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Evaluation of Blended Learning-Based Utilization using CSE-UCLA Model

Diana Samal[1]*, Hartono[2], Estu Widodo[3], Ria Arista Asih[4], Julham Hukom[5], Salifa Belatu[6]

[1,2,3,4]Universitas Muhammadiyah Malang, Indonesia

[5]Universitas Negeri Yogyakarta, Indonesia

[6]IAIN Ambon, Indonesia

Abstract

Implementing the Blended Learning model was identified as having a major influence on achieving learning objectives in the classroom. Blended learning facilitates different times and types of student learning so students can learn according to their needs. The purpose of this study is to define the blended learning effectiveness used at MTs Ittaqollah Ambon in terms of some components evaluation, that are system assessment, program planning, program implementation, program improvement, and program certification. The CSE-UCLA (Center for the Study of the Evaluation University of California, Los Angeles) evaluation model-based evaluative study was employed in this research as the methodology. The study's subjects were the students, principals, teachers, and the management team for blended learning. The research results indicated that the level of effectiveness average of the components of the assessment system was 86.6% (good category), the level of effectiveness average of the planning program components was 84.5% (good category), the level of effectiveness average of program implementation components was 89 .3% (good category), the level of effectiveness average of improvement program components is 85.5% (good category), the average effectiveness level of certification program components is 85.9% (good category). The study's results can provide suggestions or recommendations for enhancing or refining the usage of blended learning in schools to maximize the achievement of learning objectives.

Keywords: Technology, Blended Learning, Evaluation, CSE-UCLA (Center for the Study of Evaluation University of California in Los Angeles)

Introduction

The advancement of information and communication technologies in the 21st century have had a significant impact on the education area, particularly the learning process (Akgunduz & Akinoglu, 2016). The education environment has started to change and evolve due to the current educational technology's rapid advancements (Karagöl & Esen, 2019). The emergence of technology is a breakthrough that makes humans easier to do their jobs, especially information and communication technology (Eka et al., 2021; Nurhaeni et al., 2021). Technology has the potential to enhance students' collaborative skills (Keser & Özdamli, 2012), HOTS (Kurt, 2010), learning concentration, and also their motivation (Baytak et al., 2011). Students have more practice and opportunities to investigate their difficulties and articulate their discoveries with various alternative replies because to technology integration (Juandi & Priatna, 2018; Nurjanah et al., 2020; Sung et al., 2016). It has been found that having access to technology in classrooms can have a beneficial effect on students' academic performance (Hu et al., 2018). Hence, it is an expectation placed on teachers that they will be able to integrate technology into various instructional formats.

Applying the appropriate learning model can improve the learning experience and have an effect on student achievement or competency (Prasetya et al., 2019). The teacher often presents the content, then the students' complete assignments or practice during class. Nevertheless, there are time restrictions with this teacher-centered teaching and learning type, so students are required to continue their studies at home (Cobena & Surjono, 2022). According to Sanuaka et al., (2017) research results, it was difficult for students to enhance their skills due to the usage of ineffective methods and a lack of time. Teachers must use learning models that give students enough time and more opportunities to explore their learning preferences (Setiawan et al., 2022). Based on these issues, blended learning can be used since it gives students the freedom to discover their learning preferences and pace.

In general, blended learning combines conventional learning models (face-to-face learning in class) and online

Corresponding Author e-mail: dianasamal@webmail.umm.ac.id

https://orcid.org/xxxx-xxxx-xxxx-xxxx

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learning system. Likewise, according to Lalima & Dangwal (2017), blended learning involves direct learning, indirect learning, group learning, and computer-assisted learning. Blended learning requires access to the internet, but the process not only shows learning websites in the classroom but also uses learning strategies that fit the needs of each student.

Blended learning combines online and conventional or face-to-face learning methods, such as lectures, online discussions, and individual study. Students can begin learning and communicating online after defining the course's outline (Lin et al., 2017). Additionally, the use of blended learning does not involve the application of only online instruction; instead, it is used to assist students in their learning when they require teaching resources or learning materials that have not been entirely distributed in class via online access (Bibi & Jati, 2015; Divayana, 2017) .

According to Setyaningrum (2018) and Sahni (2019), blended learning provides extra learning opportunities that encourage students' participation inside and outside the classroom. Moreover, the blended learning components are able to facilitate students' independent learning to study whenever and wherever they like (Tuomainen, 2016), without being limited by groups or schools (Albiladi & Alshareef, 2019). In addition, it might be challenging to create a setting or environment that is acceptable for students, but the blended learning method makes it possible to create an "accessible, adaptable, active, participatory, encouraging, and inspiring" learning and teaching environment (Zhang et al., 2020).

Research has shown that blended learning can make learning more interesting, make up for the weaknesses of traditional learning methods (Alammary et al., 2015; Dziuban et al., 2018), make learning more flexible and accessible, improve learning achievement, and make learning more interesting for students (Dziuban et al., 2018). The idea supported by Zhang et al., (2020) is that the online material using blended learning is more effective in boosting the students' interaction and collaboration to improve their active learning. Moreover, students who were taught using blended learning had better academic results or achievement than those who were taught using the conventional method (Ma & Lee, 2021). Moreover, Marco et al., (2013) found that the benefits of blended learning include improving access and flexibility, getting good student responses, boosting pedagogical abilities, cost-effectiveness, timeliness of feedback, and providing access to all people who require training.

Nonetheless, despite the fact that multiple studies have revealed the advantages of blended learning, other studies have also explained or indicated that the implementation of blended learning is still unclear and has not been done optimally (Bruff et al., 2013; Cheng & Chau, 2016; Cho et al., 2021; Ma & Lee, 2021). The implementation of blended learning which is not yet optimal is influenced by various issues and also challenges. According to Maarop & Embi (2016), there are four categories of issues faced in implementation of Blended Learning, namely institutions aspects, instructor aspects, students' aspects, and technology aspect. In terms of institutions aspect, several institutions stated that their culture of teaching by using the conventional system became their main challenges in adapting the blended learning system (Rasheed et al., 2020). This is because they need to adapt students to the blended learning system, while they also find it difficult because they are used to traditional methods. Moreover, the instructor also stated that the issues such as workload increasing, increased time allocation, lack of skill in conducting blended learning system, and difficult in finding the right blend for the curriculum become the most frequently issues they often face (Bruff et al., 2013; Ma & Lee, 2021; Rasheed et al., 2020). Regarding to the students' aspects, Maarop & Embi (2016) stated that students' participation become the main issue or problem in blended learning implementation. According to the reports, several students struggled to achieve the requirements of blended learning, which called for extremely high levels of attentiveness and discipline from students (Rasheed et al., 2020). Additionally, the blended learning effectiveness is also impacted by ineffective time management and the diverse of student backgrounds (Israel, 2015). Last but not least, technology aspect becomes the biggest challenges as well as issue in blended learning implementation. Issues such as limited bandwidth access, bad weather, and the incapability to see students' body language in the online conditions are some of the limitations of technology (Maarop & Embi, 2016).

In order to optimize the implementation of blended learning in the future, it is crucial to conduct a thorough evaluation of the ongoing implementation of blended learning in light of some of the difficulties identified. Therefore, the activity evaluation on the blended learning implementation aims to collect data and then analyze the data so that the results can be considered when making a decision or recommendation for the object being evaluated. Hence, good recommendations can occur through a good evaluation process and carried out by predetermined criteria concerning the evaluation component, so that constraints can be found that really need to be perfected or repaired (Divayana, 2017). Evaluation is the process of gathering, analyzing, and presenting information on a certain object under study so that the findings can be considered when making a decision (Ariawan et al., 2016; Divayana, 2017). Ariawan et al., (2016) stated, "evaluation is an activity that consists of the process of collecting, describing, and presenting various information about the progress of something which can later be used as a basis for drawing conclusions and recommendations."

The evaluation model used to evaluate the blended learning implementation is the CSE-UCLA model. This evaluation model is claimed to be feasible and suitable for evaluating programs or policies in the field of education to service programs that help human life (Divayana et al., 2018; Divayana & Sugiharni, 2016). This was clarified by Divayana (2017), who stated that the CSE-UCLA model is a model of evaluation that includes five evaluation dimensions and is appropriate for assessing or evaluating service programs that improve human life, for instance e-learning, library programs, cooperatives, e-government, banks, and many more. This is supported by Suyasa & Kurniawan (2018) and Putra (2023), who also claimed that the CSE-UCLA evaluation model is an appropriate model for evaluating the e-learning implementation, which in this case is blended learning. This is because the CSE-UCLA model has an advantage in evaluating the components determining the level of effectiveness of the program's socialization activities so that program users know

clearly about the program's existence and things that need to be prepared in order to use the program properly.

The CSE-UCLA model is an evaluation model with five evaluation dimensions: system assessment, which gives information about the state of the system; program planning, which helps choose programs to meet program needs; program implementation, which prepares information to present programs; program improvement, which gives information about how the program works or performs; and program certification, which gives information about the programs (Divayana & Sugiharni, 2016). Hence, the CSE-UCLA model is acceptable for usage as an evaluation model for the blended learning application since it includes the evaluation components mentioned above (Suyasa & Kurniawan, 2018). This is supported by Divayana (2017) that the CSE-UCLA evaluation model is very appropriate because it provides a component, such as the implementation program component, that can provide an overview of the socialization actions that have been taken.

Based on the identification of previous problems, this study's purposes are to obtain information about the effectiveness of blended learning implementation in terms of system assessment, program planning, program implementation, program improvement, and program certification contained in the CSE-UCLA evaluation model. Besides, another goal of this study is to find the obstacles in the program's implementation and find alternative solutions that are expected to provide suggestions or recommendations for improvement or refinement of the blended learning being held. This study has the advantage of providing decision-makers and implementers with data on the efficiency of implementing blended learning as a whole in terms of system assessment components, program planning, program implementation, program improvement, and program certification so that later they will be able to make improvements to the implementation of blended learning based on several recommendations that have been given.

METHODS

Design

The design used in this research is an evaluation study by using the CSE-UCLA model. The specifications of this design model can be seen in figure 1 below.

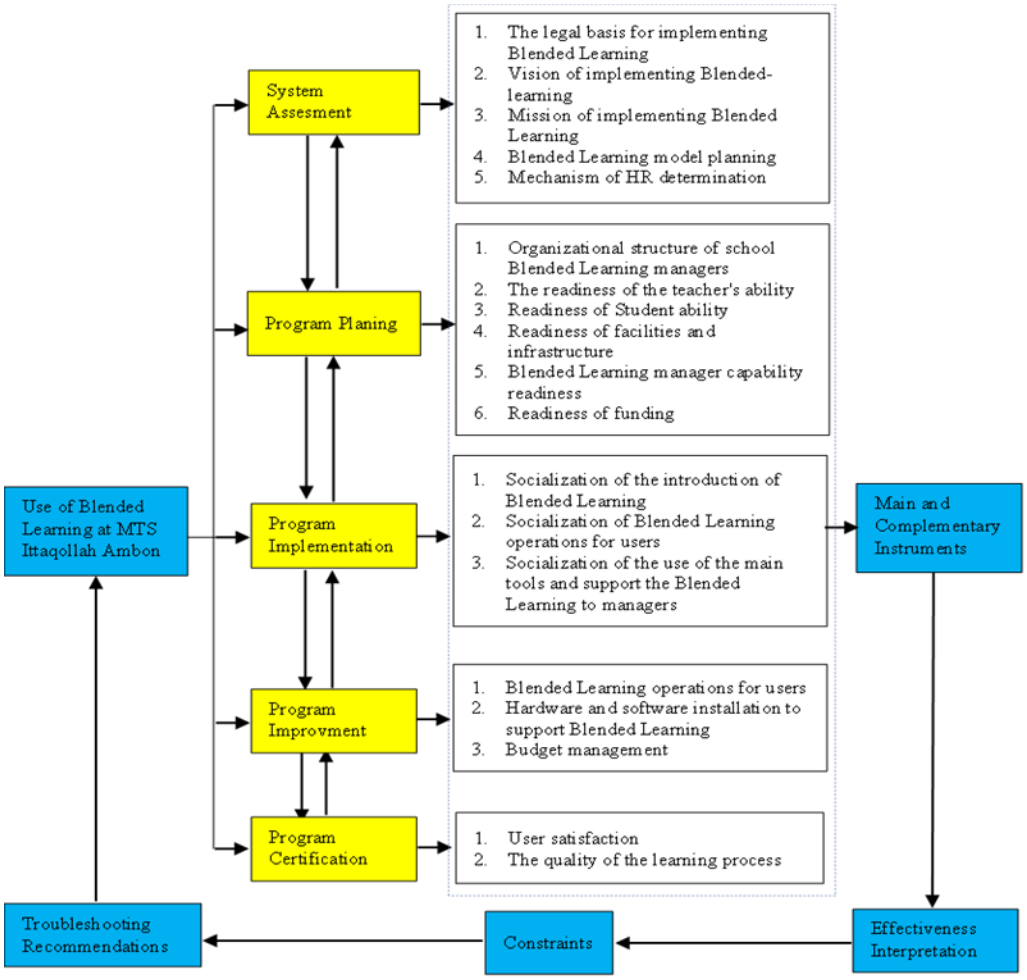

Figure 1: Evaluation of Components and Aspects of Utilizing Blended Learning Evaluation at MTs Ittaqolah Ambon using the CSE-UCLA Model.

Research Objects and Subjects

The object studied in this research was the implementation of blended learning at MTs Ittaqollah Ambon. The subjects involved in this study were school students, principals, teachers, and the blended learning management team (head of the computer lab). In determining the subject, the researcher used a purposive sampling technique to dig deeper into the information concerning the related parties and have interest in blended learning.

Instruments

The instruments in this study consisted of questionnaire (main instrument), and complementary instruments, namely interview guidelines, observation results, and documentation.

Data Analysis Technique

The data analysis technique used in evaluating the utilization of blended learning at MTs Ittaqollah Ambon was based on the components of system assessment, program planning, program implementation, program improvement, and program certification. Data analysis regarding the limitations or weaknesses of blended learning at MTs Ittaqollah Ambon used quantitative data analysis techniques. The components and aspects that were evaluated follow the established evaluation standards. Table 1 presents the quality-determining standards for evaluating the implementation of blended learning at MTs Ittaqollah Ambon.

Table 1: Standards for Determining the Evaluation Quality of Blended Learning Utilization at Mts Ittaqollah Ambon (Divayana et al., 2017).

Evaluation Components	Evaluated Aspects	Quality Determination Standards (%)
System assessment	The legal basis for implementing Blended Learning	88-100 %
	Vision of implementing Blended-learning	85-100 %
	Mission of implementing Blended Learning	85-100 %
	Blended Learning model planning	85-100 %
	Mechanism of HR determination	85-100 %
	Organizational structure of school Blended Learning managers	88-100 %
Program Planning	The readiness of the teacher's ability	85-100 %
	Student ability readiness	85-100 %
	Readiness of facilities and infrastructure	85-100 %
	Blended Learning manager capability readiness	85-100 %
	Readiness of funding	90-100 %
Program Implementation	Socialization of the introduction of Blended Learning	88-100 %
	Socialization of Blended Learning operations for users	88-100 %
	Educating managers on how to use the key tools and promote Blended Learning	88-100 %
Program Improvement	Blended Learning operations for users	85-100 %
	Supporting Blended Learning by installing hardware and software	85-100 %
	Budget management	85-100 %
Program Certification	User satisfaction	85-100 %
	The quality of the learning process	85-100 %

The criteria or standard categorization that determines the quality of blended learning can be described as follows: (1) Very Good, with a percentage range of 90-100, (2) Good, with a percentage range of 80-89, (3) Sufficient, with a percentage range of 70-79, (4) Not Enough, with a percentage range of 60-69, and (5) very less, with a percentage range < 59. For more details, it can be seen in table 2 below:

Table 2: Criteria or Categorization of Quality Determination Standards

No	Percentage (%)	Information
1	90 – 100	Very good
2	80 – 89	Good
3	70 – 79	Sufficient/Enough
4	60 – 69	Not enough
5	< 59	Very less

Results And Discussions

Based on the research evaluation results using the CSE-UCLA evaluation model carried out at MTs Ittaqollah Ambon in 2022, there are several aspects that are evaluated in evaluating the use of blended learning, including the components of the assessment system, including: 1) the legal basis for implementing blended learning; 2) the vision of implementing blended learning, 3) mission of implementing blended learning, 4) planning of blended learning, 5) HR determination mechanism. The planning program component includes 1) the structure of the school's blended learning management organization, 2) the readiness of the teacher's ability, 3) the readiness of students' abilities, 4) the facilities and

infrastructure readiness, 5) the readiness of blended learning management capabilities, 6) funding readiness. The component of program implementation includes 1) socialization of the introduction of blended learning, 2) socialization of blended learning operations for users, and 3) dissemination of the use of the main tools and support for blended learning to managers. The improvement program components include 1) blended learning operations for users, 2) hardware and software installation to support blended learning, and 3) budget management. The components of the certification program include 1) user satisfaction, and 2) the quality of the learning process.

Generally, the results of evaluation of the blended learning implementation at MTs Ittaqollah Ambon used the CSE-UCLA evaluation model for each evaluation component; the system assessment component obtained an average percentage of 86.6%, so it was included in the level of effectiveness in the good category. For the program planning component, it got an average percentage of 84.5%, so it is included in the level of effectiveness in the good category. For the program implementation component, an average percentage of 89.3% was obtained so that it was included in the level of effectiveness in the good category. The improvement program component got an average rate of 85.8%, so it was included in the level of effectiveness in the good category. Finally, the certification program component obtained an average percentage of 85.9%, so it is included in the level of effectiveness in the good category.

To more clearly understand the results of obtaining the average percentage of each CSE-UCLA evaluation component in evaluating the implementation of blended learning at MTs Ittaqollah Ambon, it can be seen in table 3 below.

Table 3: Average Percentage Results of Each CSE-UCLA Evaluation Component in the Implementation of blended learning at MTs Ittaqollah Ambon.

No	Evaluation Component	Evaluation Result	Information
1	System assessment	86,6 %	Good
2	Program Planning	84,5%	Good
3	Program Implementation	89,3%	Good
4	Program Improvement	85,8%	Good
5	Program Certification	85,9%	Good

Furthermore, in particular, the evaluation results of blended learning-based learning at MTs Ittaqollah Ambon based on the assessment system on the aspect of the legal basis for the blended learning implementation obtained an evaluation result percentage of 89.2% of the success effectiveness standard of 88-100%. This shows that in terms of the legal basis, the blended learning implementation had met the effectiveness standards. In the vision of implementing blended learning, the percentage of evaluation results obtained is 87.6% of the effectiveness standard of 85-100%. This shows that the vision aspect of implementing blended learning had met the effectiveness standards. In the mission of implementing blended learning, the evaluation percentage results obtained was 87% of the standard of success effectiveness of 85-100%. This shows that the mission aspect of implementing blended learning had met the standards of effectiveness. In the planning aspect of the blended learning model, the percentage of evaluation results obtained was 86.4% of the effectiveness standard of 85-100%. This shows that blended learning had met the standards of effectiveness in the planning aspect. Regarding human resource needs in implementing blended learning, the evaluation results obtained were 82.6% of the effectiveness standard of 85-100%. This shows that blended learning had not met the effectiveness standard in the planning aspect.

In the Program Planning component on the organizational structure aspect of the school's blended learning manager, the percentage of evaluation results obtained was 89.2% of the effectiveness standard of 88-100%. This shows that the school's blended learning manager had met the effectiveness standards in terms of organizational structure. Regarding teacher readiness, the percentage of evaluation results obtained was 81.4% of the effectiveness standard of 85-100%. This shows that in the readiness aspect, the teacher's ability had not met the effectiveness standard. In the aspect of student readiness, the percentage of results obtained was 80.6% of the standard of success effectiveness of 85-100%. This shows that the aspect of teacher readiness had not met the standards of effectiveness. In the facilities and infrastructure aspect, the percentage of evaluation results obtained was 85.4% of the effectiveness standard of 85-100%. This shows that the readiness aspect of facilities and infrastructure had met the standard of effectiveness. In the readiness aspect of the ability of blended learning managers, the percentage of evaluation results obtained was 85.4% of the effectiveness standard of 85-100%. This shows that in the aspect of readiness, the ability of blended learning managers had met the effectiveness standards.

In the Program Implementation on the socialization aspect of the introduction of blended learning, an evaluation result percentage of 89.2% was obtained from the effectiveness standard of success of 88-100%. This shows that the socialization aspect of the introduction of blended learning had met the effectiveness standards. In the aspect of socializing the operation of blended learning for users, the percentage of evaluation results obtained is 90% of the effectiveness standard of 88-100%. This shows that the socialization aspect of the operation of blended learning for users had met the standard of effectiveness. Regarding socializing the main tools and supporting blended learning to managers, the percentage of evaluation results is 88.6% of the standard of success effectiveness of 88-100%. This shows that in the socialization aspect, the main tools and support for blended learning to managers have met the effectiveness standards.

In the Improvement Program on the operating aspects of blended learning for users, the percentage of evaluation results obtained was 83.6% of the effectiveness standard of 85-100%. This shows that the operating aspects of blended learning for users did not meet the effectiveness standards. In hardware and software installation aspect to support blended learning, the

percentage of evaluation results obtained was 87.2% of the effectiveness standard of 85-100%. This shows that hardware and software installation to support blended learning had met the standards of effectiveness. In the aspect of budget management, the percentage of evaluation results obtained was 88.6% of the standard of success effectiveness of 88-100%. This shows that the aspect of budget management had met the standard of effectiveness.

In the Certification Program component on the aspect of user satisfaction, an evaluation result percentage of 86.4% was obtained from the effectiveness standard of 85-100%. This shows that the aspect of user satisfaction has met the standard of effectiveness. Regarding the learning process quality, the percentage of evaluation results obtained was 85.4% of the standard of success effectiveness of 85-100%. This shows that the quality aspect of the learning process had met the standard of effectiveness.

A comparative analysis between the evaluation results and the standards for the effectiveness of the successful implementation of blended learning at MTs Ittaqollah Ambon using the CSE-UCLA model can be seen in Table 4 below.

Table 4: Evaluation Results of the blended learning Implementation at MTs Ittaqollah Ambon Using the CSE-UCLA Model

Evaluation Component	Evaluated Aspects	Standards Effectiveness	Evaluation results	Decisions
System Assessment	The legal basis for implementing Blended Learning	88-100 %	89,2	Qualify
	The vision of implementing Blended-learning	85-100 %	87,6	Qualify
	The mission of implementing Blended Learning	85-100 %	87	Qualify
	Blended Learning model planning	85-100 %	86,4	Qualify
	HR Requirements	85-100 %	82,6	Not Qualify
	The organizational structure of school Blended Learning managers	88-100 %	89,2	Qualify
	The readiness of the teacher's ability	85-100 %	81,4	Not Qualify
Program Planning	Readiness of students' abilities	85-100 %	80,6	Not Qualify
	Readiness of facilities and infrastructure	85-100 %	83	Not Qualify
	Readiness of Blended Learning manager capabilities	85-100 %	85,4	Qualify
	Readiness of funding	90-100 %	87,6	Not Qualify
	Socialization of the introduction of Blended Learning	88-100 %	89,2	Qualify
Program Implementation	Socialization of Blended Learning operations for users	88-100 %	90	Qualify
	Educating managers on how to use the key tools and promote Blended Learning	88-100 %	88,6	Qualify
	Operational Blended Learning for users	85-100 %	83,6	Not Qualify
Program Improvement	Hardware and software installation to support Blended Learning	85-100 %	87,2	Qualify
	Budget management	85-100 %	86,6	Qualify
Program Certification	User satisfaction	85-100 %	86,4	Qualify
	The quality of the learning process	85-100 %	85,4	Qualify

Based on Table 4 above, several obstacles were found in implementing blended learning at MTs Ittaqollah Ambon. These obstacles include: in the system assessment component, especially for the human resource aspect requirements in implementing blended learning at MTs Ittaqollah Ambon, there were still obstacles found, namely in terms of difficulty finding human resources who had superior competence in managing blended learning, so that later blended learning can still be used and function properly.

In the program planning, especially in the aspect of teacher readiness, there were still obstacles, namely that there were still many teachers who did not have the ability to use computers in the teaching and learning process. Furthermore, in the aspect of readiness of students' abilities, there were still obstacles. Many students were still lazy to use computers for learning and preferred using them to play games. In the aspect of funding readiness, obstacles were also found, namely the lack of sources of funds from outside the agency. Most of the funds collected for implementing blended learning at MTs Ittaqollah Ambon came from foundations, the school itself, and donations from the school committee. In the aspect of facilities and infrastructure, constraints were also found, namely the lack

of hardware specifications provided by the school, so the blended learning implementation was not optimal. In the improvement program, especially in the operating aspects of blended learning for users, there were still obstacles; namely, some teachers and students have not been able to operate blended learning properly.

Conclusion And Recommendation

The conclusions that can be concluded from the results of this research are that, in general, the effectiveness level of the usage of blended learning at MTs Ittaqollah Ambon has been going well, including the system assessment, which obtained an average level of effectiveness of 86.4%, so that it includes the effectiveness level in the good category. The component of program planning obtained an average level of effectiveness of 84.5%, so it is included in the effectiveness level in the good category. The program implementation obtained an average level of effectiveness of 89.3%, so it is included in the level of effectiveness in the good category. The program improvement obtained an average level of effectiveness of 85.8%, so it is included in the good category for the level of effectiveness. The certification program, it obtained an average level of effectiveness of 89.9%, so it is included in the level of effectiveness in the good category.

Even though, in general, the use of blended learning at MTs Ittaqollah Ambon has been going well, if investigated specifically, several obstacles were found, which have been described previously. From the constraints found in the blended learning usage at MTs Ittaqollah Ambon, there are several recommendations that researchers need to provide as refinements or improvements for the smooth implementation of blended learning at MTs Ittaqollah Ambon, namely: on the assessment system, especially to overcome constraints on aspects the need for human resources (HR) in implementing blended learning at MTs Ittaqollah Ambon, school leaders are expected to be able to recruit HR as an effort to manage blended learning with reference to appropriate academic qualifications, for example in the field of information technology or learning technology. In addition, principal can also facilitate blended learning by providing training on blended learning -based learning management.

Recommendations in the program planning specifically to address aspects of teacher readiness, namely: school leaders are expected to be able to give opportunities and facilitate teachers to attend trainings or workshops on the importance of using digital literacy for teachers and managing blended learning-based learning. To overcome the obstacles related to the student readiness aspect, it is necessary to approach or encourage students to be more prepared for blended learning, for instance, by making blended learning for students, providing independent learning training, and providing digital literacy training for students to be able to utilize technology or computers. As an intensive learning need, students are ready to face blended learning. To overcome obstacles in terms of funding readiness, school leaders are expected to be able to seek breakthroughs in funding sources from outside agencies, such as local governments and private donors. To overcome obstacles in the aspect of facilities and infrastructure, school leaders must have the courage to buy equipment that at least meets the specifications needed in implementing blended learning so that it can be implemented optimally.

Recommendations in the improvement program, especially to overcome obstacles to the operating aspects of blended learning for users, the principal should provide support and opportunities to carry out intensive training on the use of blended learning for all subjects taught so that later all teachers and students will become fluent using blended learning in the learning process at MTs Ittaqollah Ambon.

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