of life can also be achieved so that people can live prosperously (Kuswanto et al., 2017; Rahayu et al., 2022). Given the importance of the role of education in a country, the UUD 1945 states that the government has an obligation to educate the nation's life. This mandate gives the government...
an important responsibility to be able to provide an equal education for all Indonesian people (Adawiyah et al., 2021; Koedoes et al., 2020). This is further reinforced in the UUD 1945 chapter 31 which states that education is a right for every citizen without exception. A way to increase the quality of education can be started by improving the quality and the performance of teachers (Maryatun, 2016; Palunga & Marzuki, 2017; Salmia & Yusri, 2021; W自信ono et al., 2020). This, of course, cannot be separated from the role of the principal in carrying out the academic supervision. Therefore, the principals must understand the concepts of academic supervision, as the scientific basis for the principal's duties. By understanding the concepts of academic supervision, it is hoped that the principal can carry out his duties as a supervisor in a professional manner so that it leads to increasing the professional abilities of teachers. The implementation of the academic supervision can improve the learning process if it is carried out in accordance with applicable principles (Suwartini, 2017; Zulfikar et al., 2017). In addition, a principal must also have conceptual, interpersonal and technical skills so that the academic supervision can be carried out effectively (Masnum, 2017; Ulum et al., 2020).

The academic supervision directly affects the state of the teacher’s behavioral environment in classroom management in the learning process with the teacher directly or indirectly changing his mind by providing teaching materials in preparation, core and completion activities (Alwis et al., 2020; Suriansyah & Effendi, 2019; Wichmann-Hansen et al., 2015). The skill and ability to change mind can be seen at the learning stage (Sitaasih, 2020; Usman, 2018). It is necessary for the principal as a supervisor who can provide academic supervision to teachers to improve the learning process. Principals must be able to fulfill their main duties and functions as managers or leaders in schools to improve teaching and classroom supervision by prioritizing and providing suggestions and constructive criticism to teachers to improve their quality of teaching (N. H. Putri & Wibowo, 2018; Suwartini, 2017).

Based on the initial observations at the Satya Wacana Christian Elementary School in Salatiga, it was found that the principal of the Satya Wacana Christian Elementary School Salatiga has faced obstacles in carrying out the academic supervision effectively. This is due to the COVID-19 pandemic. All learning activities are carried out online and all educators are also required to conduct academic activities and work from home. Many activities have been disrupted and a bit stagnate due to the extraordinary occurrence of the Covid 19 Pandemic. The situation makes the academic supervision can hardly be carried out. There is also a bias in conducting educational activities according to standards of quality of education, as it makes it difficult to manage teacher activities. Do teachers carry out learning activities on a regular basis? How long does the learning activity last? Are students really served by the activities carried out? Is the material carried out in accordance with the established quality standards? And so forth.

To overcome this, it is deemed necessary to create an appropriate management system that can be applied during the Covid 19 Pandemic. The education management is related to management in the fields of curriculum, facilities and infrastructure, students, financing, staffing, and public relations (Budiwibowo & Sudarmiani, 2019; Nasution et al., 2021). The implementation of education management activities will be very difficult if it is done manually considering that currently almost all activities are carried out online. For this reason, the use of technology in the education sector is very necessary. Current technological developments have penetrated and have a strong influence in the field of education (Bravo et al., 2015; Nurseto, 2011; Paramida & Permadi, 2019). Especially at this time (the Covid-19 pandemic), various facilities, educational components and educational facilities cannot be separated from technology that has taken part in educational activities both directly and indirectly. These technological developments require educational actors to become technology literate people. The management system can be started by deloping a guideline in the form of a monitoring model as a reference for teachers and principals in conducting academic activities (Rahardja et al., 2019; Rauch & Hulsink, 2015). The model is expected to help and facilitate the principal in controlling and monitoring the academic activities of teachers so that the quality of education can be better measured, maintained and controlled. The model developed will allow teachers and principals to have guidelines that are of relatively the same standard as clear guidelines for distance learning activities.

Education in this era of globalization, characterized by the development of information and communication technology, requires improvements in the education system (David & Schwaninger, 2021; Santi et al., 2020). For example, improving modern and professional education management with educational distinctions (Fajriana & Aliyah, 2019; Rony, 2021; Wardi et al., 2019). The existence and role of information technology in the education system has brought a new era in the development of the world of education. In supporting the information needed by all levels of management, a management information system is needed. Utilization of management information systems themselves can be applied to information systems within an educational institution (Mustaqim, 2017; Prasojo et al., 2017; Sukmanasa et al., 2020). There are several factors that make management information systems essential in educational institutions, including schools, facing an increasingly complex global environment and an increasingly complex and
dynamic educational environment. It's complicated, but as a policymaker, schools have to make quick decisions. For this reason, in order to implement and use the model more effectively, it is necessary to support the model with an appropriate technology and information management system.

As the follow-up, the monitoring model is designed by utilizing the learning management system and facilities from Gsuite. Gsuite is chosen since this facility has been used at the Satya Wacana Christian Elementary School in the learning activities. In addition, by using Gsuite, schools will get a special account with large storage from google (Trilaksono et al., 2022; Wati & Yerizon, 2022). Furthermore, the schools will also be able to manage the accounts and systems provided independently. The existing facilities are also more complete and can be operated by one of the teachers or staff appointed as an administrator or operator. Another reason why we choose Gsuite is because it will cost you less money or even free. Generally, to develop a school Management Information System is often constrained due to the high cost of making it. In addition, schools must also provide large enough storage and server space. To overcome these obstacles, we need a program that can be used with small expenses so that it can save operational costs from schools. This program can be used as the basis for making a management information system. The facilities in Gsuite can be used for free. This facility is also equipped with many application programs that could support the development of the monitoring model without the fear of running out of storage. To get this facility, the schools only need to send a letter of application to Google. Thus, the use of Gsuite in the manufacture of this information system can be used after obtaining approval (Fitra et al., 2020; Muris, 2021).

This monitoring model will later become a guide that allows school principals to supervise the planning and implementation of academic activities carried out by educators more easily and quickly. Planning in the form of learning activity plans, teaching materials and materials used, as well as the implementation of the teaching and learning process can be accessed and monitored to maintain the quality standards of school education in terms of academics (M. A. Flores & Derrington, 2017; Maria Assunção Flores & Derrington, 2017). The application of this model is also expected to facilitate the teaching and learning process and school services. Referring to the expectations and goals to be achieved, it is necessary to develop a Gsuite-based monitoring model at the Satya Wacana Christian Elementary School Salatiga so that it can be used as a guide in helping school principals monitor academic activities carried out by teachers during the implementation of online learning so as to improve performance and maintain the quality of school education.

A relevant research showed that the application of SIM was considered very important and really supported the process of learning activities. Further more, regular training can improve the capability of the Human resources related to the computer system that had been adapted to technological developments and adapted to their needs (Loilatu et al., 2020; Wijaya & Risdiansyah, 2020). In order to improve and improve the educational process of teachers, the principal is responsible for organizing and conducting supervisory activities. This is an important task because the school leader, as a leader, can support, advise or assist teachers in carrying out their duties or in addressing any issues that arise in the learning process (Istianah, 2019; Suradi, 2018). Aimed to assess needs, planning, developing, and then testing the management information system model. The results of the study showed that provision of human resources, tools, policy support, and student participation were important factors for the further development of the system. The study stated that the use of MIS in schools could help schools improved the quality of education services in many aspects, including: increasing human resource capabilities, facilities and infrastructure, and funding or financial capabilities (Lestari, 2017; Susanto, 2012). This study aims to develop a monitoring model by utilizing the Gsuite facility to assist school principals in supervising learning activities carried out by teachers.

2. METHOD

The research method used in this study is RnD. Research and Development (R&D) is a research method used to manufacture a particular product and test its effectiveness (Sugiyono, 2015), which aims to develop a model that can be used by the principals to monitor teachers academic activities during online learning so that the quality of the school education can be controlled. This study applies the Borg and Gall model that has been adapted and modified by Lawrence Cunningham (Gall, M. D. et al., 1996). The model consists of 6 steps and is divided into 3 stages. At the initial stage, observations and information collection related to the needs of the institution were carried out to then make an initial model/design. At the development stage, a design trial was carried out, stage 1 evaluation and stage 1 revision. In the final stage, field trials were carried out on the revised model/design and it was still possible to evaluate and revise the second stage until the expected and appropriate model was found.
The instrument of this study used a validation sheet that acted as a product feasibility study. The feasibility of the product were assessed based on several aspects, including: clarity of guidelines, clarity of language, clarity of purpose, suitability of instruments, coverage of material, clarity of scoring and assessment, and conformity with quality standard achievements. This product had been validated by validators consisting of materials and product media presentations. To measure the effectiveness and practicality of the product, a questionnaire with 5 qualification criteria was used. The trial was carried out involving 20 respondents consisting of 1 principal and 19 teachers. Aspects assessed include ease of use, clarity of guidelines, practicality, quality control, and conformity to needs. The level of feasibility and product validation is measured and calculated, the results of which will be converted into a product feasibility scale as shown in Table 1.

Table 1. Product Feasibility Scale

<table>
<thead>
<tr>
<th>Achievement Percentage</th>
<th>Scale</th>
<th>Qualification Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>90% - 100%</td>
<td>Very Good</td>
<td>Feasible (no revision)</td>
</tr>
<tr>
<td>75% - 89%</td>
<td>Good</td>
<td>Feasible (no revision)</td>
</tr>
<tr>
<td>65% - 74%</td>
<td>Fair</td>
<td>Revision Needed</td>
</tr>
<tr>
<td>55% - 64%</td>
<td>Less Feasible</td>
<td>Revision Needed</td>
</tr>
<tr>
<td>0% - 54%</td>
<td>Not Feasible</td>
<td>Revision Needed</td>
</tr>
</tbody>
</table>

(Data collection techniques were carried out through the Forum Group Discussion (FGD) and SWOT analysis to figure out the needs analysis and determining strategic steps and goals. The author only analyzes and describes the needs and strategic steps in measuring the school quality at the Satya Wacana Christian Elementary School Salatiga. This study is in accordance with what the school has carried out without changing the results already in the field. The research was conducted from August to October 2021 at the Satya Wacana Christian Elementary School, Salatiga.

3. RESULT AND DISCUSSION

Result

The initial stage of this research consisted of two steps. The first step begins with observing and collecting information about the state and condition of the school that will be used as the object of research, namely the Satya Wacana Christian Elementary School. Furthermore, the second step is carried out by discussing the information that has been carried out to determine the position and then determine the goals to be achieved. Based on the results of the discussion, it can be seen that the academic activities carried out by teachers at the Satya Wacana Christian Elementary School Salatiga during online learning have not been monitored systematically and are still not in line with expectations. These results can be seen after a SWOT analysis related to the implementation of monitoring academic activities at the Satya Wacana Christian Elementary School was carried out.

After conducting discussion and analysis using FGD techniques and SWOT analysis, an initial model for the development of the monitoring system was produced, tested, evaluated and revised until the desired model was found. The model were namely MMBG Suite. The Gsuite-based Monitoring Model (MMBG Suite) consists of 3 elements, namely 1) teacher activities consisting of input, process, and output stages; 2) Academic Supervision which consists of setting academic standards and observations, as well as feedback and evaluation; and 3) Education quality standards. As it is shown in Figure 1.

The input process in teacher activities is the stage where teachers start learning planning by making lesson plans and their teaching tools. The tools prepared include materials, teaching materials, manuals, media, teaching technique plans, assessment sheets, and evaluation sheets (made using GForm) along with the assessment rubric. The entire learning device is then inputted and uploaded to Google Drive through a special account owned by each teacher so that it can be accessed by the principal and other teachers. Thus, it is possible for principals to set the expected standards by accessing academic supervision instruments at this stage. The instrument can be accessed via the link provided in the model diagram. If the standard has not been achieved, the existing tools and instruments will be returned to the teacher and revised. However, if the specified standard has been reached, it can proceed to the next stage, namely the process stage.

In the process stage, the teacher begins by determining the online learning schedule (via gmeet), using the Google Drive data storage facility which has a large capacity, inputting material, teaching materials, audio-visual media and evaluation tasks into the Google Classroom LMS. The LMS can only be accessed using a special account created by the school for students and teachers. Thus, the LMS is limited to students and teachers in the Satya Wacana Christian Elementary School. At this stage, the teacher also
prepares student attendance by using Gform or G-Attendant to record and record student attendance. Here the principal also has access to provide supervision and monitoring of academic activities prepared by the teacher. This is intended so that the quality of material, assignments and academic activities is maintained and well controlled. Academic supervision can also be carried out again if there are still planned and scheduled academic materials, assignments, or activities that have not been revised properly and still require improvement. If all the devices uploaded and entered are appropriate, then the teacher can proceed to the next stage, namely the output stage.

**Figure 1.** GSuite-based Monitoring Model (MMBGSuite)

In the output stage, the teacher conducts online learning according to the schedule that has been made in the G-Calendar. Utilization of Gmeet facilities can be used to conduct online learning. Apart from that, gmeet, teachers and students can also interact with students through Google classroom. Students can also access materials or assignments that have been inputted by the teacher through the LMS. At this stage, teachers can also conduct online or manual assessments. The assessments that have been made can also be viewed and monitored by each student who has submitted their assignments. At the stage of setting academic standards in the element of academic supervision, the principal establishes educational standards to carry out academic supervision. The principal starts this by accessing the academic supervision instrument by accessing google drive on the school account that has been provided. Instruments can also be accessed via the links provided in the model diagram. The results of filling out the instrument can indicate whether the tools and preparations made by the teacher have met the standards set or not. If the standard has not been achieved, the existing tools and instruments will be returned to the teacher and revised. However, if the specified standard has been reached, it can be continued at the next stage, namely the observation stage.

At the observation stage, the principal has an access to provide supervision and monitoring of academic activities prepared by the teacher. This is intended so that the quality of material, assignments and academic activities is maintained and controlled properly and in accordance with the expected standards. At this stage, the principal makes observations and observations on the implementation of learning in online or offline classes. Guidelines for observations and interviews before and after observations can be accessed via the link provided on the model diagram. The principal can also access the instruments that are already available by opening Google Drive with the special account that was previously created. Academic supervision can also be carried out again if there are still planned and scheduled academic materials, assignments, or activities that have not been revised properly and still require improvement. To make it easier and more practical for the users to learn and take advantage of the MMBGSuite, an application program was created. The application program contains interconnected menus about the components in the Gsuite-based Monitoring Model. It is intended that the existing models, guidebooks, and instruments can be easily accessed by teachers or school principals from anywhere and anytime as long as they are connected with an internet connection. The quality of teaching tools, especially good evaluation, can be judged by criteria of validity and practicality (Nugroho et al., 2017). For this reason, it is necessary to send a feasibility study to media experts and materials (content) experts to conduct...
feasibility tests on the products created. The result of the feasibility test will be used as a reference for product development and improvement.

MMBGSuite media validation includes several aspects of the assessment, namely: product display feasibility, product usage control feasibility, product interaction feasibility with users. The results of the MMBGSuite feasibility test on the media from experts on all aspects get a score percentage of 82.9%. Based on the criteria and qualification shown on the table 1, the result shows that MMBGSuite can be declared to have passed the test with the predicate suitable for use or “feasible”. For the feasibility of the material, the assessment is also measured through several aspects, including: clarity of guidelines, clarity of language, clarity of purpose, suitability of instruments, coverage of material, clarity of scoring and assessment, and conformity with quality standard achievements. The result shows a score percentage of 76.2%. Based on the criteria and qualification shown on the table 1, it shows that MMBGSuite can be declared to have passed the test with the predicate “feasible”. Other trials were also conducted to measure the effectiveness and practicality of the product. By using a questionnaire with 5 qualification criteria, the trial was carried out involving 20 respondents consisting of 1 principal and 19 teachers. Aspects assessed include ease of use, clarity of guidelines, practicality, quality control, and conformity to needs. Based on the results, the percentage of grades given by the teachers is 80.6% and the percentage of grades given by the principal is 85.4%. These two results indicate that teachers and principals can use and utilize the product easily. Thus, from a practical point of view, the MMBGSuite model can be stated as “practical”.

Discussion

A way principals can do to improve and enhance the quality of classroom learning is to use academic supervision (Kartini et al., 2020; Suriansyah & Effendi, 2019). The function of the academic supervision, performed by the principal as a supervisor, is to help teachers improve the quality of teaching, so that the quality of teaching improves students' results or progress (Alwis et al., 2020; Wichmann-Hansen et al., 2015). This is consistent with the ongoing monitoring efforts to improve the pedagogical skills of classroom teachers, as well as the principal’s efforts to develop teacher competencies in educating students in the classroom. Academic leadership is one of the competencies that school leaders should have. Academic supervision consists of 3 aspects, namely: planning, implementation, and assessment (Hasanah & Kristiawan, 2019; Nasution et al., 2021; Yusup, 2017). In terms of planning, that teachers do not face significant obstacles which includes the preparation of syllabus and lesson plan (Curriculum Plan). Even if the format used is different than before, they still can overcome the task. In fact, the obstacle for teachers is not the creation of lesson plans, but the curriculum used during the pandemic, in which curricula are still not fully understood and educators are not properly implemented. The independent learning system supported by the Minister of Education does not yet have reference materials or implementation guidelines, so teachers are unable to perform the distance learning correctly (Nurkolis & Muhdi, 2020; Pendy et al., 2022).

In the implementation stage, there are many changes and obstacles. This is due to a major change in learning strategies. Initially face-to-face training has turned into what is known as virtual learning or online learning. This is a problem because teachers are not ready to carry out online learning because there is no clear technical support from the government regarding distance learning implementation policies. This lack of preparation and confusion certainly has an impact on student learning outcomes that are less than optimal. Another research also shows that apart from the fact that online learning standards have not been regulated by the Indonesian government, the use of online learning tools and sites is still inadequate and inadequate. In addition, learning outcomes using online learning tools are still low and considered ineffective (Primasari & Zulela, 2021; Rigianti, 2020). In addition, the implementation is uneven because it is not supported by a qualified internet network (Nurkolis & Muhdi, 2020; Purwanto et al, 2020; R. S. Putri et al., 2020).

At the evaluation stage, problems and obstacles were experienced by both teachers and students. Many students stated that they had difficulty in following and understanding the material given (Sadikin & Hakim, 2019; Sugiran et al., 2016). Meanwhile, from the teacher’s side, the obstacles found were related to the assessment of learning outcomes where the teacher was unable to carry out an overall assessment, namely the cognitive, affective, and psychomotor aspects. Especially when going to conduct an affective/attitude assessment, the teacher has difficulty in making an assessment because it cannot be seen and assessed from the work that students have collected. A similar situation where the issues identified in the implementation of academic supervision during the Covid-19 pandemic, such as: the difficulty of implementing the national curriculum in the context of the Covid-19 pandemic, the lack of teacher preparation for online learning, and lack of mastery of technology. Efforts to overcome academic quality control problems include: by providing training and guidance on the Covid-19 emergency curriculum, providing training and guidance on the use of technology, as well as introducing face-to-face training which
is held twice a week. In the implementation of supervision, principals often encounter a number of problems so that they must immediately find solutions to create a good and efficient supervision environment, which in turn has a positive impact on improving the quality of education (Gumiandari, 2021; Nurmayuli, 2018).

One of the difficulties currently being faced is the COVID-19 outbreak that has hit Indonesia. The COVID-19 pandemic has had a very significant impact in all areas of life, including the implementation of education policies in Indonesia (Dyah Purnama Sari, 2020; Yudiawan, 2020). The government’s policy on online learning is a priority policy that is mandatory and must be implemented by all school institutions in Indonesia. One of the effective and strategic steps taken by the government to prevent the spreading chain of Covid-19 transmission is the application of distance learning (PJJ) or e-learning which relies on technology media to assist the implementation process (Mulatsih, 2020; Wahyono et al., 2020). The process of implementing learning usually uses software in the form of online learning applications that can be used for direct meetings and conducting learning interactions, such as: Google Classroom, Zoom, WhatsApp, and the like (Muhammad et al., 2021; Vegatama & Amiruddin, 2021). In fact, applications in the form of social media such as Facebook have also been used in Singapore as an LMS (Learning Management System). Teachers could post announcements, share resources, host weekly tutorials and conduct online discussions.

The results of this study indicate that students are basically satisfied with the affordability of Facebook because the basic functions of LMS can be easily implemented in Facebook groups (Han & Shin, 2016; Solong, 2021; Wang et al., 2012). For this reason, the development of MMBGSuite was carried out to make it an appropriate management system that can be applied during the Covid 19 Pandemic. The management system began by compiling guidelines in the form of a monitoring model as a reference for teachers and school principals in carrying out academic activities. This model is expected to help and facilitate principals in controlling and monitoring teacher academic activities so that teacher performance becomes better and has an impact on the quality of good education and even increases.

The development of MMBGSuite was carried out in six stages: 1) Observation and information gathering. 2) Planning and goal setting) 3) Initial model design. 4) Field test. 5) Evaluation and refinement) 6) Field test of the final product. These steps produce the final product in the form of a Gsuite-based Monitoring Model (MMBGSuite). MMBGSuite consists of three parts, namely, teacher activities, academic supervision, and educational quality standards. In the teacher activities section there are several guides and video tutorials on planning, implementing and assessing student learning outcomes as well as instruments that must be done at each stage. In the academic supervision section, the instruments needed by the principal in providing performance assessments at the preparation, observation and evaluation stages are also provided in a google form format. The use of google forms is intended so that the instrument can be accessed more quickly and can be shared online from anywhere. The education quality standard section is a reference from the results of teacher performance assessments through academic supervision that has been carried out to measure whether the learning activities carried out are in accordance with the quality standards set, below the standards or even exceeding the standards to be achieved.

From several trials that have been carried out, it can be said that the Gsuite-based Monitoring Model is an innovation that can be used to help the teachers from all grade levels to have the same good standards and learning procedures. This can be seen from the implementation of academic activities at each class level through a structured schedule regarding the number of online meetings held, length of time online, online learning materials, media used in conducting online learning (PPT, virtual whiteboards, learning videos), the form of assignments and assessments made by teachers, how information is distributed, and much more. The achievement of standards and fulfillment of academic quality will result in academic supervision that has been carried out to measure whether the learning activities carried out are in accordance with the quality standards set by the school. This will make the expected academic quality can be maintained and well controlled.

4. CONCLUSION

Based on the results and discussion of the research, some conclusions can be drawn as follows: First, the academic supervision brought a positive and significant influence on the teaching performance of the teachers. Second, the implementation of the MMBGSuite has proven to be significant in helping the academic supervision carried out properly on the distance learning program during the Covid 19 pandemic and proven to be able to help maintaining the quality standards of the school. Third, the development of the MMBGSuite models and application programs was an effort to improve the teachers teaching performance and deserve to be used as a reference model in controlling the education quality standards through the implementation of the academic supervision.
5. REFERENCES


