The Development of "MAS AL" (Alternative Assessment Management) as a Solution to Integrated Distance Assessment Management

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Abstract; In line with the outbreak of the Covid-19 virus in all corners of the world, various learning ideas that can be done during the pandemic have emerged. The natural learning process is changed to Learn From Home, Online learning, Distance Learning, Hybrid Learning, and others. Submission of material even to the collection of assignments is also made online. Many teachers end up choosing methods that are considered easy and mastered. Some teachers use Google Drive, email, YouTube, WhatsApp, and others. However, teachers still find it challenging to organize the files because each platform has limitations. Departing from the teacher's need to manage learning assessments, researchers are interested in developing an application that can manage online and integrated learning assessment data. The application is named MAS AL which is an acronym for Alternative Assessment Management. This study aims to 1) describe how the process of developing the "MAS AL" application and 2) describe the feasibility of the MAS AL application. This study uses the ADDIE development model. The ADDIE stage consists of 5 stages: Analyze, Design, Develop, Implement, and Evaluate. The validation test result obtained a percentage of 89.2% for the first validator and 90.3% for the second validator. At the implementation stage, MAS AL trial was carried out by elementary school teachers in East Java who obtained a questionnaire percentage of 97.5%. So, the conclusion obtained is that MAS AL as a solution to integrated distance assessment management is appropriate.

Keywords: MAS AL, Assessment Management, Distance Learning

INTRODUCTION

The community still believes that schools are the best way to develop intelligent and noble human resources. It is hoped that through various programs, curricula, methods, as well as structured and systematic learning assessments, they will be able to create ideal conditions for the growth of an academic climate capable of stimulating students' cognitive, affective, and psychomotor development, allowing them to develop to their full potential. In practice, learning activities are

divided into three stages: planning, implementation, and evaluation (Imbar, Murti, Wirasti, & Zahroh, 2020). Before beginning to teach, a teacher must create a syllabus and lesson plan based on the competencies and learning objectives. Following that, the teacher implements learning in the classroom by involving all existing components, including teaching materials, methods, media, and equipment. Finally, the teacher prepares assessments and evaluations to ensure that students have achieved the required competencies. Expect, this is the ideal learning environment that has been used in Indonesia for decades.

The ideal learning environment was thrown into disarray when the Covid-19 outbreak, which later became a pandemic, hit Indonesia and the rest of the world. Because of the characteristics of this virus, which spreads quickly and through droplets, everyone must keep a physical distance between humans (physical distancing). Humans are no longer free to leave the house, congregate, and interact with one another. This is also true in the field of education. The school finally eliminated face-to-face learning in class through various policies from the central to the regional levels. The school became quiet, and there was no longer any laughter from the students who usually colored every activity in the school. Because of the picket schedule, only a few teachers and employees remain on the job. This situation raises concerns about the fate of millions of students who can no longer study usually; however, future human resource needs are increasingly competitive. As a result, a breakthrough is required to create learning during a pandemic. This has become highly urgent because humans have been unable to predict when the pandemic will end (Krismonika Vita, Dike, & Fitriningrum, 2020).

Various learning ideas for use during the pandemic emerged in response to concerns about future human resource needs. Begin with ideas for Learn From Home, Online Learning, Distance Learning, Hybrid Learning, and more (Putro, Khamim, 2020). Various learning platforms and applications known as Learning Management Systems have emerged to facilitate the learning process (LMS) to meet these needs. At first, it was not easy to adjust to the new learning patterns, but teachers and students eventually adjusted. The new learning environment is not without challenges; many teachers are still perplexed when confronted with technology. Teachers who are used to traditional face-to-face learning must suddenly change the way they teach, which is not an easy task. Teachers must be innovative In developing learning content that students can access online (Faishal, 2021). Of course, this does not impede teachers who adapt quickly, but some teachers struggle to provide online learning materials; as a result, many teachers send assignments to be completed at home and then collected and corrected. Some teachers go to their pupils' homes to teach them. It may still be doable in the early stages, but because the number of students is excellent and the number of teachers is small, the teacher feels burdened and overwhelmed. As a result, this strategy is deemed useless.

Problems do not only arise from the teacher; pupils also face numerous challenges. It is not the same to study at home as it is to learn at school. Students are unable to communicate and collaborate with their peers as they would at school. Furthermore, pupils must become accustomed to studying in front of a computer or cellphone screen, something they have never done before. There was a restriction on taking cellphones to school before the outbreak because it interfered with student learning. However, it appears that students are now required to own and operate a cellphone or computer. Even if they were never taught how to operate computers and mobile phones, create emails, download and install software, or learn through a learning management system (LMS) in the past. On the other hand, students' learning loads are increasing due to teacher-assigned assignments that must be completed within a particular amount of time. Students struggle to understand the curriculum, let alone complete school assignments, due to teachers' insufficient guidance (Sari, 2020).

Parents were obliged to intervene in their children's education, similar to what students had to go through. When a teacher can no longer help pupils learn, it is up to the parents to support and facilitate children's learning. Parents must give appropriate study space, learning facilities, and resources, and the most challenging element is to devote time to their children's education. Parents are undoubtedly busy, especially when it comes to employment. They must earn a salary to support their families, but they must also accompany their children to school, which is not easy. Aside from time and energy constraints, not all parents know how to plan, administer, assess learning, and possess the four teaching competencies. Finally, parents become irritated and begin blaming teachers for their inability to supervise learning and bothering parents (Lilawati, 2020).

Apart from these issues, this is the current learning situation, whether anyone likes it or not. If education is successful, each education component must be aware of and willing to carry out their particular tasks. All must adapt to one another and complement one another. These challenges were daunting, but with adjusting, instructors, students, and parents gradually became accustomed to them. As time passes, new learning ideas and breakthroughs arise. One of the most intriguing developments is the rise of the concept of online distance learning. Students can learn independently using online modules or programs that already contain topic information. Parents' responsibilities are reduced to directing and supervising their children. Teachers can also teach more effectively because the subject content is generated collaboratively rather than by a single teacher. As a result, even teachers who are not tech-savvy can benefit from the availability of online learning.

When students begin learning, a new difficulty arises: how to conduct online learning assessments. Teachers are used to doing assessments utilizing files in the classroom, whether assignments, quizzes, experiments, or exams. However, because the pupils are distant from the teacher's location, they will find it difficult to continue

using the file in this online learning environment. How to disseminate the assessment, gather the results, organize the assessment file, and locate the file. Many teachers choose strategies that are thought to be well-understood and straightforward. Teachers use Google Drive, email, YouTube, WhatsApp, and other such services.

On the other hand, teachers still find it challenging to manage these materials due to the constraints of each platform. YouTube, for example, can only save video files, and WhatsApp, as well as email and Google Drive, cannot support vast and easily lost data due to the large number of other communications that come in. As a result, there has been no solution to the difficulty of managing this learning assessment until today.

On the other hand, this learning evaluation is critical for teachers because it contains all the student's learning progress. Teachers want a system that allows them to organize learning assessments, store them properly, and retrieve them at any time. The following are some of the advantages of teachers being able to organize or manage student evaluation files: 1) as a student portfolio track record; 2) the ability to see student learning progress; 3) the ability to save all files in one location, and 4) the ability to locate files quickly when needed.

The research team has a track record of research based on the development of various learning media for elementary school students, including The Development of Mathematics Interactive Comic for Third Grades of Elementary School (Rahmawati & Salam, 2018), as well as a track record of research based on the development of various learning media for elementary school students and An Android-Based Game for Children to Learn Fraction (Rahmawati & Ariyanti, 2020), both of which are in the department's research agenda for 2020-2021. The utilization of learning resource development results through ICT (learning management system) in learning is a study theme at PGSD.

The researchers are interested in building an application that can handle online and integrated learning assessment data based on the teacher's demand for assessment management and the researchers' track record in the development of digital media. The program is known as MAS AL, which stands for Alternative Assessment Management. MAS AL is a web-based remote assessment management tool that may be accessed from a computer, laptop, tablet, or smartphone linked to the internet network.

The teacher will use MAS AL to handle student assessment files, including three parts of the assessment: cognitive, affective, and psychomotor. The teacher can use MAS AL to categorize the different assessments offered, such as assignments or evaluations and cognitive, emotional, and psychomotor components. One of the benefits of MAS AL is the ability to store files neatly in one location and retrieve them as needed.

METHOD

The research is focused on developing a web-based integrated remote assessment management application (MAS AL) that is connected to the internet network and can be accessed via a computer or smartphone, with Google Drive as the data storage area. The ADDIE development model is used in this research. Analyze, Design, Develop, Implement, and Evaluate are the five steps of the ADDIE stage.
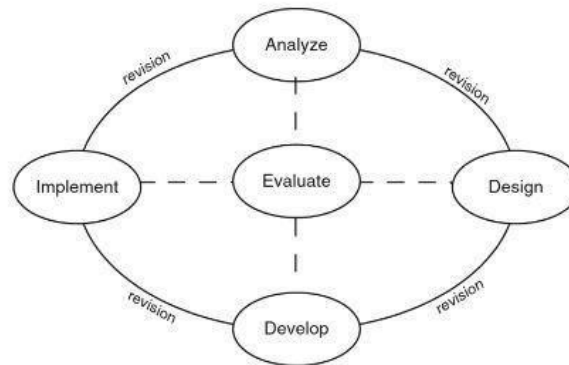

Figure 1. ADDIE Model Development Stage

The ADDIE model aids are the design of problem-solving in the learning process. The ADDIE model is created using a programming approach with a logical sequence of steps to solve learning difficulties with learning resources suited to the needs (Branch, 2010).

The researcher did a needs analysis, a teacher analysis, and an assessment model analysis during the analysis phase. The researchers designed MAS AL, collated resources, and created research equipment throughout the design stage. The researcher was in charge of the design during the development stage. Finally, the researcher conducted a trial on 20 teachers in East Java during the implementation stage. Two types of data will be collected in this development study: quantitative and qualitative data. Quantitative data is gathered by scoring from experts and users. Scores on material and media validation, as well as scoring on user questionnaires, provided quantitative data. Experts who served as validators offered qualitative data in the form of ideas and improvements in the validation sheet's columns. At the same time, users provided qualitative data in the form of impressions and messages on the questionnaire sheet filled out by the teacher.

RESULTS AND DISCUSSION

Results

During the COVID-19 epidemic, the Research Team examined the learning process and determined that the entire learning process must take place online. All assignment submissions are made through the internet. It is vital to have a system

that makes it easier to collect, assess, and search the recorded assessment findings so that the assessment process, the assignment, and the evaluation of students, are not fragmented and automated. The cognitive, affective, and psychomotor domains are the three areas of assessment that the instructor must record during the teaching process. However, in practice, the three components are still unconnected in the WhatsApp, Google Drive, LMS, and Google Classroom systems, remaining separate. Because teachers must remember where to keep files and which programs were used, the disconnection of the three assessments will make it impossible for teachers to report the outcomes of student progress to their guardians or if the data is needed at any moment.

At this design stage, the researcher defined the goals of developing an alternative web-based assessment management system known as MAS AL, as well as the scheme and systematics for MAS AL, which consists of three main components: 1) teachers can create assignment questions and evaluation questions; 2) teachers can store all assignment and evaluation files in one (single) file management; and 3) teachers can recall files that have been saved based on the desired category. After all of the designs are finished, the research team creates a website with an overview of MAS AL that can be visited by a PC, laptop, or smartphone connected to the internet.

The researcher created the MAS AL site during the development stage using the design draft created previously. Researchers use a Zoom conference to carry out the development process online. The first stage discussed how the MAS AL logo was created, which was also addressed online. Following the creation of the logo, the researchers began work on a prototype of the MAS AL online and began the process of obtaining hosting and servers. The next stage is to create the initial display/log-in authorization from the MAS AL site, where users will be required to register or register before they can log in.

The researchers make modifications or revisions based on the ideas and inputs provided by the material and media validators during the evaluation stage of the development stage. After the development stage is finished, the researcher validates the results with the help of professionals. The first validator's validation score was 89.25 percent, while the second validator's score was 90.3 percent, indicating that MAS AL is legitimate.

The research's next stage is implementation, which begins once the development phase is completed. MAS AL is tested on elementary school teachers throughout the implementation stage. During the implementation stage, the researchers and teachers held a Zoom conference to quickly summarize the research and confirm that MAS AL was available. The researcher also guarantees that when using MAS AL, there are no misunderstandings. The researcher supplied a link to the MAS AL website after the Zoom meeting. During the trial, researchers did not intervene; instead, guidelines were included in the app to make it easier for teachers to use MAS AL.

Following the trial, the researcher issued a MAS AL-related questionnaire in a google form to gather user feedback and an evaluation at the implementation stage. There are ten questions, seven of which need the teacher to write down the responses in the form of scores, three of which are descriptive. The first component concerns ease of use, while the second concerns display design and specific concerns

about the utility of utilizing MAS AL. The Percentage of Each Aspect formula is used to calculate the outcomes of the questionnaire ratings.
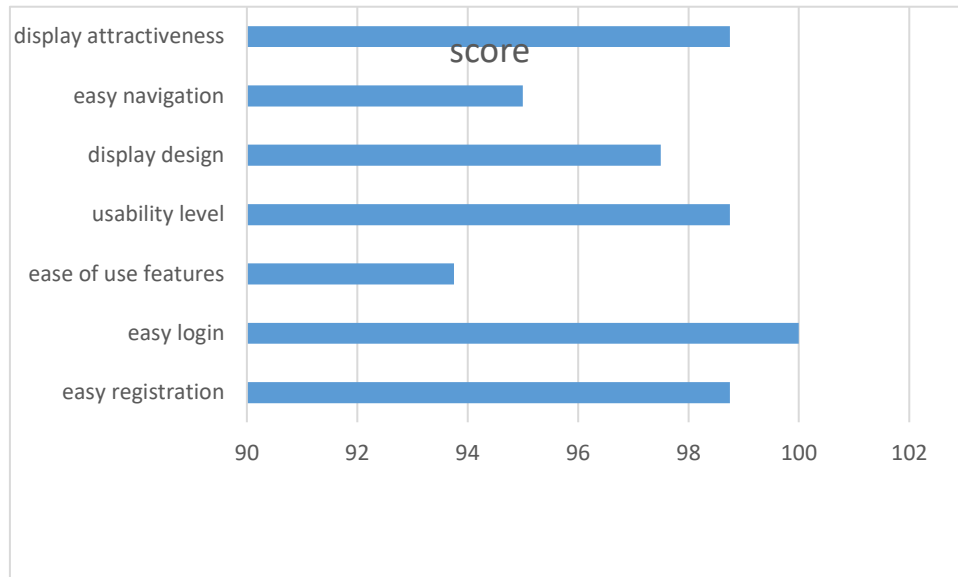

Diagram 1. Percentage of Each Aspect

Discussion

MAS AL can be declared eligible for use as a tool in managing student assessment files based on the findings of the MAS AL trial with 20 elementary school teachers. Teachers believe that having a system that can keep all student assessment files, including cognitive, affective, and even psychomotor evaluations, is beneficial. Teachers also mentioned that because MAS AL can be accessible from anywhere, it makes it easy to locate student work if needed at any time. Furthermore, MAS AL may be accessed from cellphones or computers by typing the website address into a browser, eliminating the need to download and install apps that can slow down the device.

Teachers believe that MAS AL alleviates one of their psychological burdens, as evidenced by one teacher's statement that he always runs out of memory if he uploads and stores student work on his mobile. This is one of the responsibilities that contribute to the teacher's lack of excitement and concentration in the classroom (Renny, 2020).

One of the responsibilities of the teachers is to grade the students' work. However, if the teacher cannot begin by arranging the student assignment files ahead of time, the task will become tricky. This follows what (Fathonah & Renhoran (2021) says about teachers' stress management during the pandemic when offering an online assessment of student assignments.

As a result, the MAS AL will alleviate the workload a little because all student assignments and assessment files will be arranged appropriately and accessible at

any time if needed. This is also in line with Nugraha's (2020) statement about school psychological evaluations during the new normal.

CONCLUSION

Based on the research findings and discussion around the development of MAS AL, it can be determined that the ADDIE development technique (Analyze, Design, Development, Implementation, and Evaluation) is valid and appropriate for the application. Needs analysis, teacher analysis, and assessment model analysis are all done during the analysis step. The researchers designed media development, collated resources, and created research equipment throughout the design stage. The researcher realized the design and validated the material in the development stage, with 89.2 percent for the first validator and 90.3 percent for the second validator, indicating that it is highly practicable.

Develop a satisfying final product, and the evaluation stage is carried out at each level. The implementation stage was then given to 20 teachers in East Java, with a 97.5 percent success rate based on user replies from the questionnaires issued by the researchers. According to the study's findings, the MAS AL was shown to be a very viable solution for Integrated Distance Assessment Management.

REFERENCES

Branch, R. M. (2010). Instructional design: The ADDIE approach. In *Instructional Design: The ADDIE Approach*. https://doi.org/10.1007/978-0-387-09506-6

Faishal. (2021). Efektivitas pembelajaran bahasa via daring. *Ta'dibi : Jurnal Prodi Manajemen Pendidikan Islam*, *IX*(September 2020), 114–140. Retrieved from http://e-jurnal.stail.ac.id/index.php/tadibi/article/view/226

Fathonah, S., & Renhoran, C. R. (2021). Gambaran Tingkat Stress Guru Madrasah Aiyah Di Jakarta Selatan Selama Masa Pandemi. *Pendidikan Islam*, *12*, 57–71.

Imbar, K., Murti, R. A., Wirasti, K., & Zahroh, I. A. (2020). Pemberdayaan Guru Melalui Pendampingan Evaluasi Pemanfaatan Media Pembelajaran Papan Buletin di SD Kecamatan Sukamakmur Empowerment of Teachers through Assistance for Evaluation of Learning. *ARSY: Aplikasi Riset Kepada Masyarakat*, *1*(1), 18–23.

Krismonika Vita, M., Dike, D., & Fitriningrum, E. (2020). Inovasi Pembelajaran Guru dalam Masa Pandemi Covid-19. *VOX Education*.

Lilawati, A. (2020). Peran Orang Tua dalam Mendukung Kegiatan Pembelajaran di Rumah pada Masa Pandemi. *Jurnal Obsesi : Jurnal Pendidikan Anak Usia Dini*, *5*(1), 549. https://doi.org/10.31004/obsesi.v5i1.630

Nugraha, R. A. (2020). Assessment Psikologis Bagi Konselor Sekolah Selama Masa Tatanan Baru Normal. *Seminar Nasional Daring IIBKIN 2020*, 67–72.

Putro, Khamim, dkk. (2020). Pola interaksi anak dan orangtua selama kebijakan pembelajaran di rumah. *Fitrah: Jurnal of Islamic Education*, *1*(1), 124–140.

Rahmawati, I., & Ariyanti, S. D. (2020). *An Android Based Game for Children to Learn Fraction*. *387*(Icei), 226–231. https://doi.org/10.2991/icei-19.2019.53

Rahmawati, I., & Salam, M. W. A. (2018). *The Development of Mathematics Interactive Comic for Third Grades of Elementary School*. *212*, 507–511. https://doi.org/10.2991/icei-18.2018.109

Renny, C. A. (2020). Management Stress Kerja Guru Sd Terhadap Beban Kerja Pada Masa Pandemi Covid-19. *Consilia : Jurnal Ilmiah Bimbingan Dan Konseling*, *3*(Vol 3, No 3 (2020)), 219–226. Retrieved from https://ejournal.unib.ac.id/index.php/j_consilia/article/view/13917/pdf

Sari, N. (2020). Problematika Pelaksanaan Pembelajaran Daringmasa Pandemic Covid-19 di MIN 3 Medan. *Journal Of Education And Teaching Learning (JETL)*, *2*(3), 44–57. https://doi.org/10.51178/jetl.v2i3.67